NAMIBIA Economic Transformation Journey 1990-2020

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FIRST CAPITAL
NAMIBIA

Namibia Economic Transformation Journey

1990 – 2020

by

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ACRONYMS

AMTA	Agro Marketing and Trade Agency
BoN	Bank of Namibia
FAO	Food Agriculture Agriculture
GDP	Gross Domestic Product
GRN	Government of the Republic of Namibia
FC	First Capital
IMF	International Monetary Fund
MoF	Ministry of Finance
MTEF	Medium Term Expenditure Framework
MFMR	Ministry of Fisheries and Marine Resources
MAWF	Ministry of Agriculture, Water and Forestry
NSA	Namibia Statistics Agency
NUST	Namibia University of Science and Technology
N$	Namibian Dollar
NAB	Namibia Agronomic Board
USD	US Dollar
UNAM	University of Namibia
WB	World Bank

Executive Summary

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. An outstanding feature of Namibia's economy over the past thirty years is the volatility of its GDP growth. The country's economic growth has exhibited higher volatility and has made economic policy making quiet challenging. The sources of this volatility have been exogenous, mainly to a large extent through the trade channel or global commodity prices and domestic factors such as drought. As a very small open economy, a fall in demand of Namibia's exports, is quickly transmitted to almost all sectors of the economy.

Namibia's economic structure remains relatively unchanged since independence despite deliberate policies, programs implemented by government to restructure and transform the economy. The SWAPO government in 1990 inherited an economy that suffered decades of racially discriminatory policies and effectively disempowered the black majority both politically and economically. The existing dual economic structure in 1990 was dominated by the primary sector and the non-tradable service sector as engines and drivers of economic growth. Poverty and unemployment especially among the black population was very high, while income inequality was at 0.70, the highest in the world at the time.

The new government wanted a radical economic transformation that was to fundamentally change the structure of the Namibian economy from an exploitative exporter of raw materials and agricultural products, to one which is based on beneficiation of mineral resources and manufacturing as the key driver of economic growth and ensuring more equity with regards to incomes, ownership of assets and access to economic opportunities by all Namibians. Given the high-income inequalities and poverty at the time of independence, the priority of the new government was to shift and integrate the previously disadvantaged into the mainstream economy and this was initially to be achieved through redistributive policies such as expansionary fiscal policy.

In addition to the redistributive policies, national development plans (NDP 1 to NDP 5) aimed at transforming the economy were implement and the first national development plan was launched in 1997. This were followed by Vision 2030 and Namibia's National Industrial Policy where manufacturing and services sectors were identified as priority sectors and that they should constitute about 80% of the country's gross domestic product (GDP) by 2030. These two sectors were to be the drivers of the economy towards industrialization and achieving prosperity.

A review of economic transformation over the past 30 years presented in this report confirms that Namibia economic structure remains unchanged and no major sectoral shifts have taken place. The failure to change the structure of the economy has been identified as one of the major binding constraints to more rapid economic growth and job creation and and calls for targeted policy interventions that could move the economy onto a higher growth and job creation path.

Shares of sectors in the economy (a measure of economic transformation) remain relatively unchanged almost at the same ratio to where they were in 1990. The share of primary industry (agriculture, mining and fishing) did not expand but declined from 23% in 1990 to 16% of GDP in 2019, while the secondary sector (manufacturing) registered a small increase from 14% of GDP in 1990 to 17% of GDP in 2019. The tertiary sector remained relatively unchanged registering a small increase from 53% of GDP in 1990 to 59% in 2019. The past 30 years was characterised by a stagnation of the secondary sector (manufacturing sector) at an average contribution of 11% to GDP contrary to government's target of both manufacturing and service sector accounting for 80% of GDP by 2030.

The disappointing results of the economic and social reform agenda of the 1990s and 2000s and the recent poor performance of the Namibian economy (2016 to 2019), with the economy entering the longest recession since indepedence has raised many questions about the future of the Namibian economy. Economic growth over the past 30 years has been below the rate of more than 5% desired by government and more than fourty percent of the youth are unemployed while the national unememployt remained above 33% since independence. To compound the problem, the economy's capacity to generate tax revenue is challenged and constrained and this poses a dillema for government in using fiscal policy to expand social safety nets and support growth in the economy.

CHAPTER 1: INTRODUCTION

"*A journey of a thousand miles begins with a single step*" is a common Chinese proverb or saying that teaches that even the longest and most difficult ventures have a starting point; something which begins with one first step. Namibia started its first step towards transforming its economy in 1990 immediately after independence**.** The country emerged from ten decades of illegal occupation and gained independence in 1990. The new SWAPO government in 1990 inherited an economy that suffered decades of racially discriminatory policies and effectively disempowered the black majority both politically and economically. The existing dual economic structure in 1990 was dominated by the primary sector and the non-tradable services as engines and drivers of economic growth. Poverty and unemployment especially among the black population was very high, while income inequality was at 0.70, the highest in the world at the time. Despite the difficult beginnings from the time of independence in 1990s, Namibia's new leadership managed to form an inclusive government, adopted a policy of national reconciliation and managed to successfully construct a consensus in both government and private sectors around a strategic direction of the economy, which aimed at structural change and transformation away from primary sector reliance and towards a diversified and inclusive economy with industry and manufacturing leading the economy. The new government was determined to build a competitive and inclusive economy with a diversified production structure, resilient to shocks, an economy that creates more jobs and generate enough income to address the high poverty and income inequality. To achieve this, measures and policies enhancing economic transformation were designed and implemented starting with first government budget in the 1990/91 fiscal year. Economic transformation has therefore been on the agenda of government since 1990 and the aim was to restructure and redesign the economy through intensified spending on education, health, strengthens social safety nets and other measures that empowers previously excluded Namibians.

Many policies designed to transform the structure of the economy were based on economic structural transformation theory that dates to the times of Arthur Lewis (1950s and 1970s), who argued that development in a country occurs when surplus resources shift from the agricultural subsistence (traditional) sector to the modern sector (manufacturing sector). This line of reasoning is also in line with Kutznets (1979) who argued that it is impossible to attain high rates of growth of per capita or per worker product without commensurate substantial shifts in the shares of various sectors. The shift in the share of output of various sectors (mining, manufacturing, agriculture, services etc), which according to Simon Kutznets lies behind economic growth is what is known as structural transformation. Productivity enhancements in agriculture allow for the progressive release of labour and capital towards more productive industries such as manufacturing and modern services.

Structural Economic transformation is therefore defined as the process of reallocation of resources across the three broad sectors of agriculture, manufacturing and services (Herrendorf et al., 2014) while McMillan et al. 2017 defines economic transformation as a process of moving labour and other resources from lower to higher productivity activities e.g. from agriculture to manufacturing or from low-productivity subsistence farming to high-value crops within sophisticated value chains. It involves diversification, creation of new subsectors of activity and increased domestic value addition in trade and at the level of firms and households, it implies the acquisition of new productive capabilities and the ability to compete in larger and more distant markets on a growing scale.

In this paper we define economic transformation as a process in which an increasing proportion of economic output (GDP) and employment are generated by sectors that are growing faster and shifting in their shares of output. We measure transformation and structural changes by the change in shares of sectors and industries in the country's GDP over time with manufacturing increasing its share of GDP and employment. This process of transformation connotes the shift from rural/agricultural-based societies to urban, industrial and/or service-based economies with sustained high GDP growth rates.

1.1 Objectives of This Research Paper

The objective of this research paper is to provide new insights into structural change and transformation paths of the Namibian economy over the past thirty years (1990 – 2020). More specifically, the paper addresses the following questions:

- How is Namibia's political economy impacting government's efforts in restructuring the Namibian economy.
- How has Namibia's economic structure evolved and transformed over the past thirty years (1990 – 2020).
- Does the main indicators of structural transformation in Namibia points to the country moving in the right direction?
- Which sector of the economy has transformed the most over the past thirty years?
- What is the forward and backward linkages in the economy? Present and discuss economic sectoral linkages and integration and sources/drivers of economic growth in Namibia.
- Given Namibia's progress in institutional development and macroeconomic stability and its current socioeconomic structure, what are the country's broad options to achieve economic transformation through accelerated growth?
- Can Namibia reach the goals of Vision 2030 with the current economic structure? If the current economic structure is not appropriate which sectors should be given preference?
- What role will the agricultural sector and manufacturing sector play in Namibia's economic transformation?

1.2 Outline of the Paper

This paper is organized as follows. After the introduction in Chapter 1, Chapter 2 reviews Namibia's political economy focussing mainly on how the inherited colonial structure played a role in shaping policies and priorities. Namibia's membership of international organizations, and how global economic crisis impacted efforts to restructure and transform the economy.

Chapter 3 turns to the performance of Namibia's economy by providing an overview of its historic and current economic structure and discussing opportunities and challenges for future economic transformation. Chapter 4 - 8 turns to the recent performance of individual economic sectors by providing an overview of each sector's current economic structure and discussing opportunities and challenges for future economic transformation. Chapter 9 focuses on sectoral linkages while Chapter 10 wraps up with recommendations and findings. Special emphasis is given to potential drivers of economic growth at the sector level and how sectors of the economy are integrated and supporting and re-enforcing each other.

CHAPTER 2: OVERVIEW OF NAMIBIA'S POLITICAL ECONOMY (1990 – 2020)

Namibia is situated on Africa's south-western seaboard and its neighbouring countries are Angola to the north, Botswana and Zimbabwe to the east and South Africa to the south. The country covers 825,615 km² (almost four times the size of the UK and twice that of Germany) and is bordered by the Atlantic Ocean in the west. To understand the country's current economic conditions, challenges, and government's current policy regime, it is fair to trace the economic transformation journey travelled over the past thirty years (1990 – 2020).

In this chapter we provide a brief overview of the historical political context that shaped the Namibian society before independence and guided the new SWAPO Party Policy stance after independence. The aim is to provide a perspective of how the political environment at the time of independence shaped the direction of policy making and as a broader context in which the issues regarding social government budgetary allocations (allocations to education, health, defence and social safety nets) and overall government budgetary allocations reside.

The SWAPO government in 1990 inherited an economy that suffered decades of racially discriminatory policies and effectively disempowered the black majority both politically and economically. The South African government and the apartheid system had favoured the minority whites at the expense of blacks by providing whites with opportunities to enter the mainstream economy and excluding blacks from enjoying the same benefits (Mandla B, 2006). Such discriminatory and segregation policies denied blacks many opportunities and as a result they were locked outside the mainstream of the economy and had no access to ownership of the economic factors of production (Masito M, 2007). In the case of Namibia and South Africa, this resulted into huge inequalities between blacks and whites in areas such as education, income levels, employment and ability to attain wealth and ensured the concentration of the economy into the hands of the minority whites. The discriminatory and segregation policies that were implemented over a period of more than 100 years resulted in Namibia recording an income inequality (Gini- Coefficient) of close 0.70 in 1990, the highest in the world.

Many black Namibians at independence in 1990 were confined to rural areas and mainly depending on subsistence farming as a source of income with very limited opportunities to participate in wealth creation in the country. As highlighted by Mandla (2006), apartheid policies that were designed for black economic exclusion in South Africa and extended to Namibia was coupled with an inadequate educational system that made it difficult for black people to advance into senior leadership in private and public organisations. The segregation policies led to massive poverty and poor living conditions and the new SWAPO government was determined to halt the decline by introducing policy measures that it believed were effective and sustainable.

As we demonstrate in the document, over the past thirty years, the SWAPO Party's resolution was to establish a more equal society through restructuring and transforming the economy. To this end the new government introduced and implemented policies and programs specifically targeted at redressing the inequalities inherited from the colonial regime. We can group these interventions through various categories starting with the Redistributive Policies and Programmes that were implemented immediately after independence in 1990 followed by Structural and Economic Transformative Policies and Programmes that were implemented through National Development Plans (NDP 1 to NDP 5), Vision 2030 and other complementary economic stimulus plans such as the Harambe Prosperity Plan.

2.1 Redistributive Policies and Strategies (1990 – 2030)

Given such high-income inequalities and poverty, the priority of the new government was to shift and integrate the previously disadvantaged into the mainstream economy and this was initially to be achieved through redistributive policies. Redistribution of income and wealth is the transfer of income and wealth from the high income earners (the haves) to the low income earners (have nots) by means of a social mechanism such as government spending, taxation, social grants, loan subsidies, provision of public services, land reform, economic empowerment etc. The new government faced the challenge of redressing the high economic/income inequalities between the white minority and the majority black people and had to take decisive action to effect economic transformation, critical both to improve the quality of life of previously disadvantaged Namibians without negatively affecting the white minority who owned the bulk of the economy. The redistributive policies and interventions included initiatives such as the Affirmative Action (AC) Policy, Employment Creation, Land Reform, Government Expenditure, Personal Income Tax, Education, Health, Creation of new State Owned Enterprises (SOES) and Black Economic Empowerment (BEE), were introduced and implemented in the 1990s and 2000s. We will briefly discuss some of these policy measures individually below.

2.1.1 Expansionary Fiscal Policy (Government Expenditure)

Government used both government expenditure and personal income tax to redistribute income and fight poverty and reduce income inequality. The new government was inheriting a huge infrastructure backlog especially in the areas of education, health, housing, water and electricity supply, roads, and telecommunication infrastructure. In addition, poverty, unemployment, and income inequality was very high and rising among the black majority. Fiscal policy was the most effective policy instrument that the Namibian government employed over the past 30 years to grow the economy, fight poverty, and reduce income inequality through social spending on education, health and social income grants. Table 1 below clearly demonstrates the stance of fiscal policy over the past thirty years. Government expenditure doubled every five years or an increase of more than 25% every year. This was mainly concentrated in addressing the inequality in the education and health system as can be seen in Table 2 below show that spending on education and health was doubling every five years. In addition, we see in table 2, that spending on social grants covering old age, disability and vulnerable children also doubled every five years since 1990.

Table 1: Expansionary Fiscal Policy (1990-2020)

Years	N$ (Billions)	Annual % Change
1990	2,213	
1995	3,814	172%
2000	7,976	209%
2005	12,492	157%
2010	24,914	199%
2015	58,769	236%
2019	65,682	112%

Sources: MoF & FC Research

Table 2: Budget Allocation to Social Ministries

Budget allocation to social ministries over the years (N$ million)							
	1990	**1995**	**2000**	**2005**	**2010**	**2015**	**2019**
Education	503,5	966,9	2 061,5	3 171,0	6 721,0	11 823,3	13 768,0
Budget growth		92%	113%	54%	112%	76%	16%
Gender Equality and Child Welfare	105,6	256,1	386,3	141,4	453,1	766,4	891,5
Budget growth		143%	51%	-63%	220%	69%	16%
Health and Social Services	302,0	508	926	1 335	2 388	6 576	6 889
Budget growth		68%	82%	44%	79%	175%	5%

Sources: MoF

2.1.2 Affirmative Action (AA)

Expansionary fiscal policy was complemented by other policies such as the Affirmative Action (AA) policy. Black people or previously disadvantage people were during the apartheid era excluded from occupying certain jobs and positions reserved only for whites. This then meant most of the jobs and positions in government and private sector were occupied by whites only. The affirmative action policy on employment was aimed at forging a racial balance among employees in all sectors and this was done through the Affirmative Action (Employment) Act of 1998 which reads as: "*a set of measures designed to ensure that persons in designated groups enjoy equal employment opportunities at all level of employment and are equitably represented in the workforce of a relevant employer*".

The AA policy resulted in large number of black Namibians climbing the corporate ladder and occupying key positions in government. Implementation of the AA policy contributed to the emergence and rise of a new middle-income class with strong buying power. The new black middle-income group became a target for the banking sector and lending to this segment of the population rose substantially and stimulated aggregate demand in the Namibian economy. As demand for housing increased new suburbs were created and the housing market was booming throughout the 1990s and 2000s. In addition, the new middle-class demand for products (goods and services) increased and this led to establishment of new shopping malls with the entry of many shops from all over the world. Unfortunately for government, the increase in number of civil servants and the annual inflation adjustment led to rising government wage bill that has now become a challenge for government to sustain.

2.1.3 Land Ownership (Land Reform)

The apartheid system did not allow black people to own commercial farms and restricted subsistence farming and land possession by blacks to rural areas. It was a clear SWAPO policy to return land back to the black people in line with the provisions of the Namibian Constitution mandates that land reform must take place. The government believed that the share of land ownership by previously disadvantaged/black people will have a positive effect on the wealth/capital accumulation of the previously disadvantaged people as land is one of the factors of production. It was also believed that the transfer of land to blacks will boost their incomes as they begin to produce on the land. Increases in land ownership means direct increase in income through its capacity to generate income, and a rise in income would lead to greater capital accumulation.

2.1.4 Business Ownership (Black Economic Empowerment - BEE) Policy

In addition to the AA and land reform policies, the government undertook to Namibianise the economy and to this end BEE Policy framework was introduced. It is aimed at redressing imbalances of the past by seeking to substantially and equitably transfer and confer the ownership, management, control and development of Namibia's financial and economic resources to the majority of its citizens, to meaningfully reflect the demographics of Namibia. All sectors of the economy were targeted and sectors such as fishing, financial services, commercial agriculture, mining, tourism are now significantly owned by black entrepreneurs, with many companies owned by previously disadvantaged Namibians operating successfully in these sectors.

2.2 Integrating Namibian economy through regional economic blocks

In an effort to diversify and transform the Namibian economy and given the small population of Namibia, the government decided to join political and economic blocs in order to have access to larger markets to boost its exports and access foreign investments. The political environment prevailing at the time of independence also dictated as to which economic blocks Namibia ascended to first. Prior to independence, the SWAPO Party was a member or observer to a number of regional and international organizations, and this made it easy for Namibia to formally join these organizations. The new government in 1990, decided to officially join regional economic blocks such as SADC, SACU, CMA etc. In this section we highlight Namibia's membership of SADC, SACU, and CMA as membership of these organizations presented both opportunities and constraints to Namibia's vision of industrializing and diversifying its economy. Membership of these regional bodies has both negative and positive implications on the country's economic policies aimed at transforming the economy.

2.2.1 Southern Africa Development Corporation (SADC)

Namibia officially joined SADCC in 1990 after gaining independence from South Africa in 1990. In 1992, the *Southern African Development Coordination Conference* (SADCC) was renamed to SADC. The establishment of SADC marked the transition from an organization that focussed on political coalition of former frontline states to a bloc with a broader agenda of regional economic integration. By the end of 2018, SADC had 16 members with an estimated population of 345.2 million with three countries accounting for 57% of the total SADC population. The largest population share in the region in 2018 was in DRC (26.6%) followed by South Africa (16.7%) and Tanzania (15.7%). Namibia with a population of 2.4 million accounted for less than 1% (0.70) percent of the total SADC population. SADC's aim was to create a single market, allowing free flow of goods and services, without any internal borders or other regulatory obstacles to the free movement of goods and services. For a small open economy like Namibia with a small market and small population, SADC presented a great opportunity for the country to diversify its economy by expanding its exports to other SADC member states.

Trade liberalization is one of the core elements of regional economic integration within the SADC region. In 2018, intra-SADC exports of goods stood at about $37.3 billion whilst intra-SADC imports was at $ 35.3 billion. There are many advantages of joining an economic bloc, but there are also many obstacles that can constrain the economy's diversification as member states have to abide by certain rules and conventions. Below we present some selected economic indicators that compares Namibia with other member states. South Africa and

Angola are the two SADC giants that borders Namibia and accounts for 66% of total SADC GDP as at the end of 2018. These two countries present bigger markets for Namibia, but the question is whether Namibia has positioned itself and defined a penetration strategy to secure a bigger market shares in these two big economies. Table 3 illustrates trend in Namibia's share in the GDP of both South Africa and Angola covering the period from 1990 to 2018. For the past 30 years (1990 to 2019), Namibia's GDP share of the SA GDP remained at 3% before increasing slightly to 4% in 2018, while the country's share of Angola's GDP fluctuated from 17% in 1990, rising to 20% in 2000, before declining to 14% in 2018. We see in Table 3 that Namibia's economy is very small in comparison to these two member states of SADC. It is therefore very important for Namibia to define its position clearly rather than trying to behave like a big player, it must accept the reality and develop positioning and penetration strategies that are suited for a small economy and how it must interact with such big players.

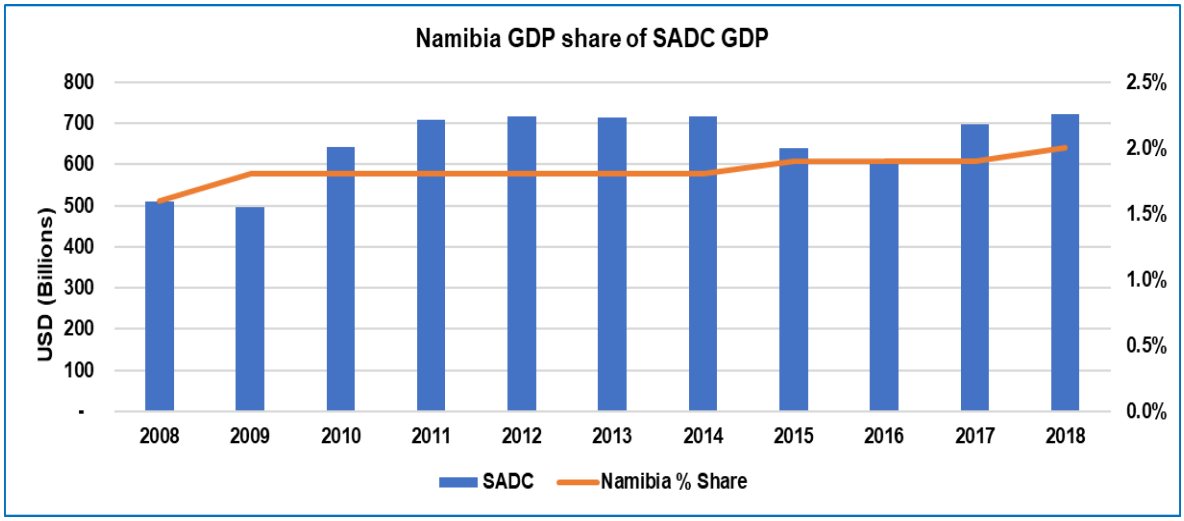
Table 3: Namibia's share of SA's and Angola's GDP

Year	South Africa GDP (US$, Billions)	Namibia GDP as % of SA Economy	Namibia GDP (US$, Billions)	Namibia GDP % of Angola Economy	Angola GDP (US$, Billions)
1990	235.4	3%	5.55	17%	36.6
1995	277.2	3%	7.60	24%	34.8
2000	345.8	3%	9.82	20%	50.8
2005	468.7	3%	13.92	16%	88.5
2006	510.2	3%	14.91	15%	101.7
2007	551.9	3%	15.87	13%	119.1
2008	580.7	3%	16.61	13%	135.0
2009	576.1	3%	16.78	12%	137.2
2010	600.8	3%	18.02	12%	145.5
2011	633.4	3%	19.32	12%	153.7
2012	659.3	3%	20.68	12%	170.0
2013	686.6	3%	22.19	12%	181.6
2014	711.8	3%	24.02	12%	194.0
2015	728.8	4%	25.74	13%	197.9
2016	742.2	4%	26.35	13%	194.9
2017	765.6	4%	26.51	14%	193.6
2018	765.6	4%	26.51	14%	193.6
2019	765.6	4%	26.51	14%	193.6

Sources: SADC

Figure 1 below compares Namibia's GDP to total SADC GDP over the past ten years (2008 – 2018). The share trend has remained almost flat at an average of 1.8% of SADC GDP. With such a small economy within the SADC bloc, Namibia need to come up with innovative strategies to position the country both in SADC and globally. The country's long history with South Africa and Angola and the excellent relationships that exists between Namibia and its two giant neighbours must be exploited if Namibia is to survive and grow its economy. Unlike the colonial era when comradeship relationships existed, each country within SADC is concerned with their economies and the protection and advancement of their interests.

Figure 1: Namibia and SADC GDP (US$)



Sources: SADC

Table 4: Namibia GDP share in SADC GDP (US$)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Namibia	8 346	8 954	10 911	12 602	13 032	12 659	12 848	11 725	11 293	13 579	14 446
SADC	508 737	496 902	614 470	708 572	717 940	712 186	716 470	639 406	601 602	696 643	721 321
% Share	1.6%	1.8%	1.8%	1.8%	1. 8%	1.8%	1.8%	1.8%	1.9%	1.9%	2.0%

Sources: SADC

2.2.2 Common Monetary Area (CMA)

Prior to 1990, the then South West Africa (Namibia) was part of the Rand Monetary Agreement (RMA), signed in 1974, which formalised the use of the South African Rand as the only legal tender in the region including Namibia. After 1990, Namibia decided to return the South Africa Rand as a legal tender that co-circulates alongside the Namibian dollar. There are currently four members of a Common Monetary Area (CMA), namely, Lesotho, Namibia, Swaziland and South Africa. In the CMA, currencies of Lesotho, Namibia and Swaziland are pegged at par with the South African Rand. While the South African Rand is allowed to be used as money in all countries in the CMA, the national currencies of Lesotho, Namibia and Swaziland are not accepted as legal tender in South Africa. An important implication of the CMA is that, Namibia, Lesotho and Swaziland do not have an independent monetary policy from that of South Africa and cannot use exchange rate as a policy instrument. CMA members inflation and interest rates move in line with those of South Africa due to common monetary within the area. With price of goods in South Africa at par or lower than those in CMA, it becomes difficult for other member states to compete with SA especially in the goods markets. The loss of both monetary and exchange rate as policy instruments leaves Namibia, Lesotho and Swaziland with very few policy options.

2.2.3 Southern Africa Customs Union (SACU)

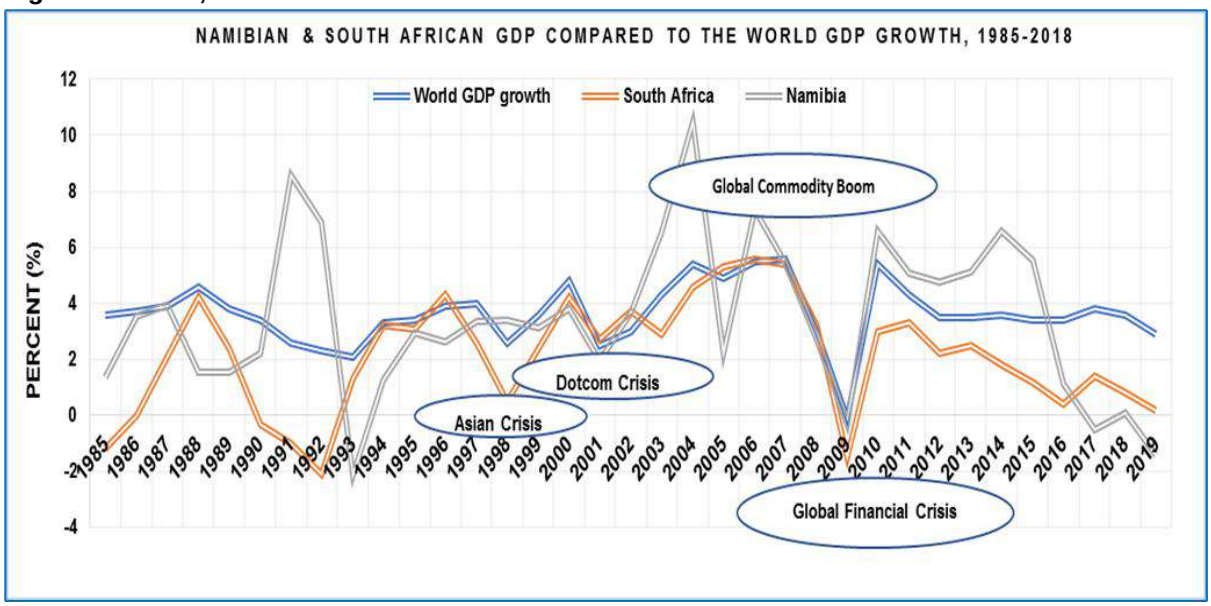
Namibia has been a member of SACU even before its independence in 1990. SACU's aim is to maintain the free interchange of goods between member countries. It provides for a common external tariff and a common excise tariff to this common customs area. All customs and excise collected in the common customs area are paid into South Africa's National Revenue Fund. The revenue is shared among members according to a revenue-sharing formula, as described in the agreement. South Africa is the custodian of this pool. Only the BLNS Member states' shares are calculated, with South Africa retaining the residual. SACU revenue constitutes a substantial share of the state revenue of the BLNS countries. Membership of SACU makes industrialization in small member states very difficult due to the dominance of South Africa.

2.3 Globalization (Global Economic Crisis & the Namibian Economy)

The birth of the new Republic of Namibia coincided with the end of the cold war and the dissolution of the Soviet Union in 1991 that also lead to the formation of 13 independent states with some of these states opting to become members of the EU. The SWAPO Party was very close to the former Soviet Union and the collapse of the USSR meant Namibia had to search for new friends globally even those countries that did not support the liberation movement. Globalization which refer to international integration in commodity, capital, and labour markets (Bordo et al, 2003) became much more pronounced in the 1990s due to advance in innovation and communications. The number of mobile phones increased due to the introduction of second generation (2G) networks using digital technology in the early 1990s and the launch of the first 2G-GSM network by Radiolinja in Finland (1991). In addition, an invention of the World Wide Web by Tim Berners-Lee in1989 with the first web site put online in 1991 and the number of internet users rose to close to 300 million by the late 1990s. The end of the cold war and the arrival of internet and cell phones in the 1990s saw an explosion in global movements of goods, capital, people and services and Namibia had no choice but go by the trend. The Namibian economy is one of the most open, highly integrated into the global economy through trade, free flow of capital and high number of tourists visiting the country. The country's economy is sensitive to developments in South Africa and the world economy. It is particularly influenced by the external demand of its three most important exports (minerals, fish and meat products).

Figure 2 shows relations between Namibia and SA GDP Vs World GDP since 1985 to 2019 and a number of economic crisis that affected the world economy and how Namibia GDP responded. Between 1991 – 1992, SA entered a recession (negative growth of more than 2%) caused mainly by domestic political instability despite the global economy posting positive growth of more than 2%. Despite the recession in SA in 1992, Namibia registered one of the highest GDP growth of more than 8% mainly on account expansionary fiscal policy (expansionary government expenditure). Unfortunately, the high GDP growth in Namibia could not be sustained as Namibia followed SA and registered a negative GDP growth of more than 2% in 1993 caused mainly by contraction fiscal policy due to declining government revenue. Although the world economy was registering positive economic growth, the USA entered into a recession in 1992 and this affected growth in European countries which in turn affected demand for commodities and other Namibian products.

Figure 2: World, SA and Namibia GDP Growth



Sources: NSA & IMF

2.3.1 Asian financial crisis

The Asian financial crisis began in Thailand in 1998 and spread quickly to economies such as the Philippines, Indonesia, Malaysia, and South Korea. As a result of the devaluation of Thailand's baht, a large portion of East Asian currencies fell by as much as 38 percent and international stocks also declined as much as 60 percent. Figure 2 above shows how the world economy, Namibia and SA responded to the Asian financial crisis. While Namibia GDP declined in 1998, the impact of the Asian crisis was heavy on the SA economy which registered 0.5% growth in 1998, while Namibia had GDP growth of more than 3%. Despite Namibia being one of the most open economy, the composition of its exports cushioned it from the Asian crisis.

2.3.2 The Dotcom Crisis

The dot-com bubble, also known as the tech bubble or Internet bubble burst of 2000 had a significant impact on the global financial markets with a spill over on the real economy. Around the turn of the millennium, spending on technology was volatile as companies prepared for the Year 2000 problem. There were concerns that computer systems would have trouble changing their clock and calendar systems from 1999 to 2000 which might trigger wider social or economic problems, but thanks to large-scale efforts to correct the bug before the year 2000, there was virtually no impact or disruption. Between 1995 and its peak in March 2000, the Nasdaq Composite stock market index rose 400% only to fall 78% from its peak by October 2002, giving up all its gains during the bubble. Figure 2 shows that the impact of the dot-com crisis was not as severe as the Asian financial crisis, with the Namibia and SA GDP declining but growing positively above 4.2% in 2000.

2.3.3 Commodity Boom and Bust

The Namibian economy/GDP has a high degree of dependence on the mining sector and mineral exports accounts for more than 50 percent of total exports. Between 2001 and 2007, prices of many commodities, including copper, uranium, nickel, diamonds, platinum and petroleum rose to record highs, and contributed significantly to good growth in Namibia as shown in figure 2 above. The commodity boom came to a halt in 2008 and the economy contracted significantly. As the prices of these commodities decline, Namibia's balance of trade deficits widened further.

2.3.4 The Global Financial Crisis

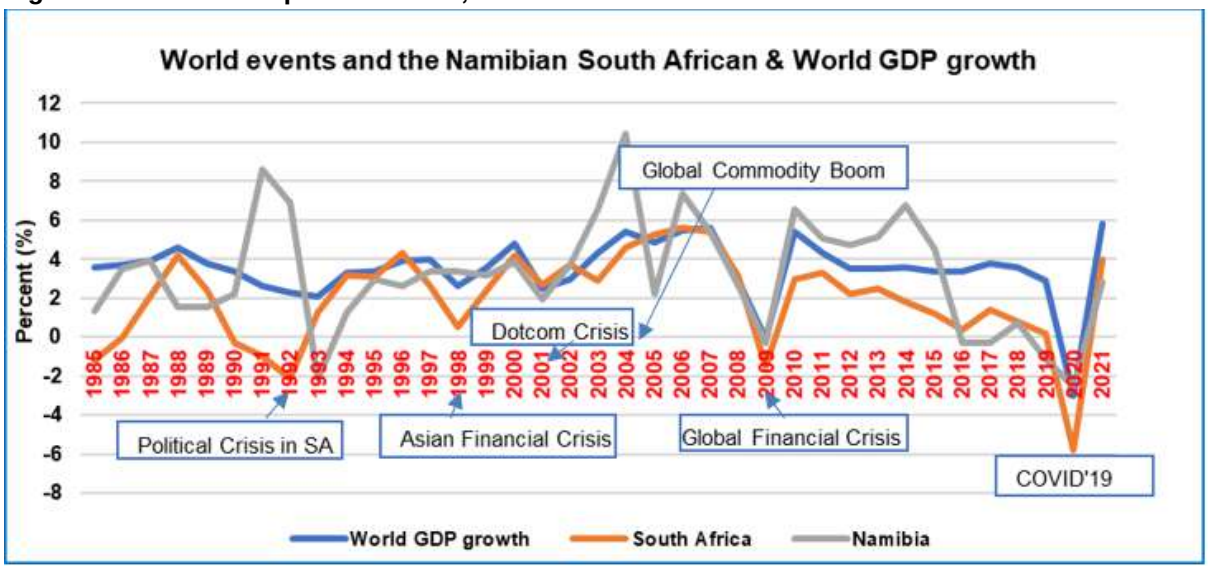
The last major economic crisis experienced by the world was the global financial crisis of 2008 which resulted in the biggest shock to global financial markets since the 1930s. The financial crisis of 2007–2009 has been called the worst financial crisis since the Great, and it contributed to the failure of key businesses, declines in consumer wealth estimated in the trillions of U.S. dollars. The years before the crisis in 2008 were characterized by a combination of rising oil prices, rising food prices, easy credit conditions, aggressive lending practices and less disciplined risk management. Unlike other global economic crisis, the 2007 – 2009 global financial crisis was deep, pulling the world economy, Namibia and SA economies into negative growth simultaneously (Figure 2). Commodity prices and stock market indices crushed during the same period and for the first time, the Namibian economy started trending together with the world economy.

2.3.5 COVID – 19 (Corona Crisis of 2020 & the Namibian Economy)

2020 looked like a good and peaceful year with no major global crisis suspected, however, that was not to be with the arrival of the corona virus. COVID - 19, first detected in the Chinese city of Wuhan in December 2019, has infected more than 4.9 million people and more than 300,000 had deaths reported by 21 May 2020, according to the World Health Organization (WHO). The virus outbreak has led major institutions and the IMF to cut their forecasts for their global economy. The IMF downgraded world economic growth at negative 3 percent (-3%) in 2020. The Namibian economy was already on a fragile footing when the coronavirus disease 2019 (COVID-19) appeared in January 2020. The economy entered a recession in 2018 and for the past three years, GDP growth has been in negative territory and many economists had initially forecasted that 2020 will be a better year with GDP growth of more than 1%. However, with the arrival of COVID-19, the projections are that the economy is likely to register a negative GDP growth of 6 percent (- 6%) in 2020 according to Bank of Namibia.

The IMF on the other hand is more optimistic and estimate Namibia's GDP to post a growth of negative 2.5 percent (-2.5%). In this section we trace the impact of the COVID-19 on the Namibia economy. Figure 3 below shows IMF forecasts for the world economy, South Africa and Namibia with SA projected to record worst growth of -5.8% in 2020 while the world and Namibia are projected to grow by -3% and -2.5% respectively. Without China, which is projected to register growth of more than 4%, the world economy would have registered a much worth growth than projected as the USA is projected to grow by – 7% in 2020.

Figure 3: COVID'19 impact on World, SA and Namibia GDP

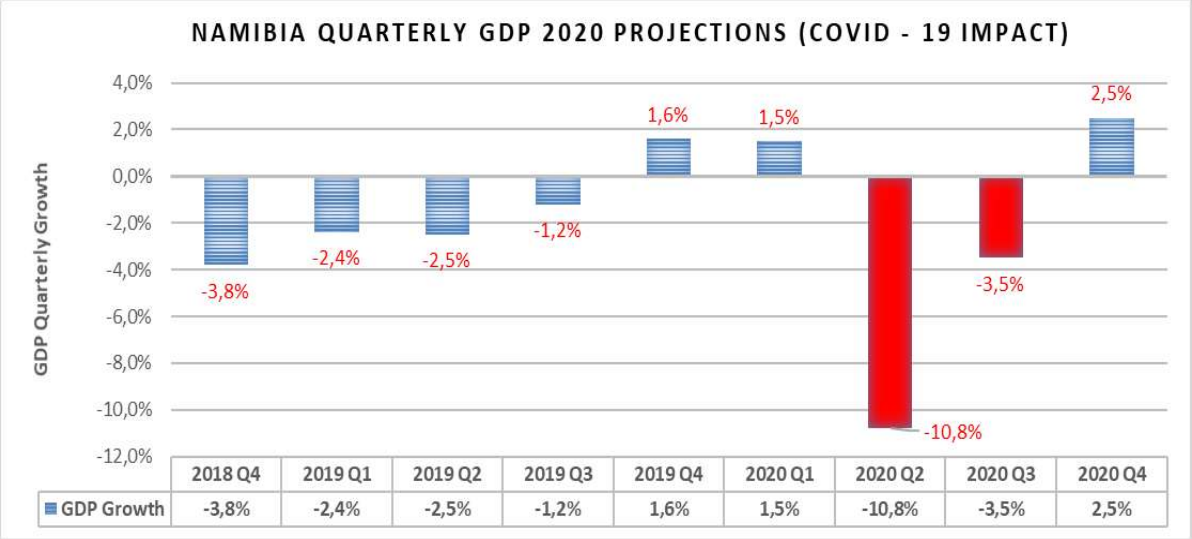


Sources: IMF &NSA

In Figure 3 above, we have presented that Namibia is likely to experience a V-shape type of recovery and below we present how the economy will behave over the four quarters of 2020 (figure 4). The lockdown was only effected on the 27th of March 2020 almost the end of quarter one of 2020, we do not see a major impact in Q1 2020 caused by COVID - 19 and project the economy to have posited a positive growth of 1.5% maintaining the strong growth recorded in quarter 4 of 2019 when the economy registered the first positive growth after registering three negative growth consecutively in 2019. Quarter 2 of 2020 will bear the full impact of Covid-19 as April month was the total lockdown month with the economy and production coming to a standstill in almost all sectors of the economy. In early May 2020, Namibia moved to stage 2 where production resumed in sectors such as mining, manufacturing, fishing, and other services sectors. Many companies re-opened and workers resumed their work and by 2nd June 2020, Namibia moves into stage 3 and most of the restrictions will be lifted and the economy is expected to swing back into full production.

We project production to have significantly contracted in quarter two (Q2) of 2020 by -10.8%. In quarter 3 of 2020, Namibia moves in stage 3 and 4 and if no new cases are discovered, almost all restrictions will be lifted and the economy will be operating fully, although borders will still be closed for movement of people and open for goods. We project the economy to register a negative growth of -3.5% in Q3 of 2020. In the fourth quarter of 2020, restrictions in most of the global economies will have been lifted and the impact of the fiscal and monetary stimulus comes through. Namibia is likely to implement a sizable fiscal expansionary policy in the 2020/21 budget, and this will stimulate economic activities. A combination of these factors will enable the economy to produce a positive GDP growth of 2.5% by the fourth quarter of 2020 and the average growth for the Namibian economy in 2020 will be at -2.5% in line with the IMF projection of -2.5%.

Figure 4: Namibia Quarterly GDP 2020 Projections



Sources: FC Research

To contain the COVID-19 outbreak, all countries globally authorities closed borders, locked down cities, suspended airline travels, restricted movements of millions of people, and suspended business operations, moves that has already started to slow down the world's big economies (EU, USA, China, Japan) and drag down the global economy along the way. Stock markets all around the globe have plummeted due to fears of a coronavirus-driven deep recession while oil price have declined by more than 50% since the outbreak of virus in January 2020. The Covid-19 crisis will affect the Namibian economy and transmitted mainly through five channels (demand side of the economy): capital flows (fixed investment) channel, personal/private consumption channel, international trade channel; government budget (expenditure & revenue) channel, financial channel; and financial markets (bond and stock market channel). Below, we discuss briefly how COVID – 19 transmitted through these channels:

2.3.5.1 Private Consumption

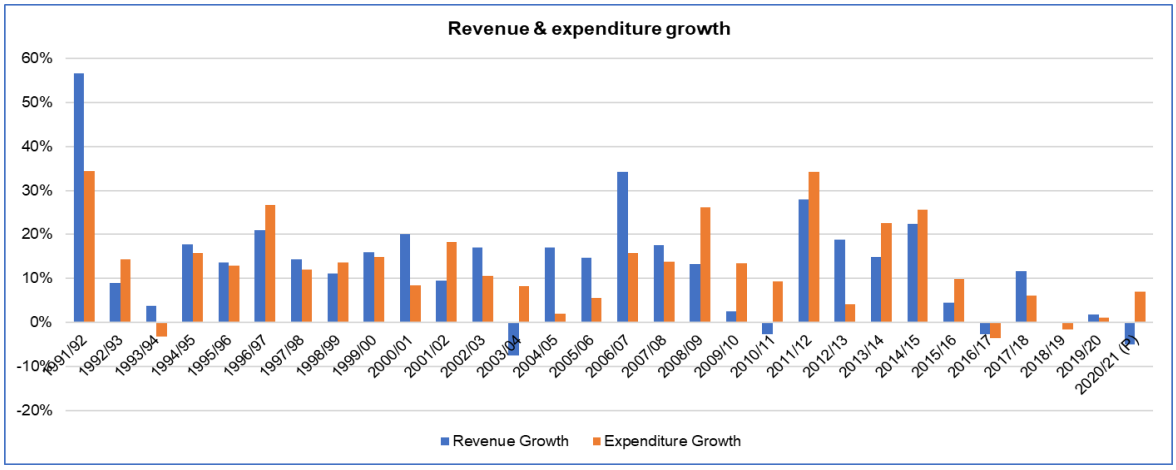
In Namibia, final consumption (private and government consumption) comprised as much as 70% of total GDP in 2019 and is positively correlated with level of income. This means the higher the income the higher the consumption or spending. The coronavirus crisis has forced many companies to close or retrench and the informal economy which has been very vibrant and supported consumption has been disrupted. Due to high unemployment combined with continued retrenchments, and the closure of informal businesses, income levels are going to fall significantly and drug consumption (consumer spending) down further. In addition, there will be contraction in credit availability as banks tightens lending to manage risk posed by Covid-19 crisis. Credit availability through the banking system has been one of the major sources or factors driving consumption higher. In addition, due to major decline in interest rates, including the fall in asset prices (shares, properties, bonds), savings of many Namibians will be negatively affected. The fall of income due to rising unemployment and temporary retrenchments, the decline in savings levels due to falling investment yields and the contraction in the availability of credit suggests that Namibia real consumer spending (consumption) in 2020 could fall significantly and impact the economy negatively.

2.3.5.2 Government Budget (Expenditure & Revenue) Channel

The decline in Namibia's GDP estimated to register a negative growth of 2.5% (IMF projection) and the closure of a number of businesses will lead to a decrease in both direct and indirect government tax revenue. In addition, the lockdown affected business operations and it is certain that the majority of businesses will be reporting higher losses and reduced profits which eventually translates to lower tax revenue. Government revenue have been contracting over the past five years and the Covid-19 have just worsened the situation with government revenue now projected to fall significantly. Such a reduction in government revenue leaves very little room for expansionary expenditure and pushes government in a tight corner. Government deficits and debt levels have also skyrocketed over the past few years giving government little scope and room to borrow without compromising debt sustainability. It is in times like this when tough decisions have to be made. Government can choose to stick to a conservative fiscal policy and contain expenditure in line with revenue growth and keep debt and deficit levels at current levels and hope the economy will recover on its own.

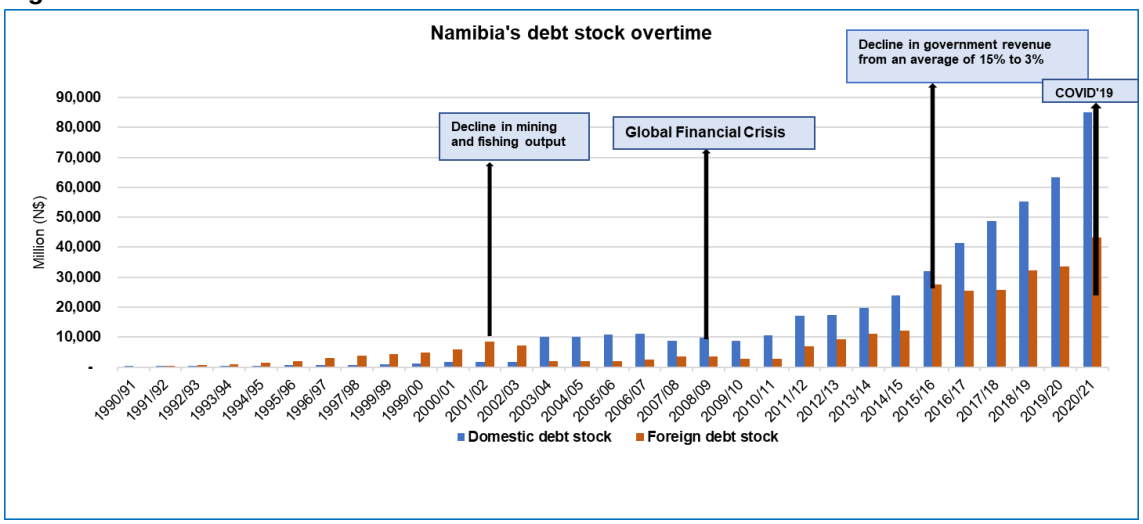
On the other hand, government might be brave and borrow and undertake massive expenditure to boost consumption and support sectoral output and bailout some struggling sectors and companies. It is our view that government will not sit idle and expect a miracle to happen but will take a lead in pulling the economy out of the recession it entered years ago and worsened by the Covid-19 crisis. We project government consumption/expenditure to increase significantly by 7%, with massive spending to boost personal consumption, spending on social safety net, construction for housing, agriculture spending, demolishing of squatters /informal housing as part of capital spending. We further project revenue to fall by 5% and government borrowing to rise substantially by 30% as presented in figure 6 below.

Figure 5: GRN revenue and Expenditure Growth



Sources: FC Research

Figure 6: Government debt trend



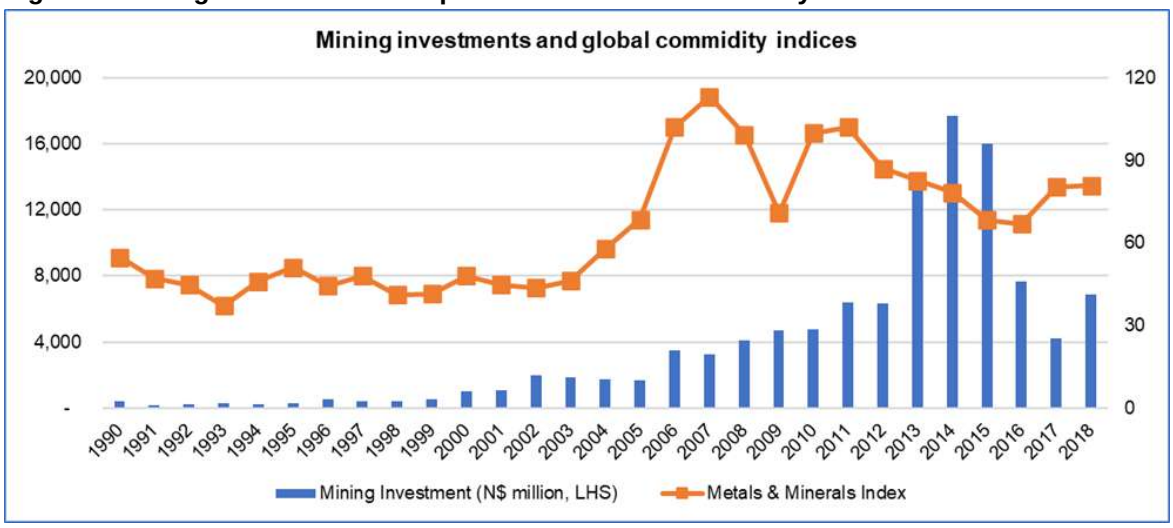
Sources: BoN, MoF

2.3.5.3 Capital Flows (Fixed Investment) Channel

Capital flows (foreign direct investment) is another channel through which the current COVID - 19 crisis could affect the Namibian economy. Figure 7 below shows the level of foreign direct investment (FDI) from 1990 to 2019. In 2014 when FDI was at its highest growing by 22%, Namibia's GDP increased by 6.8%. However, in 2016, Namibia recorded one of the lowest growths in FDI registering a negative growth of 27% (- 27%) and this contributed to a major contraction in the economy with GDP growth of -0.3%. it can be observed from Figure 7 below that as FDI fail to recover, the economy remained trapped in low growth trend and registering negative growth of 1.1% (- 1.1%) in 2019. Foreign Direct Investment according to UNCTAD (2020), is expected to drop between -5% and -15% due to the impact of COVID – 19. More than two thirds of the multinational enterprises (MNEs) in UNCTAD's Top 100, have issued statements on the impact of Covid-19 on their business and profitability. Many are slowing down capital expenditures in affected areas. In addition, lower profits to date, 41 have issued profit alerts that will translate into lower reinvested earnings. According to UNCTAD on average, the top 5000 MNEs, which account for a significant share of global FDI, have seen downward revisions of 2020 earnings estimates of 9% due to Covid-19. Hardest hit are the automotive industry (-44%), airlines (-42%) and energy and basic materials industries (-13%). Africa and Namibia being dependent on FDI will be the most affected and this will bear a significant negative impact on their economies.

Gross Fixed Capital Formation declined by 29% in 2016 followed by further contractions of 24 and 14% in 2017 and 2018 respectively. The most notable sector contributing to the slow GFCF is the mining sector which posted the deepest decline of 35 percent in 2016 followed after another decline of 12 percent in 2015. The following years, 2017 and 2018 also recorded negative growth in GFCF of 12 and 2% respectively. The trend of GFCF is furthermore, in line with the trend of the world Bank's price Index of base has been slowing during the similar period. Most notable the Price Index dipped by 10 and 16 percent in 2014 and 2015 respectively.

Figure 7: Mining Investments Comparison to Global Commodity Prices



Sources: NSA & IMF

2.3.5.4 The Trade Channel

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 World Trade Organization (WTO) on April 2020, forecasted that global trade volumes are projected to decline between 13% and 32% in 2020 as a result of the economic impact of COVID-19. North America imports are forecasts to contract between a range of –14.5% and –33.8% in 2020, while Europe is forecast to contract between a range of --10.3% and –28.9% in 2020. Both North America and Europe are major trading partners for Namibia. Asia imports are projected to contract by a range of between –11.8% and - 31.5% in 2020. Namibia's exports are dominated by raw materials, which subjects it to low offers from European, China/Asian and American industries. Exports of merchandise overtime is dominated by diamonds, followed by the other mining (which is composed by uranium, copper, gold, silver and more). Among the top exported overtime is live animal and meat products and other manufactures such food products.

Table 5: Expenditure on GDP

ECONOMIC VARIABLE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Private Consumption	-1%	15%	16%	16%	11%	18%	14%	3%	8%	-20%
Government Consumption	18%	-1%	28%	20%	14%	6%	5%	6%	6%	-13%
Gross Fixed Capital Formation	-1%	-4%	31%	14%	34%	8%	-29%	-24%	33%	-2%
Gross Domestic Expenditure	3%	8%	24%	15%	24%	3%	0%	-5%	-3%	1%
Export of goods & services	0%	4%	13%	13%	8%	-8%	-1%	2%	16%	-2%
Import of goods & services	-9%	3%	24%	13%	29%	-3%	0%	-9%	4%	3%
Exchange rate	12%	3%	-13%	-16%	-23%	-3%	-20%	9%	1%	-9%

Sources: NSA

2.3.5.4 Policy Response to Covid-19 Crisis

Namibia have passed through many global crises since 1990 and among others are the global financial crisis of 2008, the Asian financial crisis of 1997/98, the global food crisis and different oil crisis in addition to the boom/bust commodity prices over the years. In all these crises, the Namibian government never panicked or overreacted but remained steady fast and responded responsibly. According to Peter Senge's first law of The Fifth Discipline: "*today's problems come from yesterday's solutions"*. For example, the problem Namibia might be facing today is likely the result of a series of solutions and interventions implemented over the past 30 years. Calls are being made from many corners for government to go and borrow money and flood the economy with cash to solve the economic crisis in the country caused by Covid-19. In search of a solution to the Covid-19 crisis, the Namibian government must avoid sowing the seeds of tomorrow's problems with today's solutions. While previous economic crisis such as the global financial crisis, were essentially **demand shocks** and required fiscal and monetary policies to alleviate the negative impact of the a demand shock, the Covid–19 is not a demand shock but a **supply shock** to the economic system, which eventually creates a demand shock. In case of a demand shock (e.g. global financial crisis), the economy contracts, slowdown and shuts because one sector of the economy is in a crisis (housing market crisis leads to financial sector crisis and eventually negative impact transmitted to the rest of the economy). In this case government respond and fights back by using both demand management policies such as monetary and fiscal policies to stimulate demand and counteract the initial impact that led to lower income and lower demand. Government in the process pays a high price reflected in high deficits and rise in total debt but over time win the battle and the economy stabilizes and is restored back to its original equilibrium.

The crisis caused by Covid-19 is a **supply shock** as everything in the economy was functioning as normal and for Namibia 2020 was even promising year in terms of economic growth. Governments decided to fight the COVID-19 by locking citizens in their houses, prohibited people going to work and caused a sudden contraction of the labour supply, closing borders affected the free flow of goods and people, shutting down the economy by instructing most business to stop production. With the collapse in production and reduced trade, prices of goods started rising and begin to bite consumers. In addition, prices of services such as transport started rising again reducing the buying power of consumers. Many Namibian businesses had weakened balance sheets before the arrival of Covid-19 due to the recession Namibia experienced between 2017 and 2019 and government response to fighting the pandemic only deteriorated their balance sheet further. The policy makers must remember that when you face a supply shock, policies like monetary and fiscal policies, that aims only to pump money back into the economy may not be as effective as they are in responding to a demand shock. Government must therefore properly evaluate and carefully identify those sectors that are indeed struggling and why they are struggling. The Namibian economy was already in a recession when the COVID-19 pandemic arrived, and many companies were already struggling especially in the tourism industry, construction, wholesale & retail, and mining sector. The agriculture sector was emerging from the crisis caused by drought. Unless we identify and define the problem correctly, we may prescribe wrong solutions that will sow the seeds of tomorrow's economic problems.

CHAPTER 3: STRUCTURE AND PERFORMANCE OF THE ECONOMY

"*Clearly the Government and people of Namibia are faced with a formidable challenge. The colonial structure of the country's economy requires fundamental change, not a mere adjustment. The underdevelopment and dual* nature *of the economy must be overhauled completely and not just reformed. Namibians will not succeed in removing the current economic ills confronting us unless our efforts are directed at the outer constituency and periphery of the economy, (Dr. Sam Nujoma, Founding Father of the Republic of Namibia*" *NDP 1 Foreword message, 1995)*.

The above statement by founding President Dr. Sam Nuyoma reflected the stance of the ruling Swapo party who feared that without effective economic structural change and transformation, the inherited colonial economic system will continue to reproduce racialised poverty and inequality and will end up in an economic crisis and reverse all the gains achieved over the years. The government therefore called for corrective measures, systemic economic policy interventions which was not only be growth-enhancing, but which was also to ensure that the pace and pattern of economic growth will unswervingly move Namibia towards an inclusive economy and an equal society to unite all Namibians, black and white. To this end, the SWAPO government wanted a radical economic transformation that was to fundamentally change the structure of the Namibian economy from an exploitative exporter of raw materials and agriculture, to one which is based on beneficiation of mineral resources and manufacturing as the key driver of economic growth and ensuring more equity with regards to incomes, ownership of assets and access to economic opportunities by all Namibians. This was the vision of the leadership at the time of independence and below we present facts to show how the economy has evolved over the past 30 years (1990 to 2020).

3.1 Distinguishing 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.

3.1.1 Degree of Openness in SADC (2008 – 2018)

The openness of the Namibian economy reflects its involvement in international economic relations represented by the flow of goods, services, input factors. The degree of openness of the economy is usually expressed by the ratios: export/GDP, Import/GDP or (Export + Import)/GDP and in this paper we use the combined exports and imports as a percent of GDP (Export + Import)/GDP. In Table 6 below, we compare Namibia and few selected SADC countries and it appears that Namibia is heavily dependent on international trade than most of the SADC economies. A country with a ratio of close to 1.0 or above 1, shows that the country is vulnerable to global events, that is, a significant changes in foreign economic variables are having an impact on the macroeconomic variables - GDP, employment and price level. South Africa's degree of openness is low ranging between 0.4 and 0.6, meaning the country has a large internal market and may be a self-sufficient economy, but also low degree of openness in a country like Zambia can be attributed to being underdeveloped economy with low competitiveness at the world market.

Table 6: Degree of Openness (Exports + Imports/GDP) in SADC Countries

DEGREE OF OPENNESS ((IMPORTS + EXPORTS) /GDP) IN SADC					
Year	**Namibia**	**South Africa**	**Mauritius**	**Botswana**	**Zambia**
2008	1.12	0.63	0.70	0.92	0.56
2009	1.06	0.48	0.61	0.84	0.53
2010	1.14	0.46	0.66	0.85	0.61
2011	1.00	0.51	0.66	0.77	0.68
2012	0.98	0.52	0.68	0.92	0.72
2013	1.03	0.55	0.68	1.05	0.75
2014	1.13	0.56	0.68	0.77	0.70
2015	1.05	0.52	0.63	0.91	0.73
2016	1.02	0.50	0.57	0.86	0.66
2017	0.77	0.48	0.57	0.63	0.62
2018	1.06	0.50	0.56	0.69	0.70

Sources: SADC

Table 7 presents the degree of openness of the Namibian economy over the period 1990 – 2018 using local currency (N$). It appears that the Namibian economy has been a very open economy since independence in 1990 when the degree of openness stood above 1 with the exception of the period 2000 – 2007 when this ratio was below 1.0. The average ratio for the period 1990 to 2018 stood at 1.0, confirming that Namibia is one of the most open economies in the world and freely allows the movement goods and services without restrictions. However, such high degree of openness has been identified as one of the major reasons why some countries have failed to change the structure of their economy and industrialize as the country has access to cheaper manufactured products. This may explain why Namibia's economic structure remain relatively unchanged over the past 30 years as we demonstrate below.

Table 7: Degree of Openness of The Namibian Economy

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	3,162	3,834	1,16
1991	6,857	3,761	4,419	1,19
1992	8,050	4,276	5,110	1,17
1993	9,302	4,951	5,587	1,13
1994	11,550	5,651	6,158	1,02
1995	12,706	6,288	7,073	1,05
1996	15,013	7,593	8,796	1,09
1997	16,750	7,961	9,638	1,05
1998	18,786	8,637	10,900	1,04
1999	20,686	9,548	11,773	1,03
2000	27,125	10,811	12,119	0,85
2001	30,535	12,446	14,226	0,87
2002	35,430	16,230	16,966	0,94
2003	37,304	17,396	18,617	0,97
2004	42,679	16,991	17,959	0,82
2005	46,177	18,678	18,615	0,81
2006	54,028	24,566	22,454	0,87
2007	62,303	31,553	32,310	1,03
2008	72,904	40,068	39,446	1,12
2009	75,214	38,270	41,387	1,06
2010	82,596	45,170	49,243	1,14
2011	90,104	42,471	47,462	0.98
2012	106,862	44,936	60,040	0,98
2013	122,792	54,029	71,916	1,03
2014	138,758	64,627	92,135	1,13
2015	150,080	58,982	98,739	1,05
2016	166,007	70,912	97,946	1,02
2017	180,601	57,988	81,210	0,77
2018	191,121	92,345	109,637	1,06
Total Average				**1.02**

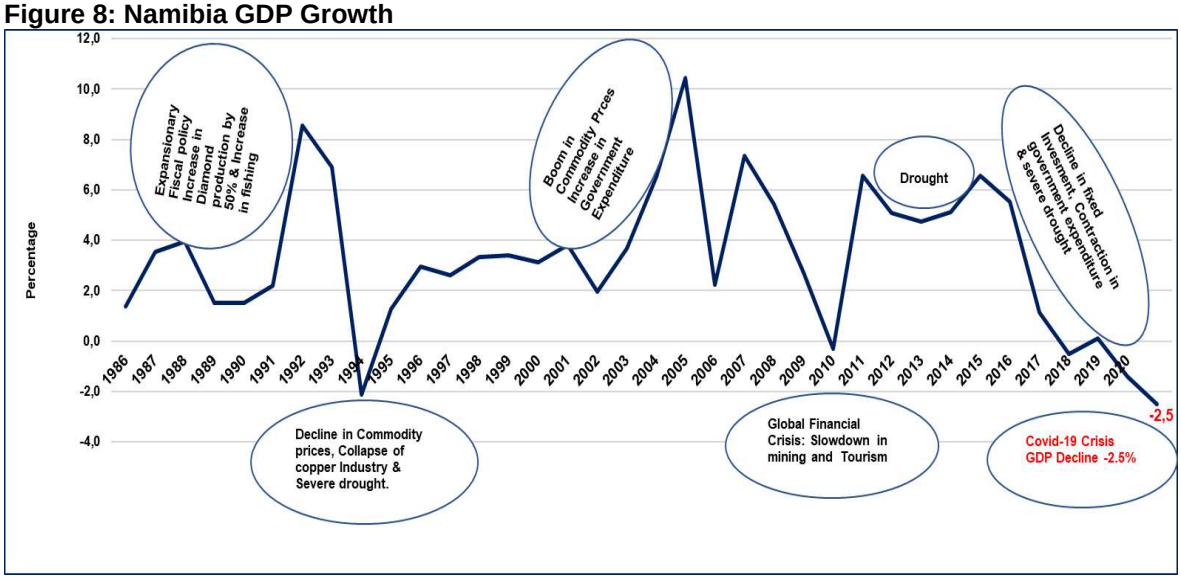
Sources: BoN

3.1.2 Trends in GDP Growth over the past 30 Years (1990 – 2020)

Figure 4 below shows that the Namibian economy picked up at independence on account of expansionary fiscal policy (government expenditure), high growth recorded in service sub sectors namely: financial, wholesale and retail trade services. Despite expansionary fiscal policy, economic growth started to decline reaching an all-time sharp contraction of -1.6 percent in 1993. From 1995 to 2003 GDP growth stabilized at an average of 3.5 percent before reaching an all-time peak of 12.3 percent in 2004 mainly supported by the growth in the mining sector. In 2009 another sharp contraction of negative 1.1 percent was recorded because of the global financial crisis (*Figure 8*). Between 2010 and 2015 the economy entered an expansionary phase supported by strong expansionary government expenditure and grew at

an average rate of 5.7 percent before plunging into the longest recession recorded in the Namibian history registering negative growth from 2017 to 2019. In line with stagnant and unchanging economic structure, Namibia's economic growth over the past 30 years has not been consistent with the high economic growth registered by many emerging markets and the country has experienced stagnant and declining GDP growth *(see figure 8 below).* While the high commodity prices helped to fuel high economic growth in some years, the economy always reverted back to its equilibrium low GDP growth.

Figure 8: Namibia GDP Growth



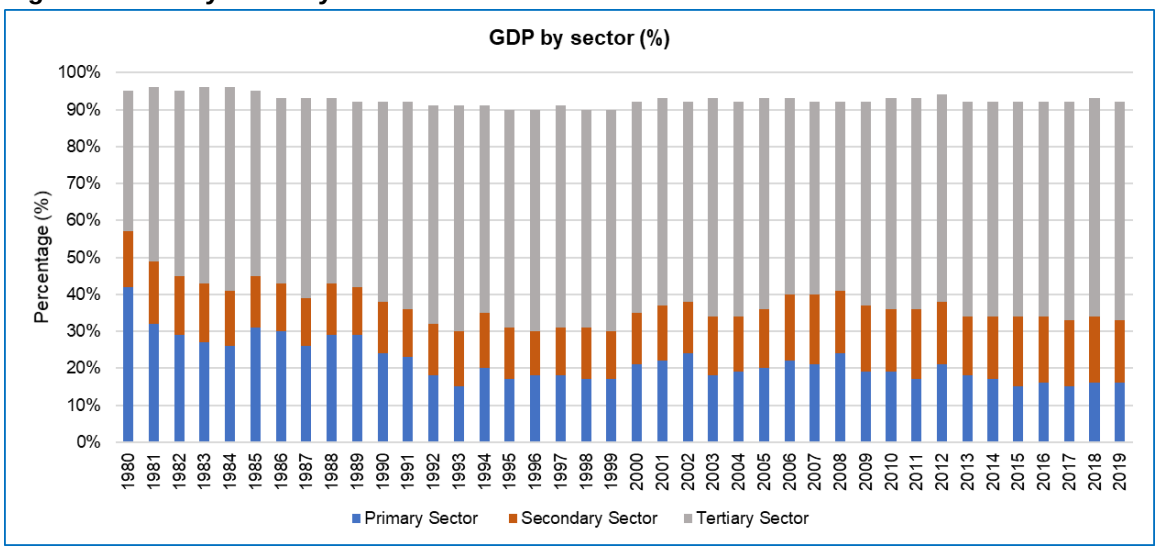
Source: National Accounts (CBS)

3.2 Structure of the Economy Over 1990 – 2020

Economic structure is a term that describes the changing balance of production/output, trade, incomes and employment drawn from different economic sectors, ranging from primary (agriculture, fishing, mining etc) to secondary (manufacturing and construction industries) to tertiary sectors (tourism, financial/banking, IT, government services etc). The shift in the share of output (GDP) of various sectors, which according to Simon Kutznets (1954) lies behind economic growth, is what is known as structural transformation (UNCTAD: 2016). The vision of the Namibian founding fathers and policy makers in government was to ensure that their policies will overtime change the structure of the economy in order to register higher economic growth through productivity gains and labour mobility. All successful economies in Asia, Europe, America etc registered massive changes in the structures of their economies by lessening dependence on volatile primary sector and shifting to high growth sectors such as secondary (manufacturing) and service or tertiary sectors. A successful economy with changing economic structure is capable of growing faster, providing employment for its citizens, reduce poverty, while offering them a high standard of living by generating high national income. The Namibian government leadership stated clearly in 1990 that they want Namibians to enjoy a prosperous life and this was to come through high economic growth as a result of economic restructuring and diversification.

Figure 9 and10 below presents the structure (industry share) of the Namibian economy over a period of 40 years from 1980 to 2019. Namibia's economic structure remains relatively unchanged since independence despite deliberate policies, programs implemented by government to restructure the economy. While a notable change in economic structure was registered between 1980 to 1990 where primary sector contribution declined from 41.6% to 23.9%, while the contribution of the tertiary sector increased from 38.3 to 53.7%, no major change has been recorded since independence. While the primary sector (agriculture, mining, and fishing) accounted for more than 43 percent of GDP in 1980, the share of this sector declined by almost 50% to 24% of GDP by 1990. The share of primary industry has changed very little declining to 19% of GDP in 2010 and falling further to 15% in 2019. The secondary sector remains relatively small contributing less than 20% of GDP since 1990. Figure 8 below is worrisome especially the stagnation of the secondary sector (manufacturing sector). Ever since the Industrial Revolution, rapid economic growth has been associated with the growth and expansion of the manufacturing sector. Throughout the history of economic thought, structural transformation, especially towards manufacturing from agriculture, has been regarded as the main engine of economic growth and development (UNCTAD, 2016). Although, the tertiary sector (services) has expanded, a deeper look indicates that the largest component of the tertiary sector is the non-tradable sectors such as government.

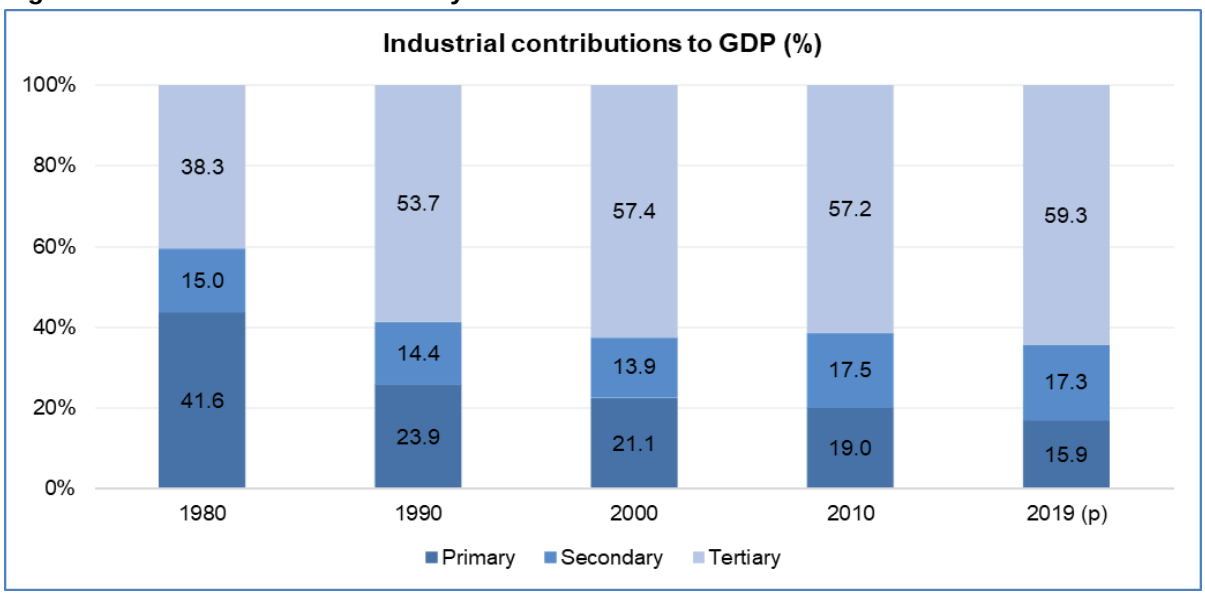
Figure 9: GDP by Industry



Sources: NSA

From figure 10 below we see that both the tertiary and secondary sectors only registered marginal increases while the primary sector slightly contracted. Failure to change the structure of the economy have translated to lower and volatile GDP growth with very little impact on unemployment and poverty levels. The reduction in poverty levels observed over the past years is attributed to the government spending on social sectors such as education and health and also strengthening of the social safety nets.

Figure 10: Structure of the Economy



Sources: NSA

3.3 Sectoral Contributions to GDP

A further breakdown of the structure of the economy into subsectors again shows a similar trend with most sectors contribution to the economy remaining relatively unchanged (Table 8 below). Most notably, agriculture sector contribution to GDP has gradually been declining over the years from an average of 7.2 percent over the 10-year period between 1980-1989 to 4.2 percent between 2010-2018. Despite that the mining sector's contribution since 1990 is significantly lower than the average realized between 1980-1989, its contribution still remains significant with an overall average of 13.8 percent. Over the last 8 years between 2010-2018, the mining sector's contribution to GDP averaged 11.9 percent. The fishing sector's contribution to GDP improved significantly after independence, increasing from 1.1 percent between 1980-1989 to 4.2 percent between 2000-2009. However, the sector's contribution declined to 2.9 percent over the past 8 years. The manufacturing and utility services and the construction sectors' contribution remained constant over the past 4 decades averaging 12.5 and 3.0 percent respectively from 1980 to 2018. The government services sector which is the major contributor to GDP was very volatile from 1980 to 2009. Government services contribution to GDP increased from 24.1 percent between 1980-1989 to 30.5 between 1990-1999 which significantly declined to 20.8 percent between 2000-2009. The sector's contribution stabilized over the past 8 years reaching an average contribution of 22.9 percent. Table 8 again confirms that the structure of the Namibian remains relatively unchanged over the past thirty years and this has frustrated government's efforts and challenged stance of fiscal, monetary and trade policies.

Table 8: Sectoral contribution

		(1980-1985)	(1986-1990)	(1991-1995)	(1996-2000)	(2001-2005)	(2006-2010)	(2011-2015)	(2016-2019)
Primary	Agriculture	7.1%	7.3%	5.7%	5.2%	5.6%	5.0%	4.1%	4.1%
	Fishing and fish processing	1.0%	1.5%	3.1%	4.1%	4.5%	3.6%	2.9%	2.6%
	Mining & Quarryng	23.0%	19.0%	9.8%	9.1%	10.7%	12.1%	11.7%	12.6%
Secondary	Manufacturing	9.7%	9.6%	10.3%	9.7%	10.4%	12.3%	11.9%	10.5%
	Water	2.0%	1.7%	1.7%	1.9%	2.0%	2.1%	1.9%	2.3%
	construction	3.1%	2.0%	2.2%	2.4%	2.5%	3.4%	3.8%	3.7%
Tertiary	Wholesale and retail trade, repairs	7.6%	6.6%	6.9%	7.9%	10.6%	11.1%	11.5%	11.0%
	Hotels and restaurants	1.1%	1.2%	1.2%	1.5%	1.7%	1.7%	1.7%	2.1%
	Transport, and communication	5.9%	6.1%	6.0%	5.9%	4.8%	5.0%	4.9%	4.5%
	Financial intermediation	1.7%	1.8%	2.2%	2.9%	3.9%	4.5%	5.6%	7.2%
	Real estate and business services	7.0%	7.3%	8.3%	8.7%	9.2%	8.5%	8.2%	6.9%
	Community, social and personal service activities	0.6%	0.6%	0.7%	0.8%	3.8%	3.1%	2.3%	1.9%
	Producers of Governement Services	23.1%	25.4%	29.0%	31.1%	22.3%	19.2%	22.1%	23.8%
	Public administration and defence	_	_	_	_	9.7%	9.1%	10.9%	11.3%
	Education	_	_	_	_	7.9%	7.0%	8.3%	9.5%
	Health	_	_	_	_	4.7%	3.1%	3.0%	2.9%
	Private household with employed persons	1.9%	1.8%	1.9%	1.7%	0.9%	0.8%	1.0%	0.8%

Source: National Accounts (CBS)

3.4 Economic Structure during the National Development Plans (NDP 1 to NDP *5)*

As part of its strategy to restructure and diversify the Namibian economy, the government implemented the First National Development Plan (NDP 1) in 1997. Table 9 below exhibits interesting results showing that the economic structure remains relatively unchanged over all the five National Development Plans (NDPs). For example, the primary sector contributed an average of 18.4% during NDP 1 period (1997 -2000), and the sector's contribution only slightly increased and contributed an average of 19.3% to GDP during NDP 5 (2016 to 2020). Although the secondary sector increased its contribution from 13.3% during NDP 1 to 17.4% during NDP 4, the sector contribution to GDP during NDP 5 averaged 16.4%. Although government stated objective was to diversify the economy by increasing the share of manufacturing, the sector's contribution to GDP contracted from an average of 4.1% during NDP 1 to an average of 2.6% during NDP 5, while that of agriculture remained relatively unchanged.

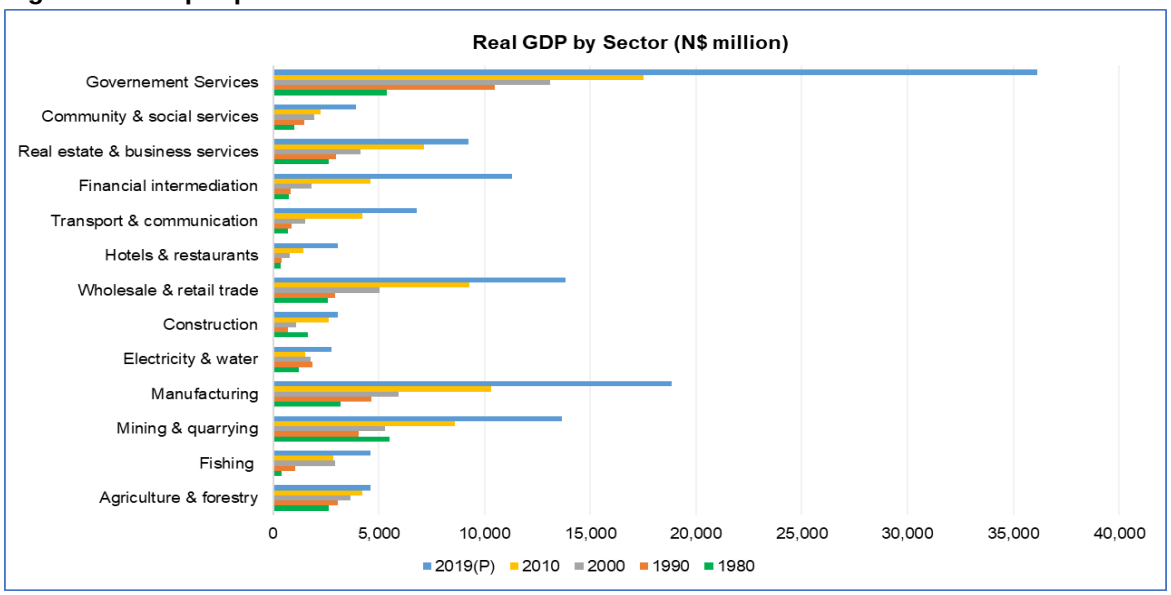
Table 9: Evolution of Economic Structure during the National Development Plans (NDPs)

	Economic Structure during the National Development Plans				
	NDP 1 (1996 - 2000)	NDP 2 (2001 - 2005)	NDP 3 (2006 - 2010)	NDP 4 (2011 - 2015)	NDP 5 (2016 - 2020)
	Sectoral Contributions				
Primary Sector	18.4%	20.8%	21.3%	18.8%	18.5%
Secondary Sector	13.3%	15.3%	18.2%	17.4%	16.6%
Tertiary Sector	59.8%	57.1%	54.1%	57.6%	58.3%
Agriculture	5.2%	5.6%	5.0%	4.1%	4.8%
Fishing	4.1%	4.5%	3.6%	2.9%	2.6%
Mining	9.1%	10.7%	12.7%	11.7%	12.6%
Manufacturing	9.0%	10.5%	12.7%	11.3%	11.8%
Electricity & Water	2.0%	2.1%	2.0%	1.8%	2.8%
Construction	2.3%	2.7%	3.5%	4.2%	3.0%
Services Sector	28.6%	34.7%	33.6%	33.9%	33.5%
	Other Economic Indicators				
Interest Rate	15.75%	9.50%	8.50%	6.00%	6.65%
Inflation	8.20%	6.90%	7.00%	5.20%	4.60%
GDP Growth	3.60%	5.20%	3.60%	5.60%	-0.20%
Growth in Total GRN Revenue	15%	10%	17%	16%	3%
Growth in GRN Tax Revenue	17%	11%	17%	17%	-2%
Growth in GRN Expenditure	16%	10%	15%	19%	-2%
Budget balance as % of GDP	-3%	-4%	-2%	-4%	-6%
Debt to GDP	22%	29%	21%	23%	45%
Foreign Debt to total Debt	82%	55%	23%	31%	38%
	Social Indicators				
Unemployment Rate	34%	31%	28%	29%	34%
Poverty Incidence	33.00%	27.60%	19.50%	17.40%	17.00%
Gini-Coefficient	0.7	0.6	0.6	0.6	0.56
Education expenditure per learner	2,899	4,348	6,384	14,039	18,317
Literacy rate	76%	76%	76%	88%	89%
Health expenditure per Capita	364	564	743	1,903	2,905
Infant mortality Rate	38%	48%	46%	39%	45%

Sources: NSA

From Table 9 above, we can see that the Namibian economy remain undiversified and dualistic in nature and all policies and programmes that were implemented during this period seem to have been ineffective in changing the economic structure and this explains why the economy has not registered sustained desired GDP growth of more than 5% as it is trapped in the low growth equilibrium state that can only produce average growth of 3% below the desired level of more than 5%. The low GDP growth means unemployment remain unchanged at 34% during the four NDPs despite supporting monetary and fiscal policies. The decline in poverty levels and income inequality could only be attributable to effective redistributive policies implemented over the past thirty years. While NDP 5 is coming to an end in 2020, it cannot be business as usual. If Namibia is serious about registering higher economic growth and changing the structure of the economy, it is time to go back to the drawing board and seriously relook at appropriate economic policies that can help transform the economy and put it on a new growth trajectory path suited for a small open economy in globalized economic order. Namibia's GDP composition since 1980 is shown below. It is observable that in 1980, the mining sector was dominating followed by the government services sector. However, that structure has changed since 1990 where government services sector became the largest contributor to GDP followed by the manufacturing sector.

Figure 11: Output per Sector



Source: NSA

Table 10 below shows average contributions of different sectors over an interval of 5 years. While the share of mining and government to GDP was equal at 23% between 1980 – 1985, mining sector contribution to GDP has been declining overtime reaching an average of 9.1% in 1996-2000 before averaging 12.6% of GDP for the period 2016-2018. In terms of the prediction of economic development (Lewis, 1954), the contraction in the contribution of both mining and agricultural sectors should have been replaced by the rise of the contribution of the manufacturing sector. However, the secondary sector excluding fish processing remained constant at an average of 15.5% from 198-1985 to 16.4% for the period 2016-2018. In the period of 1980 to 2018, the highest contributing sector to GDP is the tertiary sector excluding government and the government sector. For the first 5 years of independence, general government was the highest contributor to GDP followed by Tertiary sector excluding government with 31 and 28 percent consecutively. The least contributing sector in the first 5 years of independence is fishing and agriculture with 3 and 6 percent, respectively. Overall, the general government's contribution almost doubled from 25% during the period (1986 – 1990) to 47.4% of GDP during the period 2016-2018 (*table 10*).

Table 10: Contribution of sectors overtime

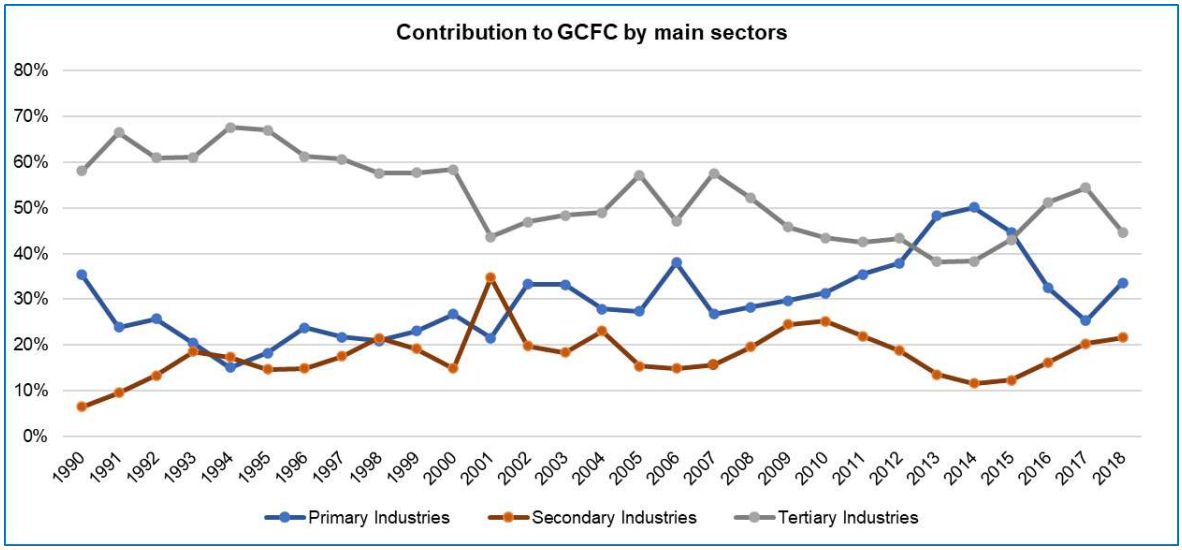
Sectors	(1980-1985)	(1986-1990)	(1991-1995)	(1996-2000)	(2001-2005)	(2006-2010)	(2011-2015)	(2016-2018)
Agriculture	7.1%	7.3%	5.7%	5.2%	5.6%	5.0%	4.1%	4.1%
Fishing and fish processing	1.0%	1.5%	3.1%	4.1%	4.5%	3.6%	2.9%	2.6%
Mining & Quarryng	23.0%	19.0%	9.8%	9.1%	10.7%	12.1%	11.7%	12.6%
Secondary sectors (exc fish processing)	15.5%	13.5%	14.4%	13.3%	15.3%	18.2%	17.4%	16.4%
Tertiary sectors (exc government)	25.6%	25.7%	27.7%	25.3%	14.0%	15.0%	12.1%	10.6%
General Government	23.1%	25.9%	30.7%	29.2%	21.1%	19.3%	23.0%	24.8%

Sources: NSA and FC Calculations

3.4.1 Gross Fixed Capital Formation (Fixed Investment) Performance

There is a strong correlation between GDP and sector growth and level of investment in that sector and the economy at large. In periods where investment inflows (foreign and government investments) increased especially in sectors with high correlation coefficient to the economy. In this section we look and trace the level of investment that has go into each sector of the economy. In figure 12 below we see that the tertiary industries have dominated domestic investment in the Namibian economy in the post-independence period 1990 – 2018. The tertiary sector's share in GFCF (fixed investment) was above 60% in the early 1990s and has been trending downwards and fallen below 50% by 2018 after picking above 50% in 2016 and 2017. The tertiary sector is followed by the primary sector with a share in fixed investment of 50% in 2014 and 2015 before contracting substantially to 34% in 2018. The secondary industries share GFCF rose from below 10% in 1990s to reach a peak of 35% 2001/02 before downward to 22% in 2018. Based on figure 12 below we can conclude the main beneficiaries of GFCF over the past 30 years has been the tertiary sector and the primary sector while the secondary industries did not attract much capital.

Figure 12: GFCF by sector

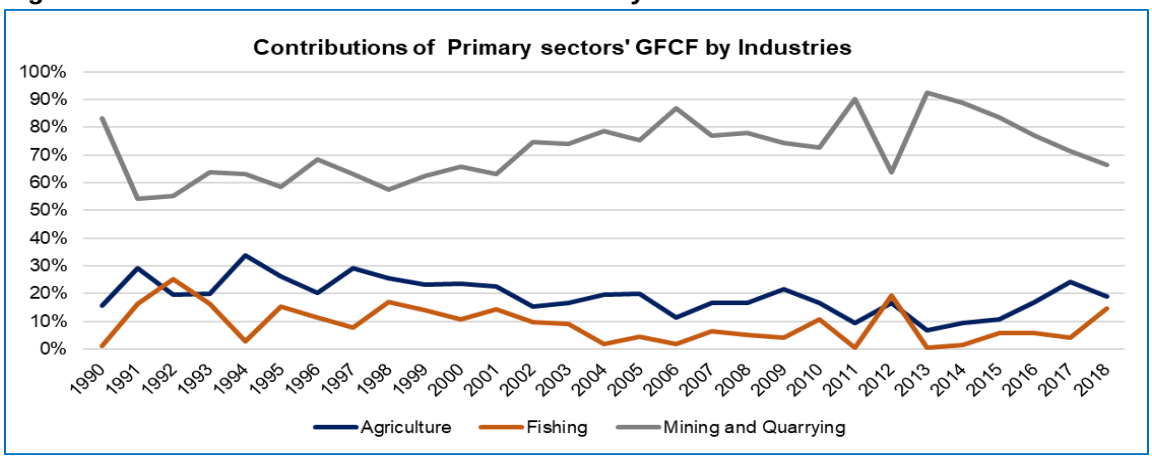


Source: NSA, BoN

3.4.1.1 Fixed Investment in Primary Industries

The primary sector is made up of the agriculture, fishing, mining and quarrying sectors. Figure 14 presents the trends in the shares of individual primary industries in total primary industries' gross fixed investment. Capital inflows in primary industries has been concentrated in the mining and quarrying sector, which accounted for an average of 70.4 percent of gross fixed capital formation over the period 1990 to 2018. In early 1990/91, mining received more than 80% of all fixed investments that entered the primary sector before falling to below 60% in 1990s. In 2014/15, the mining sector received the biggest inflow of 90% before declining to less than 70% in 2018. Despite the decline, mining still receives the biggest chunk of all fixed investment into the primary industry. Both the agriculture and fishing sectors received an average of less than 30% of total inflows of fixed investment in the primary industry. By end of 2018, agriculture share of fixed investment in the primary industry was at 19%, while fishing was at 14%.

Figure 13: Sectoral GFCF Contributions to Primary sectors' GFCF

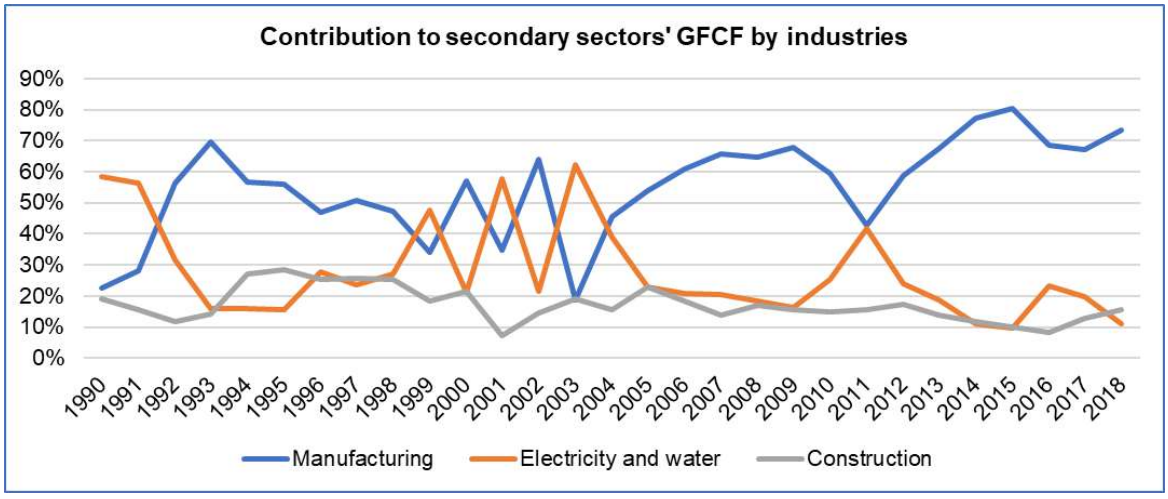


Source: NSA, BoN

3.4.1.2 Fixed Investment in Secondary Industries

The three main subsector in the secondary industry category is the manufacturing, electricity and water and the construction sector. Figure 15 presents the trends in the shares of individual secondary industries in total primary industries' gross fixed investment. Investment in secondary industries has been concentrated in manufacturing, which accounted for 73.0 percent of annual gross fixed investment by all secondary industries in 2018, followed by construction at 17.0 percent, and electricity and water supply at 10.0 percent. The high 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. Investment in manufacturing contracted significantly between 1999 and 2003 declining to a share of 30% in 2002. 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.

Figure 14: Sectoral GFCF Contributions to Secondary Industries' GFCF

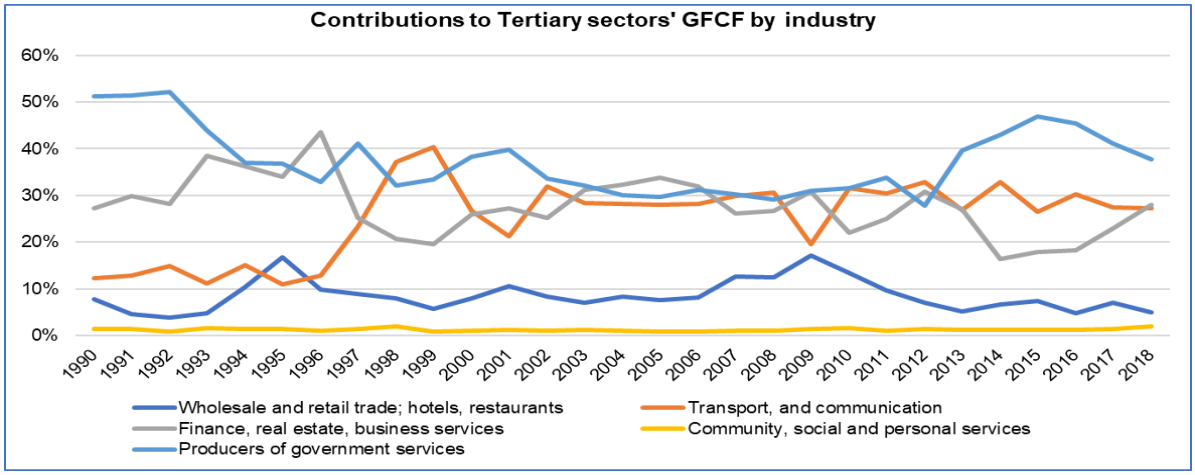


Source: NSA, BoN

3.4.1.3 Fixed Investment in Tertiary Industries

The tertiary sector is the biggest and is dominated by the producers of government services 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 before rising to 46% in 2014/15 and declining to below 40 percent in 2018. The finance, real estate and business services and the transport and communication are in second place after government receiving shares of around 28% respectively by 2018. The wholesale, retail trade and restaurants are in fourth place and its share amounted to 6.5 percent at the end of 2018 (figure 15).

Figure 15: Sectoral GFCF Contributions to Tertiary Industries' GFCF

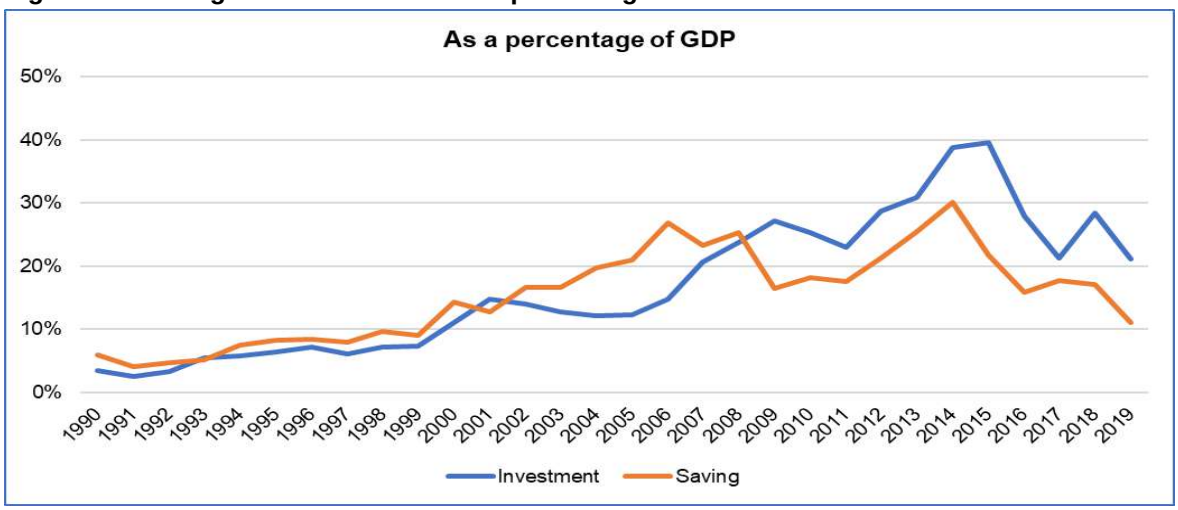


Source: NSA, BoN

3.4.1.4 Savings and investment to GDP

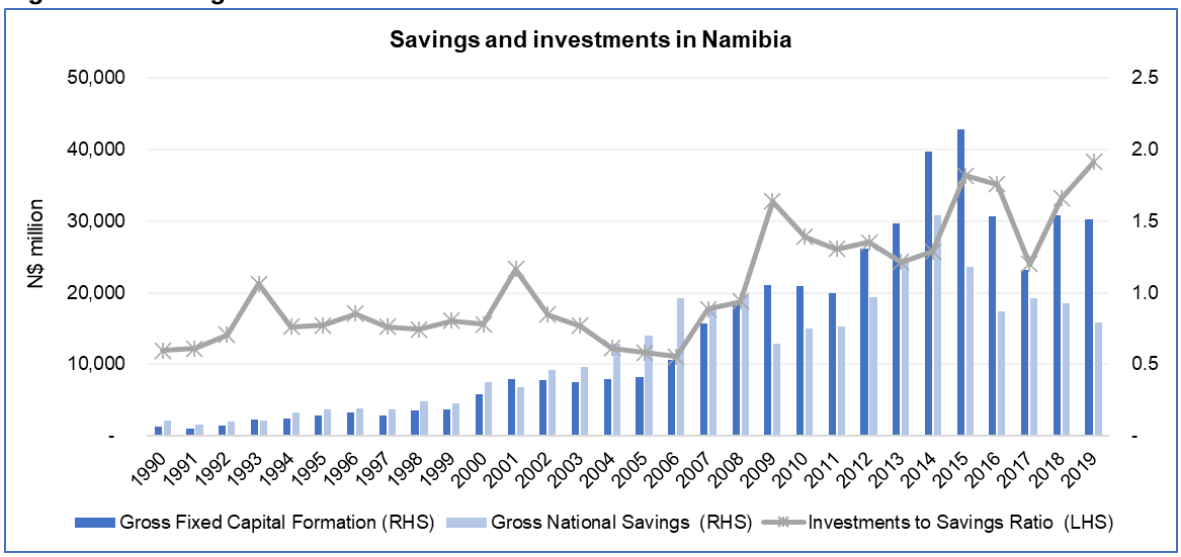
Savings and investment growth are critical in all economies especially developing economies like Namibia. The ratio of GFCF to GDP, which is the rate of investment, is an important indicator of future economic growth, because depending on the nature of investment, a higher investment rate will lead to a higher rate of economic growth by making resources available for the expansion of current and future production. Figure 16 below presents the trend of savings and investment as a percent of GDP and a positive trend is observed with both savings and investment as a percent of GDP rising from below 10% in 1990 to above 20% in 2007. Between 1990 and 2008, savings surpassed investment. However, this trend was reversed from 2008 with investment to GDP surpassing savings to GDP by a wide margin. Savings to GDP and investment to GDP reached 30% and 39% respectively but both has since declined with savings falling to 12% while investment declined to 22% of GDP by 2018.

Figure 16: Savings and Investment as a percentage of GDP



Sources: NSA

Figure 17: Savings and Investments

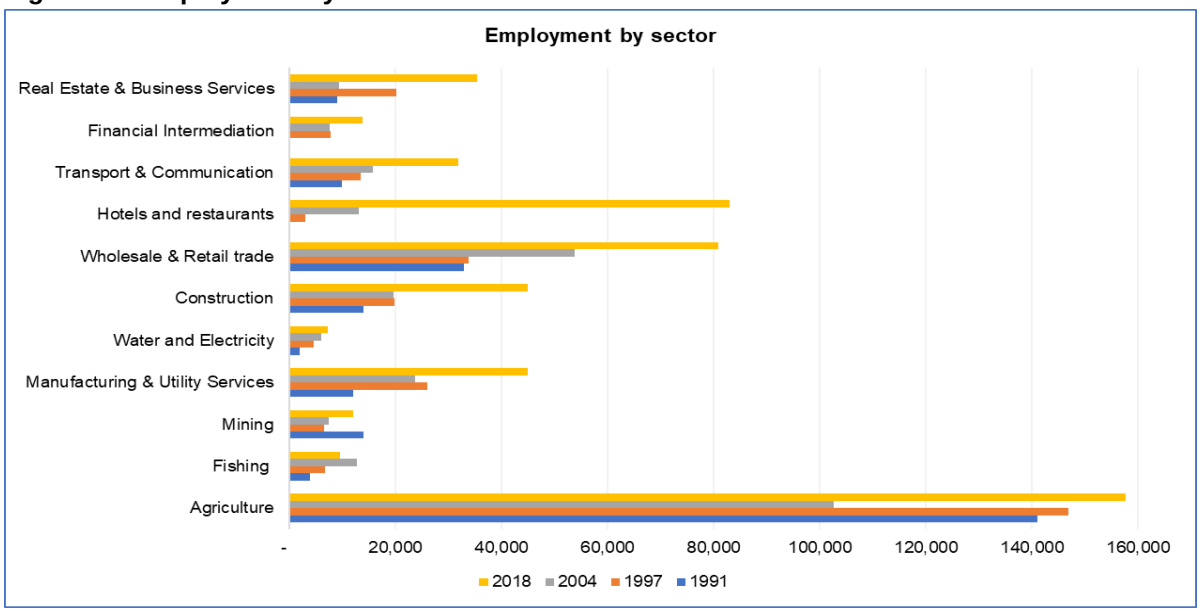


Source: BON

3.4.2 Employment by sector

Shown by figure 19 below is the distribution of the labour force in Namibia excluding government and social services sectors. The evidences that there has been favourable growth in employment in most sectors between 1991 and 2018, as well as 2014 and 2018. As of 2018, Agriculture remained the biggest employer with over 22 percent employees followed by hotels & restaurants as well as wholesale & retail trade with 12 and 11 percent respectively.

Figure 18: Employment by sector



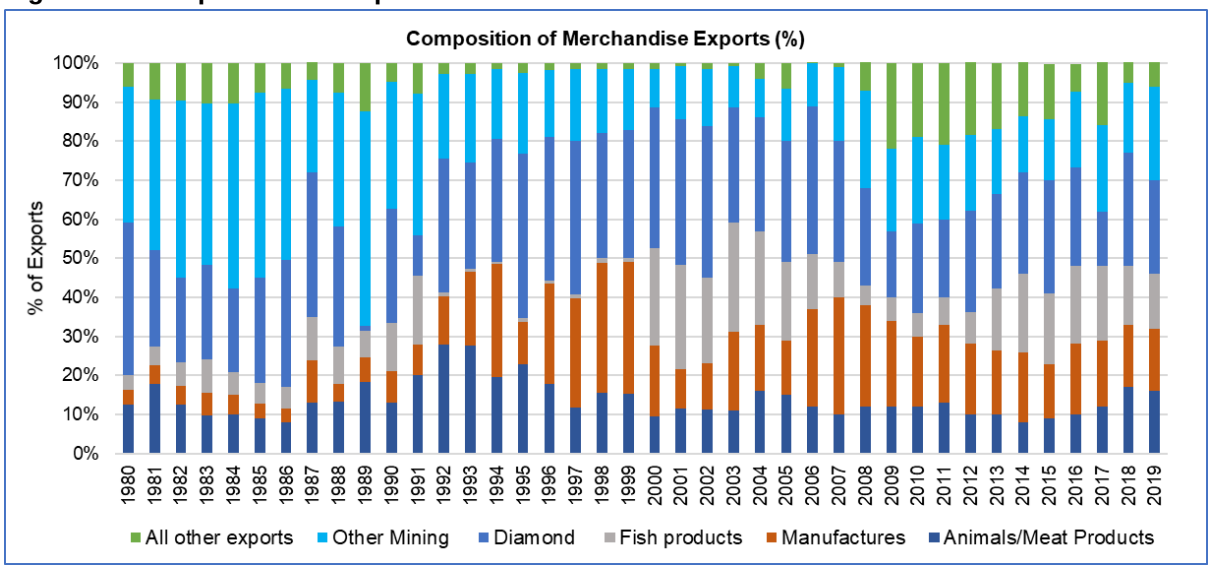
Source: NSA

3.5 Balance of trade (Exports and Imports)

3.5.1 Merchandise exports

As mentioned above, Namibia is an open economy with an average ratio of 1.0, meaning the country is less sufficient and depends heavily on imports and exports for its survival. The country imports 60% of its food needs and imports close to 80% of all inputs such machinery and equipment. Figure 19 below presents the composition of exports overtime in percentage from 1980 to 2019. It is observable that merchandise exports are dominated by diamonds, followed by the other mining (which is composed of uranium, copper, gold, silver and many others). Among the top exported overtime is live animal and meat products as well as other manufactured products such food products. In 1980 diamonds export composition of total exports were 39 percent compared to the 24 percent in 2019.

Figure 19: Composition of Exports



Sources: NSA, BoN & FC Research

Table 12 below presents percentage contributions to foreign exchange earnings by agriculture, mining, fishing and manufacturing over the period 2000 – 2019. The two categories, manufactured products and ores and minerals accounted for 94.2 percent of Namibia's exports in 2000 and by 2018 the categories accounts for 92.6 percent a small decrease of 2% over a period of 18 years. The country's export structure is less diversified and vulnerable to global swings and volatility in commodity prices. In addition, the bulk of the manufactured products are processed minerals and processed fish. While agriculture contributed 3.7 percent to total exports in 2000, the sector's contribution increased to 6.6 percent by 2018.

Table 11: Percentage contribution to export earnings by product

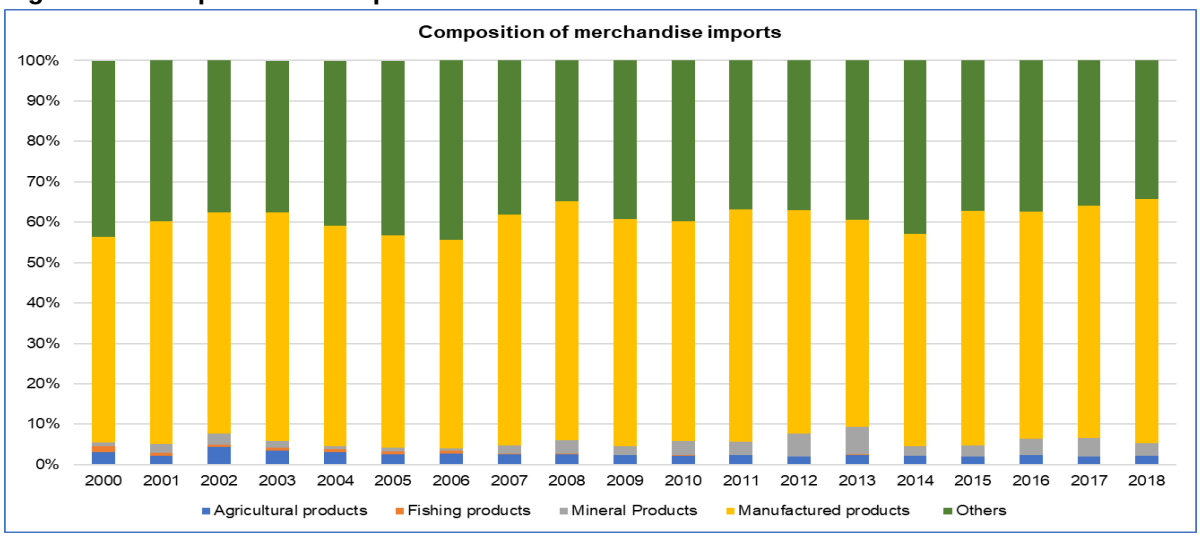
Year	Live animals	Animal products	Crops, horticulture & forestry	Total Agricultural products	Fishing products	Ores and minerals	Electricity	Manufactured products
2000	2.9	0.4	0.4	**3.7**	**2.0**	**56.3**	**0.0**	**37.9**
2005	3.5	0.3	1.4	**5.8**	**1.2**	**41.5**	**0.1**	**51.5**
2010	2.3	0.2	1.6	**4.5**	**0.6**	**42.4**	**0.1**	**52.4**
2011	2.5	0.2	1.1	**4.2**	**0.4**	**38.3**	**0.2**	**56.9**
2012	1.4	0.2	1.2	**3.0**	**0.5**	**40.7**	**0.2**	**55.6**
2013	2.2	0.2	1.2	**3.9**	**0.8**	**44.4**	**0.2**	**50.7**
2014	1.6	0.2	1.3	**3.3**	**1.1**	**44.1**	**0.3**	**51.1**
2015	2.8	0.1	1.1	**4.4**	**0.5**	**44.5**	**0.3**	**50.2**
2016	1.6	0.1	1.0	**2.8**	**0.6**	**38.5**	**0.4**	**57.8**
2017	3.9	0.1	1.1	**5.4**	**0.2**	**44.2**	**0.4**	**49.8**
2018	4.3	0.1	1.6	**6.6**	**0.3**	**46.4**	**0.5**	**46.2**
Average	2.6	0.2	1.2	**4.5**	**0.9**	**43.9**	**0.2**	**50.5**

Sources: NSA

3.5.2 Merchandise imports

Namibia remains a net importer of various goods, figure 20 below summarises the composition of imports of certain categories. Notably, there has been no structural change in imports over the past 20 years. More than 50 percent of the country imports are manufactured products mostly composed of petroleum as well as chemical products subcategories. Another significant portion of imports is others which is consisting of machineries and transport equipment.

Figure 20: Composition of Imports

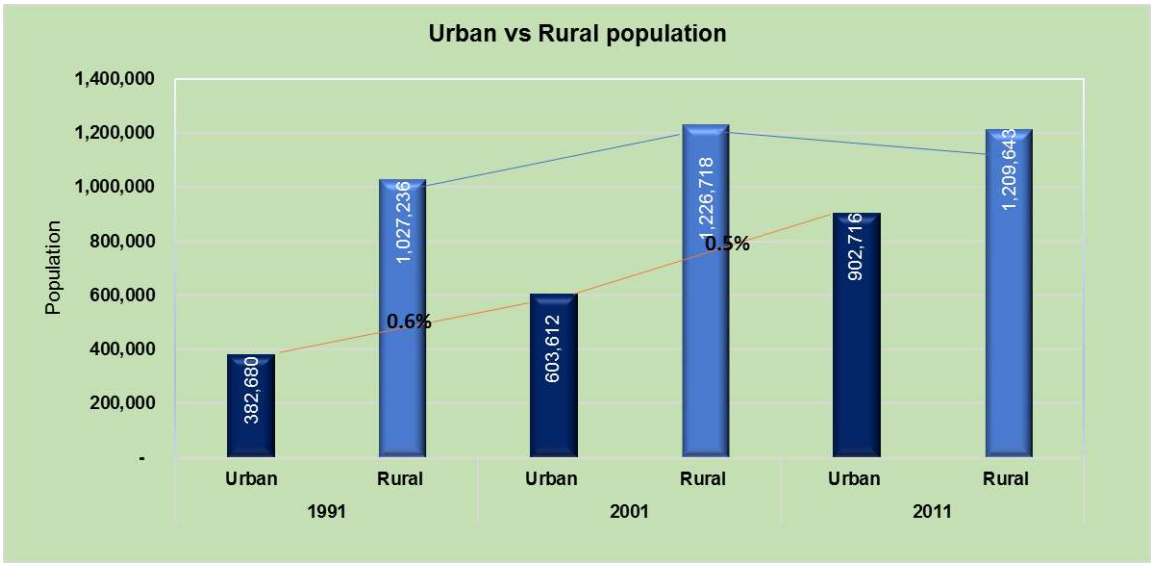


Source: NSA & BON

3.6 Rural – Urban Population Migration

Another indicator that indicates economic structural changes is the rural – urban migration. With expansion in the contribution of manufacturing and services sectors that are located in urban centres, there will be a huge migration of labour from rural to urban areas. Figure 21 below confirms that Namibia experienced major migration from rural areas to urban areas in line with the Lewis model that predicts that in the early stage of industrialization and economic structural change, a country will experience massive rural-urban migration. The model predicts that all those migrating are surplus labor from the agriculture sector and will be absorbed in the industrial (manufacturing sector). Namibia's urban population increased by more than 400,000 from 382,000 in 1991 to more than 900,000 in 2011, while the rural population only increased by 200,000 from 1,027,000 in 1991 to 1,209,000 in 2011. While the manufacturing only recorded an employment increase of 20,000, it appears the majority of those who migrated into urban centres were employed in government and other services which recorded the highest employment of more than 70,000 between 2004 and 2018. The rest of those who migrated to urban centers and could not find employment in the formal sectors ended up establishing informal business. This explains the massive increase in number of informal business and informal settlements established in almost all towns in Namibia. Failure to restructure the Namibian economy and the influx of many people from rural areas into towns who could not find employment created another problem for government – housing crisis in towns and the rise in crime.

Figure 21: Urban and Rural Population



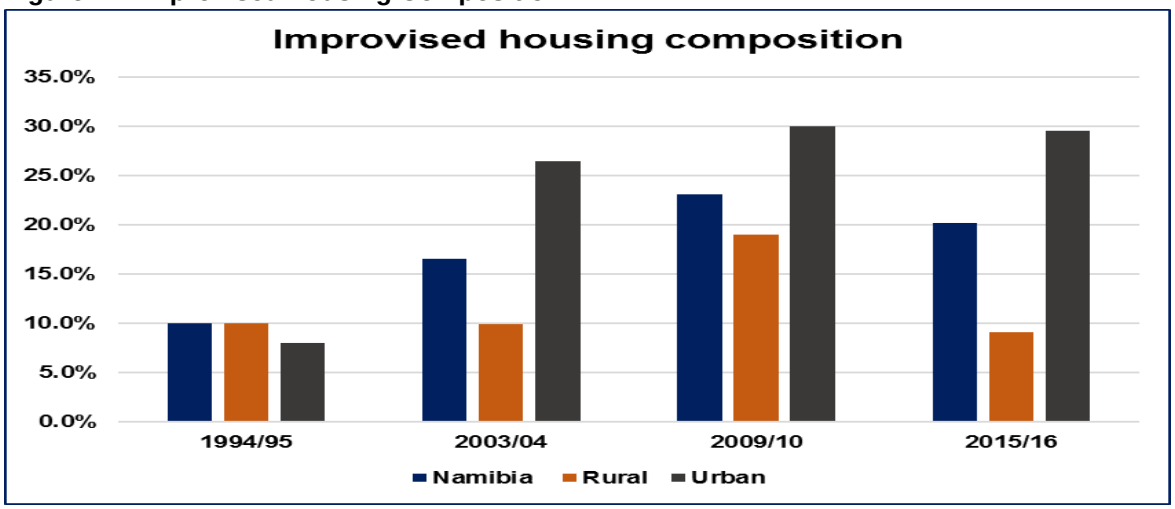
National Housing and population Census (1991,2001 &2011), NSA

3.6.1 Urban Infrastructure

Namibia's informal settlements have grown exponentially over the past decades. One of the major causes of this dramatic increase is urbanisation. In line with a rising urban population, the number of shacks and housing demand, since that most of these people cannot afford modern housing has fast increased.

Figure 22 below presents the improvised housing situation in Namibia for both rural and urban. The composition of those living in improvised housing has been increasing rapidly over time in 1994/95 the percentage was 8 percent compared to the 30 percent in 2015/16. This evidently shows there is a lack of urban infrastructure with the number of increases in shacks in urban area.

Figure 22: Improvised housing Composition



Sources: NSA, NHIES

3.7 Has the Namibian Economy Transformed (Economic Transformation Trends)?

This section looks at various measures of economic transformation to determine whether the economy has transformed or is shifting from primary based economy to an economy based on manufacturing and services sector. Namibia embarked on ambitious investment programmes, which can be seen in the various national development plans. These national development plans were used as deliberate efforts by the government to speed up the process of economic restructuring and economic development. Table 9 above presented key economic and social indicators to show how the economic have evolved over the past 30 years and whether government policies has been effective in transforming the economy. While the period 1990 to 1996 was dominated by income redistributive policies and macroeconomic stability policies, government in 1997 started experimenting with some major interventions to transform and change the structure of the economy.

Initially government was happy to redistribute income generated in the modern sector to the poor and the rural economy, but over time realised that, this was not sustainable in the long-run and a policy shift was needed. It was government's position that unless the two economies are integrated, poverty and income inequality was not going to be reduced. Against this background, government introduced a number of programmes and policies and interventions to diversify the economy and break the dualistic economic structure. To this end five national development plans (NDP 1 – NDP 5) have been implemented alongside Vison 2030.

This section presents a summary of how resources are allocated by sector. It uses employment shares to represent labour allocation; Stock of Fixed Capital to represent Capital; and Area utilized for agricultural purpose to represent land. This assessment shows the structure of the economy as the more resource a sector is or the country allocates to a sector, the important it is that sector to the country.

3.7.1 Proportion of Labour Employed by sector

Economic transformation is a continuous and long-term process of shifting labour and other resources from lower-productive sectors (agriculture) to high productive sectors such as manufacturing and service sectors (N.Balchin, et al 2019). As the economy is industrializing, it triggers a rapid increase in the share of manufacturing in GDP and a decline in the share of agriculture. This is then followed by a fall in the share of labour and capital employed in agriculture sector and a rise in the share of labour and capital employed in the manufacturing sector (Chenery 1960; Kuznets 1966; Chenery and Taylor 1968). Over time the agriculture and primary sector will employ few people, while the industry/manufacturing and service sector becomes the biggest employer. A detailed analysis of data in Namibia over the past years was undertaken. Table 14 below does not seem to support the predictions of the economic theory highlighted above. Between 1997 and 2004 agriculture sector contribution to the economy remained relatively unchanged while employment in the sector declined by more than 40%. Although agriculture sector contribution to the economy declined from 5.4% in 2004 to 4.6% in 2018, employment in the sector increased by more than 50,000 while employment in the manufacturing sector increased significantly by more than 20,000 during the same period. Although the theory (Lewis model) predicts that increase in manufacturing sector share of labour should come from labour surplus in the agricultural sector this doesn't seem to be the case in Namibia as the agriculture sector recorded the highest employment increase over the same period.

Table 14 also raises many data questions and correctness. Although agricultural sector contribution to the economy contracted between 2004 and 2018, employment in the sector expanded significantly and a further analysis shows that this high growth in agriculture employment came mainly from subsistence farming as commercial farming employment remained unchanged. A look at the manufacturing sector also raises a number of data issues as manufacturing contribution to GDP remained unchanged but employment in the sector grew significantly. Again, we see in table 14 that the Namibian economic structure remains unchanged and did therefore not create enough capacity to generate more jobs. Using this measure, shift of labour from agriculture sector to manufacturing, we see that no structural change and transformation has taken place in Namibia over the past 30 years**.** Using the shift of labour and other resources shows that there has been no economic transformation to have taken place in Namibia since 1990.

Table 12: Economic Sectors and Employment

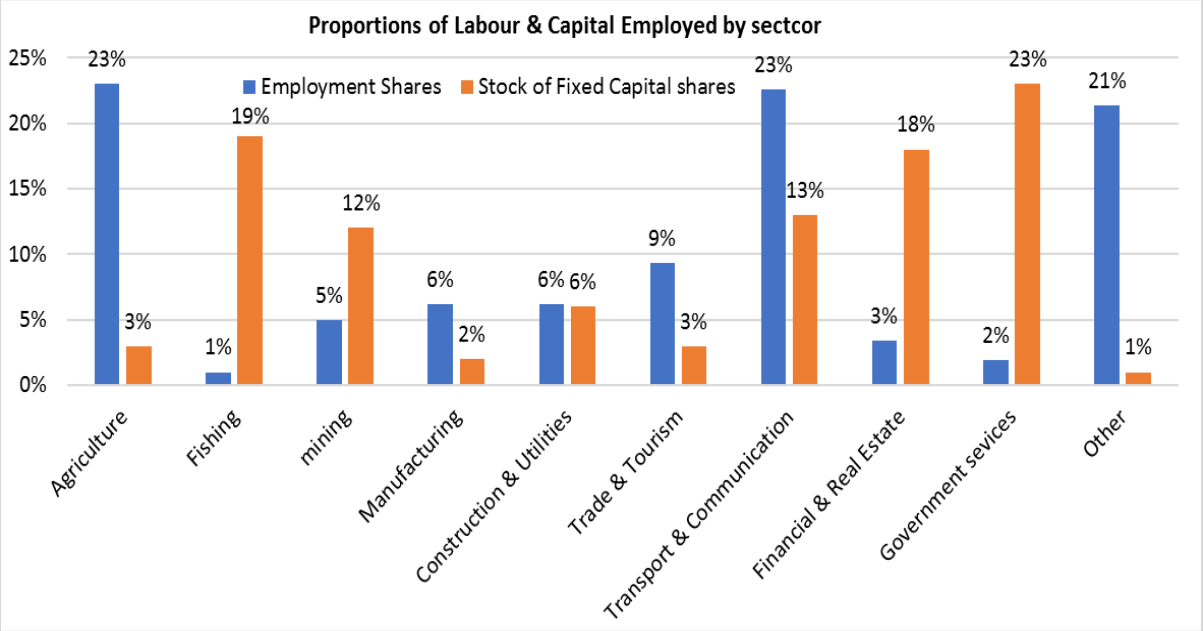
ECONOMIC SECTOR	GDP			Enployment		
	1997	2004	2018	1997	2004	2018
Agriculture	5.2%	5.4%	4.6%	146,899	102,636	157,681
Fishing	3.4%	3.7%	2.6%	6,771	12,720	9,561
Mining	9.1%	9.9%	14.0%	6,592	7,563	12,087
Manufacturing	8.8%	10.8%	10.1%	25,983	23,755	45,057
Water and Electricity	1.9%	2.2%	2.9%	4,576	6,151	7,373
Construction	2.3%	2.7%	2.3%	19,801	19,605	45,058
Wholesale & Retail trade	8.0%	11.1%	10.2%	33,815	53,895	80,852
Hotels and restaurants	1.6%	1.8%	2.0%	2,988	13,132	83,056
Transport & Communication	5.7%	5.7%	4.1%	13,480	15,861	31,852
Financial Intermediation	3.2%	4.0%	8.6%	7,817	7,582	13,860
Real Estate & Business Services	8.6%	9.4%	6.8%	20,244	9,374	30,566
Governement and other Services	32.0%	25.2%	25.2%	112,174	113,055	131,645

Sources: NSA

3.7.2 Proportion of Capital Employed by sector

Contrary to the employment structure, agriculture sector which is the major employer has the lowest share of capital stock at 3%. Figure 23 below also shows that manufacturing sector's capital share remains equally lower at 2 percent. However, the financial sector despite its low labour intensity has a high share of capital stock accounting for 18 percent of all capital stocks in the country. Government's capital stocks lead all sectors at 23 percent. For the economy to have transformed and in line with the theory, manufacturing share of the capital stock should have increased and higher than other sectors. oved from agriculture and the largest employer should be manufacturing and service sector by 2019. Using the shift of labour and other resources shows that there has been no economic transformation to have taken place in Namibia since 1990.

Figure 23: Proportion of Capital Employed by sector



Sources: NSA

3.7.3 Comparison of Labour and Capital resource allocation with Output by sector

Another measure we use to determine economic transformation is sector and factor productivity (output/input). It is expected that a sector that employs a significant portion of the factor of production such as labour or capital must produce the largest output. If agriculture employs the largest portion of the labour force, then it must produce a large output otherwise productivity of the sector will fall. Table 15 below shows a comparison of employment shares and stock of fixed capital employed in each sector with the respective output shares or GDP contributions. Agriculture sector employing 23% of the labour force and 3% of capital has the least GDP contribution at 3%.The manufacturing sector has equally one of the lowest contributions to GDP compounded by its low both capital stock and employment shares.

Table 13: Comparison of resources allocation and output

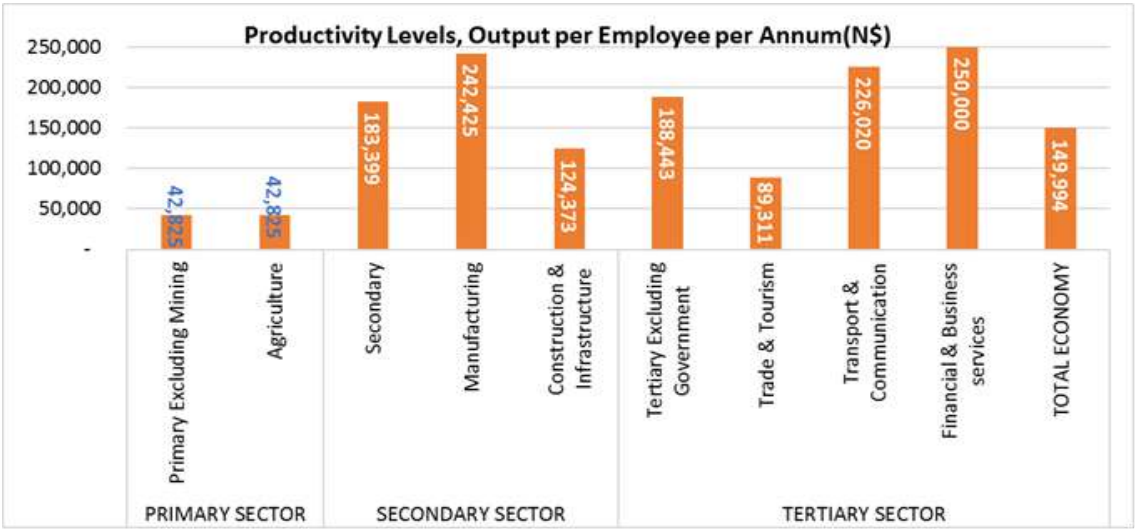
Comparison of Resource Allocation and Output			
Sectors	**Employment Shares**	**Stock of Fixed Capital shares**	**Output(GDP) Contributions**
Agriculture	23%	3%	3%
Fishing	1%	19%	19%
mining	5%	12%	12%
Manufacturing	6%	2%	2%
Construction & Utilities	6%	6%	6%
Trade & Tourism	9%	3%	3%
Transport & Communication	23%	13%	13%
Financial & Real Estate	3%	18%	18%
Government sevices	2%	23%	23%
Other	21%	1%	1%

Sources: NSA

3.7.4 Labour Productivity Levels by sector

Productivity measure is useful in highlighting the utilisation of factors of production in this case labour. Figure 24 below shows the productivity levels of various sectors of the economy. By main sector, the tertiary sector remains the most productive sector in terms of labour with an output per unit labour of N$188,443 per annum in 2018 followed by secondary sector with an output of N$183,399. Primary sector has the lowest output per employee(productivity) levels at N$42,825 more than 4 times lower than productivity levels of both secondary and tertiary sectors. At industry level, the financial and business sector has the highest level of productivity followed by manufacturing and the transport and communication sectors. Agriculture remains the least productive followed by the trade and tourism service sector.

Figure 24: Productivity Levels and Output per employee per annum

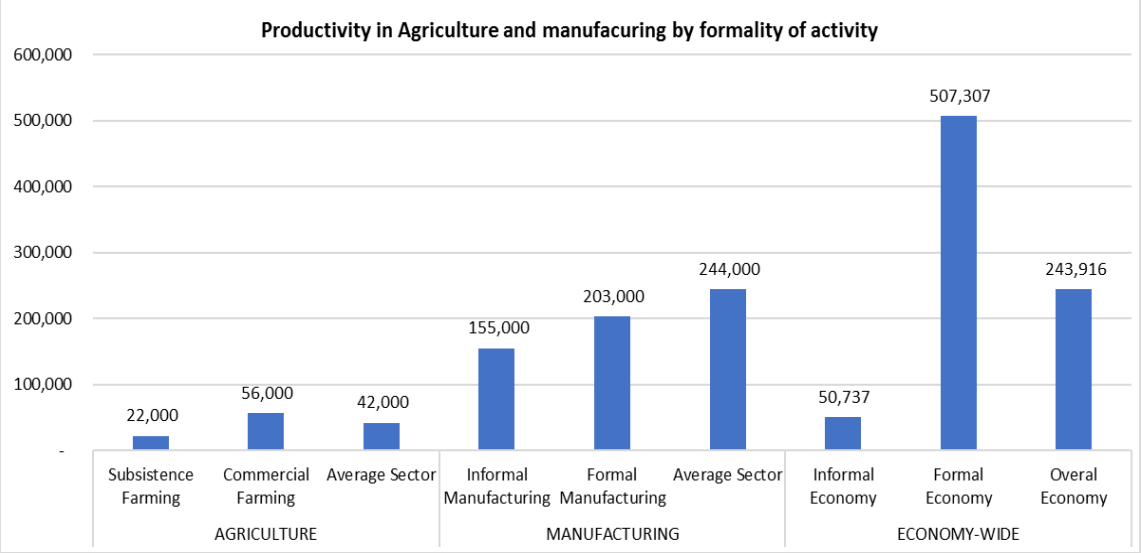


Sources: NSA

4.7.5 Productivity Comparison between Formal and Informal sectors

Figure 25 below shows comparison of productivity levels of the formal and informal economy. The comparison reveals an underlying confirmation to theory that formal economy is more productive relative to informal economy. Using subsistence farming to represent informal agriculture and commercial farming for formal economy, the data reveals significant productivity differences with subsistence farming having an annual labour productivity of N$22,000 per annum relative to commercial farming which produces an output of N$56,000 per annum for each employee. Similarly manufacturing informal activities records an average low output per employee at N$50,737 relative to N$507,307 of the formal manufacturing activities. Overall, the economy's informal economy produces an output of N$50,737 relative to N$507,307 of the formal sector.

Figure 25: Productivity in Agriculture and manufacturing by formality of activity



Sources: NSA

CHAPTER 4: NAMIBIA AGRICULTURE SECTOR TRANSFORMATION

4.1 The Role of Agriculture in the Economy

Economists and policy makers all agree that agriculture plays an important role in the country's economy and the various literature on the topic by the World Bank have established that, the agricultural sector is a vital and crucial sector for generating economic growth, job creation and fighting poverty (World Bank, 1981 and 2008). Los and Gardebroek (2015) points to the widespread evidence for a positive relation between increases in agricultural production and productivity and economic growth. With the exception of few Asian countries such as Singapore and Hong Kong, no country has industrialized and achieved prosperity without modernizing and transforming its agricultural sector and a number of publications have attributed poverty trapped developing countries' failure to develop and modernize the agriculture sector as the major cause of their under-development. Kuznets (1954) and others have shown that the long-term economic growth of nations is associated with major changes in economic structure and the agricultural sector, in particular, plays a number of critical and changing roles during the process of structural transformation. According to Kuznets at the very early stages of development, agriculture generally provides for almost all of a country's domestic requirements for food needs and foreign exchange needed for purchases of imported products including capital goods. The agricultural sector tends at this point to account for a relatively large proportion of national product and in some countries, agriculture could account for more than 30% of their GDP. For example, in the case of Brazil, agricultural sector accounted for 60% of total GDP in the early stage of economic development and played a major role in developing the manufacturing and services sector. The predominance of the traditional and low-productivity agriculture at the early stages of development also normally requires that a relatively large proportion of the total labour force be retained in rural areas and agriculture typically accounts for about 30% of GDP and 70% of the labor force (World Bank, 1990).

In this chapter we investigate whether the agriculture sector in Namibia has been transforming over the past 30 years and to enable us do that we focus on the basic structural relationships that exist between the agricultural sector and the national economy. Three basic structural relationships are examined: (i) the sectoral composition of agricultural output, or more specifically, agriculture's share of total output (GDP); (ii) agriculture's share share of total investment; and (iii) agriculture in the external trade sector (exports and imports); (iv) agriculture's share of employment; (v) diversification of the agriculture output. Many questions have been asked by politicians as to why the Namibian economy is not changing structurally. The answer could lie in what has happened to the agricultural sector in terms of the above relationships.

4.2 Policies Affecting Agriculture Transformation

Transformation cannot happen on its own but will require policy and other specific interventions with strong commitment from politicians and a visionary and effective leadership. Many programs and policies aimed at transforming economic sector has failed not because of external forces but the failure has been due to poor governance, weak leadership, and lack of accountability. As mentioned above, the segregation policies implemented prior to independence prevented black people from owning commercial farms and the majority black people were confined to subsistence farming in rural areas. The new SWAPO government

decided to transform the sector by introducing interventions on both the policy and expenditure sides in order to transform subsistence farming into commercial farming and integrate the agriculture sector into the rest of the economy and diversify the production and export side of the sector. Agricultural policies and interventions that the Namibian government implemented since 1990 can be divided into two categories:

(i) **Direct Policy/Interventions**: these are agriculture specific policy interventions that affect the agricultural sector directly and include the following:

a. Namibia Agricultural Policy (NAP) of 1995 and 2015.

b. Government expenditure policy in the agricultural sector.

c. Subsidized rural/subsistence farming credit (AA Loan Scheme).

d. Land Reform Policy.

e. Agricultural trade policy/controls (import tariffs).

f. Agricultural subsidies and other fiscal incentives.

(ii) **Indirect agricultural Policy Interventions**:

a. Transport: government investments in rural road transport, particularly in the 1990s provided a considerable stimulus to agricultural development.

b. Water and Electricity: Rural electrification and rural water supply.

c. Education: government subsidizes higher education that benefits the agricultural sector and billions of dollars have been injected in this sector since independence.

d. Training: There is also some non-formal (out of school) training of the rural population.

4.2.1 Namibia Agricultural Policy (NAP) of 1995 and 2015

Transformation of the agriculture sector in Namibia started in 1995 with the launch and implementation of the 1995 Namibia Agricultural Policy (NAP) and later replaced by the 2015 Namibia Agriculture Policy which now guides activities of all the players in the agriculture sector. Both the 1995 and 2015 were aimed at transforming the production structure of the agricultural sector and contributing to increased agricultural production, agro-processing, and marketing. According to the 2015 NAP, Namibia's agriculture sector consists of two types of land ownership, namely, freehold titles and non-title deed. The commercial sector covers about 44 per cent of the total land though it accommodates only ten per cent of the population while the communal sector covers about 41 per cent of the total land area and accommodates about 60 per cent of the population.

Accordingly, economic activity in Namibia's agriculture sector is conducted through different forms of ownership that is; public, private, joint public-private, co-ownership, co-operatives, and small-scale family (NAP, 2015). Due to climatic conditions, commercial farmers are predominantly engaged in livestock farming, with small stock dominating the activities in the south. The central and northern part of the country is more suitable for large stock production however, international trade regulations prohibits the movement of large stock while restricting the movement of small stock and livestock products from the Northern Communal Areas

(NCAs). Rain-fed crop production is possible only in the areas with more reliable rainfall patterns.

The dominant crops produced under rain-fed subsistence farming include millet, maize, sorghum and leguminous crops while commercial rain-fed farming focuses mainly on maize production. Due to climatic changes, shortages of labour at household level and increasing pressure on the land due to population growth, most subsistence farmers do not produce sufficient crops to sustain themselves until the next harvesting season. While all the wheat is produced under irrigation, only about 50 per cent of maize is produced under irrigation. Similarly, crops such as grapes and other horticultural produce are also grown under irrigation at large dams and perennial rivers along national borders.

Namibia's agricultural sector is an important pillar of the economy with a great potential to drive growth and transformation of the overall economy. Although it contributes less than 7% of total Gross Domestic Product (GDP), the sector is the largest employer and provides main source of income for the rural population. The government has on various platforms and documents stated that agricultural sector transformation is critical to growing the economy, reducing income inequality, alleviating poverty, creating wealth and empowering the rural people and ensuring food security. Despite efforts by government to transform the economy, those interventions proved futile because of failure to transform the agricultural sector on which hundreds of thousands of citizens depend on the sector for income and food security.

In addition to the 2015 NAP, the Namibian government has over the past thirty years highlighted the importance of agriculture in the five National Development Plans (NDP 1 to 5) and in Namibia's Vision 2030. With the First National Development Plan (NDP 1) and NAP 1995, the Namibian government introduced and implemented measures and programs aimed at agricultural transformation by focussing on the following outcomes:

1. Increase and diversify agriculture sector production and increase its share /contribution to GDP. Given that close to 60% of Namibia's population lived in rural areas in the 1990s and most of the labour were unskilled it made logical sense for the agriculture's contribution to GDP to have bigger share in the country's GDP.
2. Increase the amount of fixed investment in the sector.
3. Increase and diversify the composition of agricultural exports.
4. Increase Livestock production and exports.
5. Increase Crop and horticulture production and exports.
6. Ensure food security
7. Implement land reform measures that ensures transfer of productive agricultural land to previously disadvantaged Namibians.
8. Modernization of rural-farm production and moving from subsistence to commercial agriculture serving local and export demand.
9. Increase agricultural output and value addition by shifting the value chain away from primary production and toward food processing.
10. Increase small-scale farmer incomes and boost household food resilience.

11. Integrate the agriculture sector into the mainstream economy by strengthening the sector's backward and forward linkages.

12. Creation and strengthening of agricultural institutions and investment in agricultural research and extension services.

Although Namibia have made progress in modernizing and transforming the agriculture sector, the country has not yet reached the full potential hidden within the agricultural sector. If the true potential for the agricultural sector is to be fully unleashed, the country must do things in a different way, starting with political commitment, how resources are allocated to farmers, developing supporting and enabling policies to farmers and identifying key markets for farmers to sell their produce. In this chapter we look at how the sector has performed over the past 30 years, whether the sector structure has changed and transformed and if not what has caused failure in the sector's transformation and what can be done to facilitate the transformation of the sector. Specifically, we look at the economic relationships between agricultural sector and the economy and whether these relationships have changed over the past 30 years. Changes in these relationships will help us provide answers to the question of whether the Namibian agricultural sector has transformed or not. First, a brief historical account of structural of the agricultural sector is presented. Second, the structural change of Namibia's agricultural sector, in terms of the above relationships, is presented. This is followed by an analysis of the causes of structural change, particularly as it relates to the agricultural sector.

4.3 Structure of the Agricultural Sector

The agriculture sector is estimated at N$ 6.8 billion and contributes around 6.6 percent to GDP by the end of 2018. The sector is composed of livestock, crop, vegetable and horticultural farming. The livestock farming remains dominant in terms of GDP compared to crop farming with the former accounting for 57 percent and the later 43 percent of total agriculture output. Cattle livestock alone, accounts for nearly 35 percent of the agriculture GDP making it the single largest contributor to GDP in this sector. Table 17 below provides a glance of Namibia Agriculture sector based on the 2018 latest statistics. The key highlights are that livestock accounts for 33% while crop farming or output accounts for 25% of total agricultural output. In terms of food security, Namibia produces 40% of its food consumption and the remaining 60% is imported from other countries, with the bulk coming from South Africa. 78% of total agricultural exports is live animals and crops, vegetables, and fruits accounts for 21% of agriculture exports. The main livestock produced are cattle, goats, and sheep.

Cattle production/beef is very important in Namibia accounting for 65% of the livestock subsector, while sheep and goats accounts for 21%. Other categories such as pigs, karakul pelts, dairy and any other accounts for the remainder of 14% within the livestock subsector. Overall, most livestock in Namibia is communally farmed. The average proportion for commercial farming is 31, 24 and 30 percent for cattle, goats and pigs respectively. Remarkably, 81 percent of sheep farming in Namibia accounts for commercial farming, while only 19 percent is reared for communal farming. The crops subsector contributes an average of 39 percent per annum to the agriculture sectoral output. The main crops include Wheat (9%), Maize (4%), and grapes (27%).

Table 14: Agriculture Sector at Glance

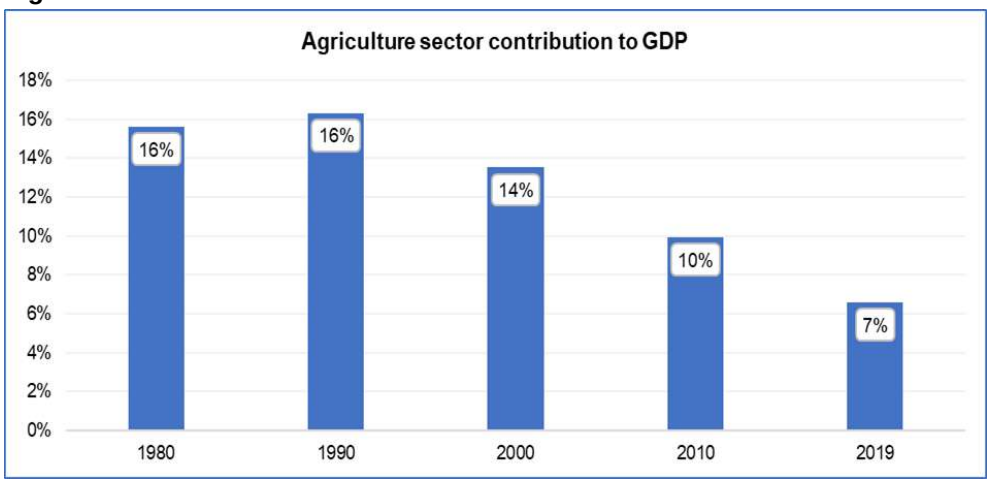
Agriculture Sector at glance		
Sectoral Contribution	Agriculture to GDP	N$ 11.8 billion or 6.6% of GDP
Subsectoral Contribution	Livestock Farming	N$ 3.9 billion (33% of Agriculture GDP)
	Crop Farming	N$ 2.9 billion (25% of Agriculture GDP)
Average GDP Growth	Agriculture and forestry	2.0%
	Livestock farming	0.7%
	Crop farming and forestry	5.8%
Livestock Output	Cattle Population	3.2 million (35% commercial, 65% communal)
	Goat Population	2.0 million (24% commercial, 24% communal)
	Sheep Population	1.7 million (81% commercial, 19% communal)
Crop Output	Maize Production per hactare	2 tonnes/ha (43.6 thousand tonnes commercial)
	Wheat Production per hactare	5.7 tonnes/ha (10.4 thousand tonnes commercial)
	Maize Production per hactare	0.8 tonnes/ha (20.9 thousand tonnes haversted)
Land	Available for Agriculture	687 square meter (84% of total)
Investment in Agrulture	Investments in 2018	N$ 2.0 billion (6% of total)
	Investment stock as of 2018	N$ 10.9 billion (3% of total)
Employment Creation	Total Employement	167,242 (23% of total employed)
	Formal Employement	20,705 (12% of total employment)
	Informal Employement	146,537 (88% of total employment)
Source of Income	Households dependent on Farming	20% of households in Namibia
Average wage	Agriculture, forestry & fishing Income	N$ 3,393 (N$ 7,935 National average)
Food Security	Local Production	40% of total consumption
	Food Imports	60% of total consumption
Import	Agriculture and Forestry products	N$ 1.9 billion (2% of total import of goods)
	Meat and meat products	N$ 879 million (1% of total import of goods)
Export	Agriculture and Forestry products	N$ 3.3 billion (5% of total export of goods)
	Live animals	N$ 2.6 billion (78% of Agricultural exports)
	Animal products	N$ 32 million (0.1% of Agricultural exports)
	Crops, vegetables, fruits, forestry products	N$ 684 million (21% of Agricultural exports)
Government Expenditure	Overall Budget (2019/20)	N$ 2.0 billion (3% of total budget)

Source: Source: FC Research & Various sources

4.3.1 Agricultural Sector Contribution to Gross Domestic Product (GDP)

In 1990 at the time of independence, the agricultural sector contributed around 16% to GDP the same percentage it contributed in 1980. Figure 26 below shows the contribution of agriculture sector to total output (GDP) over the past 40 years. The sector's contribution to GDP declined significantly between 1990 to 2010, from 16 percent in 1990 to 10 percent in 2010 before falling further to 7 percent in 2019. While theoretically it may be argued that, in the process of economic transformation, the agricultural sector contribution to the economy declines as labour and capital moves from the traditional sector (agriculture) to the modern sector (manufacturing sector), this appears not to hold in Namibia's case because the manufacturing sector seem to have also contracted during the same period. While the category of the crops and forestry segment remained constant over the years, the share of livestock subsector drastically declined from 7 percent in 1980 to 2 percent by 2019.

Figure 26: Sectoral contribution GDP

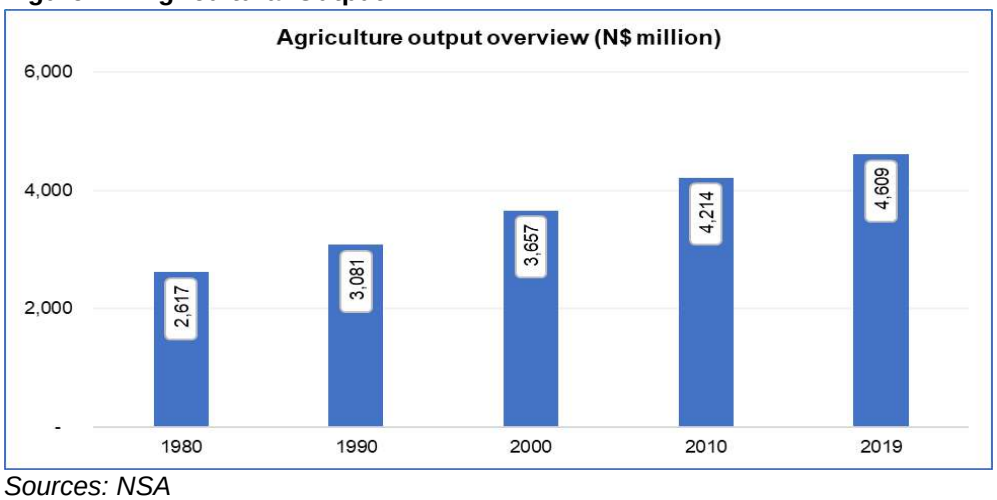


Sources: NSA

4.3.2 Agriculture Output

Although contribution to GDP has been declining, in nominal terms, the sector's output increased to N$4.2 billion in 2018 from N$3.0 billion in 1990. Figure 27 below clearly illustrates the output trend of the agriculture sector since 1980. Overall, the sector has been growing marginally from N$ 2.6 billion in 1980 to N$ 4.2 billion in 2018 and rising to N$4.6 billion by end of 2019

Figure 27: Agricultural Output



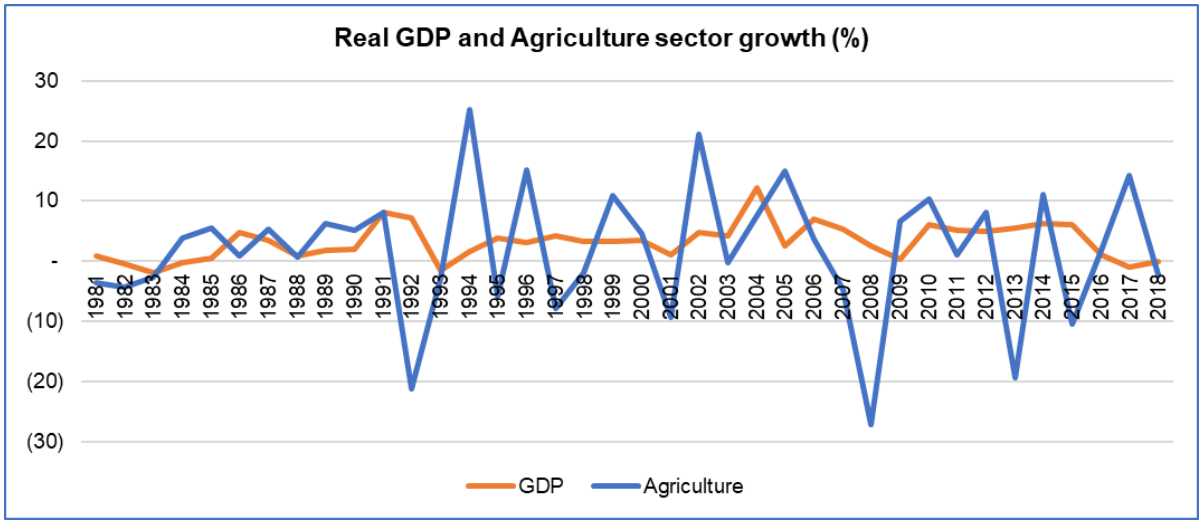
Sources: NSA

4.3.3 Agriculture Sector Growth Volatility

Namibia has over the past 30 years witnessed serious droughts and low rainfall seasons that has made both crop and livestock farming challenging, leading to high volatility in the agriculture sector. The severity of these droughts appears to have worsened in recent years as the authorities have taken measures to diversify farming away from rain-reliant crop and cereals production and boost the efficiency of irrigation. Figure 28 below shows agricultural sector output growth Vs GDP growth and it can be observed that overall, the growth of the agriculture sector has been volatile with a standard deviation coefficient of 11 as compared to the growth in GDP which has been somehow stable with a standard deviation coefficient of 3 over the years since 1981.

The correlation coefficient of -0.02 implies a weak negative correlation between the growth in agriculture sector and overall GDP. This means that Namibia can still register high GDP growth even in times of negative growth in output of the agriculture sector.

Figure 28: GDP growth

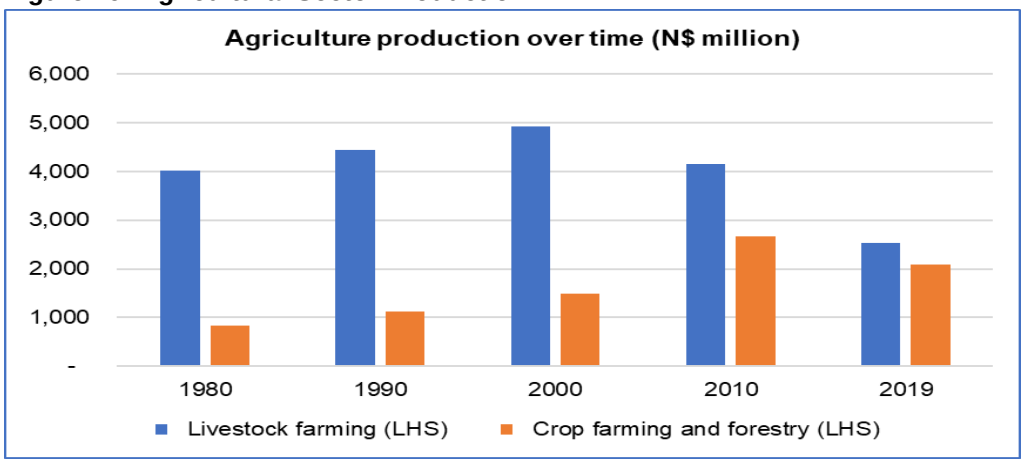


Source: NSA

4.4 Agriculture sector performance

This section covers developments within the agriculture sector. As mentioned, the two subsectors of agriculture in Namibia are livestock (33%) and crops (25%). As per figure 35 below, the two subsectors, livestock output grew slower with a mere 0.7 percent on average per annum, whereas crops grew at an average of 5.1 percent. Although livestock registered highest growth in 2000, the subsector has experienced declining growth in 2010 into 2019 as highlighted in figure 29 below on account of devastating droughts.

Figure 29: Agricultural Sector Production



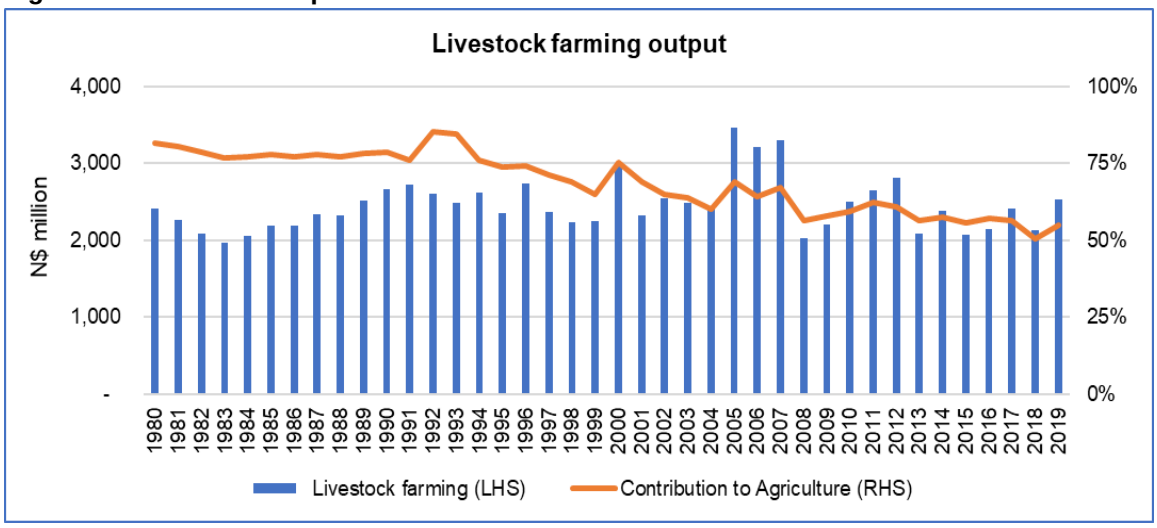
Source: NSA

4.4.1 Livestock Subsector

Livestock accounts for 57% of total agriculture output and it is the major subsector prioritised by government in terms of policy and support to expand the subsector production and exports. Figure 30 below outlines the trend in output as well as contribution of livestock farming to total agriculture output since 1980. The table highlights a downward trend in contribution of the sector falling from above 75 percent during the late 80s and early 90s to around 50 percent in 2018 and 2019. In monetary terms, the output structure has not transformed as such. This shows that this subsector has not been changing, though there were ambitious measures put in place to help boost the sectors output. While livestock contributed more than 75% of agricultural output in 1990, the sub-sector's contribution to total agriculture output declined to around 50% in 2018 before rising slightly in 2019.

Livestock farming is a highly competitive industry with multiple players mainly on communal farming. According to the 2015/16 NHIES, out of 159 484 households that do farming, 39 percent of them are engaged in livestock farming. Livestock farming is the most common form of farming practice in Omaheke and Otjozondjupa region where 90 and 70 percent respectively of households who are involved in agricultural farming practice livestock farming. Livestock farming is the least common form of farming practice in Khomas and Karas region where only 14 and 30 percent respectively of households who are involved in agricultural farming practice livestock farming. The most common form of livestock is cattle, chicken and goats with a national total head count of 3.2 million, 2.8 million and 2million respectively. Cattle farming remains a single largest contributor to the Livestock farming sector with its output accounting for 60 percent of the livestock farming GDP. According to the recent Agricultural census by NSA, Namibia has 2,555 commercial farms, of which when viewed in relation to the stock of cattle in the country, an average amount of 436 cattle per each commercial farm is derived.

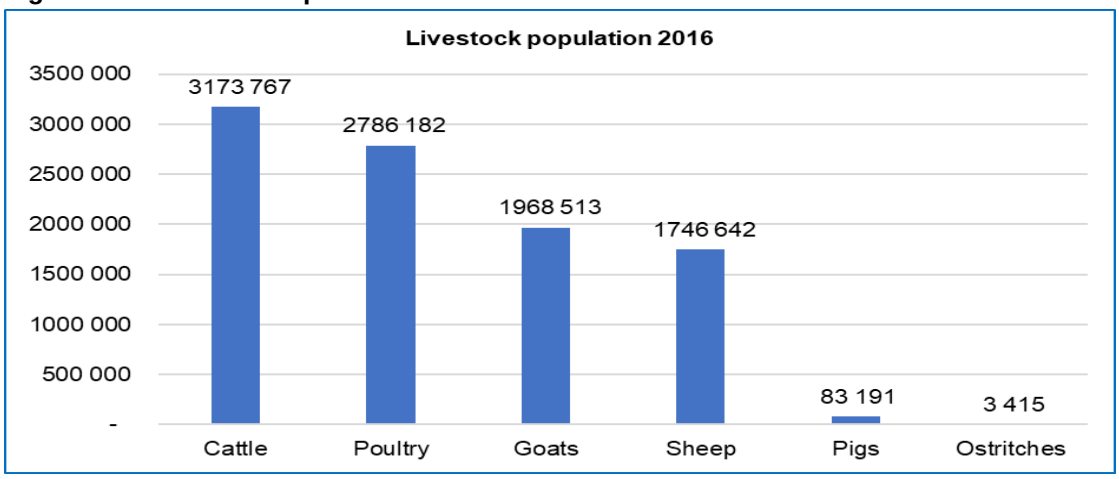
Figure 30: Livestock output



Source: NSA

According to the latest Agricultural National Accounts report of 2016, there are more cattle than any other livestock in the country with a head count of above 3.1 million (figure 31). Cattle alone, accounts for nearly 35 percent of the total agriculture GDP making it the single largest contributor to GDP in this sector. The number of cattle translate to 1.3 cattle per capita in relation to the country's population. By country comparison this number is lower compared to most neighbouring countries (South Africa, Botswana, Zimbabwe and Zambia with per capita herds of cattle of 1.9; 2; 1.8; and 1.7 respectively). Poultry livestock are the second highest at 2.7 million and this is mainly due to the establishment of Namibia Poultry in 2005. A total of 1.97 and 1.75 goats and sheep respectively were recorded during the same period countrywide. The country only has a total head count of 83,191 pigs and 3,415 ostriches.

Figure 31: Livestock Population 2016

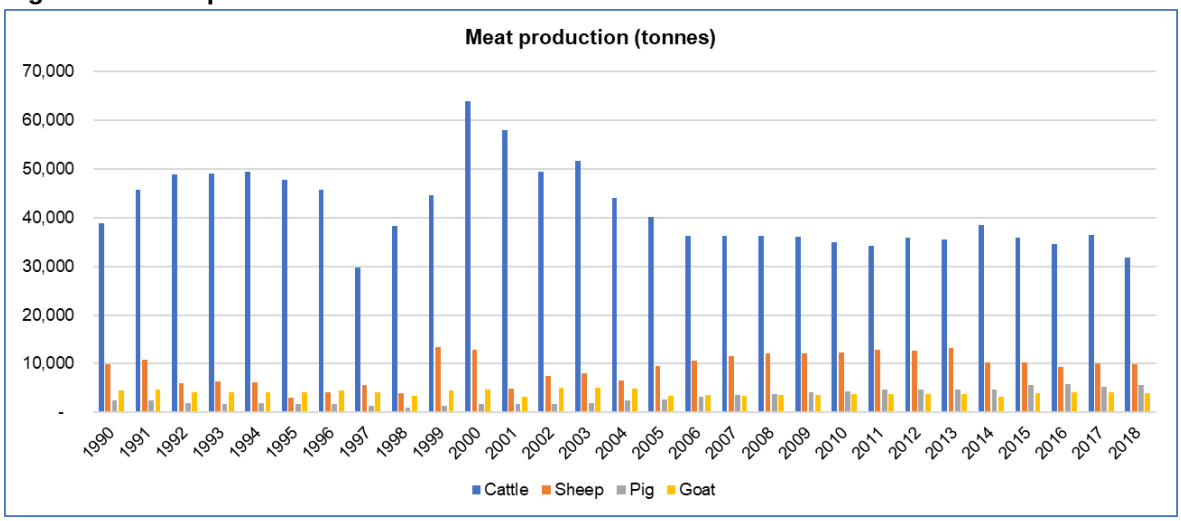


Sources: Agricultural bulletin MAWF

4.4.1.1 Meat Production

Figure 32 below indicates total amount of meat produced per annum in tonnes. Namibia produces more beef than any other type of meat produced. These findings are in line with the fact that population of cattle is higher compared to sheep, goats and pigs. Furthermore, it is also evident because cattle output outperforms all other forms of livestock. Sheep is another substantial subsector as most of them are reared for commercial purposes. In line with livestock output figures presented earlier, we can see a gradual decline in all meat categories towards 2019, except from pig meat production which is quite insignificant because of its market size.

Figure 32: Meat production



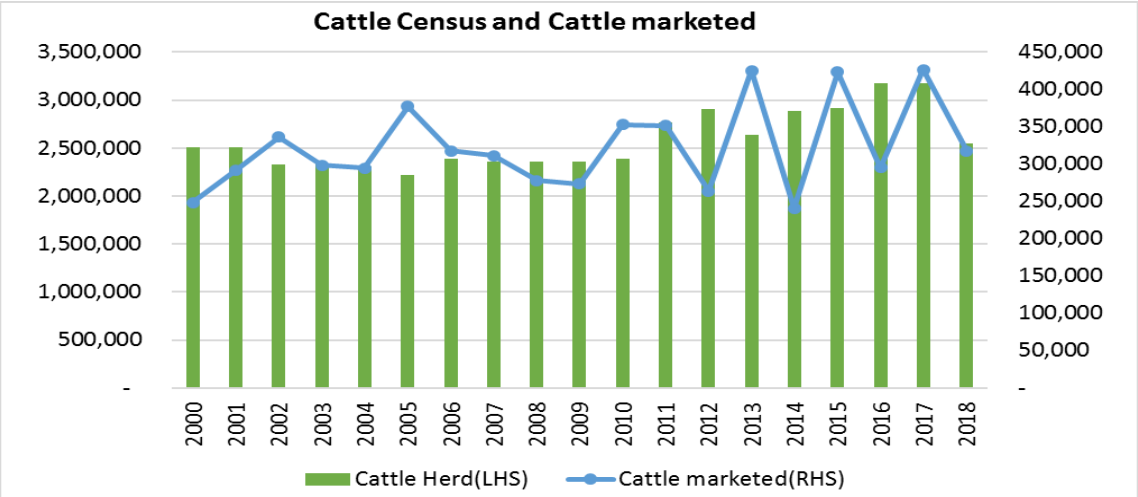
Sources: Open data portal

The country's stock of sheep continued to increase especially from 2005. In 2012 and 2013, it reached the level where it was in 1999 and 2000. The production of both pigs and goats remains very small and over the past 30 years, Namibia seem to have failed in increasing production of both pigs and goats. This phenomenon is largely explained by the rising cost of feed for pigs relative to cattle and poultry, and the increasing popularity of beef and chicken relative to pork in the average Namibian diet.

4.4.1.2 Cattle population trend

Total number of cattle in the country has dropped in 2018 to 2.7 million, 19.7 percent lower than the total number recorded in 2017 *(see figure 33)*. This decline is attributed to the cumulative effect of the loss of livestock due to the 2017 drought which also coincided with a surge in sales of live cattle to slaughtering abattoirs reaching an all-time peak of 426,176 cattle marketed. The prolonged drought in 2018 also contributed to the slower breeding outcomes. On average the number of cattle in the country has been growing at an average of 0.4 percent per annum. At current Namibia's annual demand for beef meat stands at 7,500 tonnes or 24 kgs per capita which is lower than the annual marketed average of 8,000 tonnes. However, given that more than half of livestock marketed are exported, the meat supplied for local consumption lags behind demand hence imports to cover the shortfall.

Figure 33: Cattle Population Trend

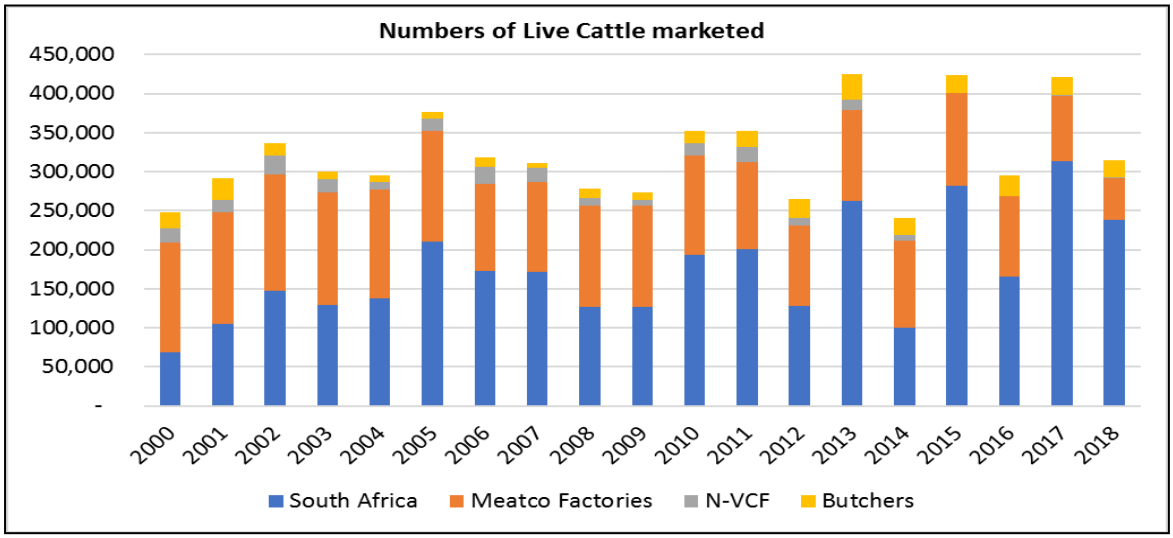


Sources: Meat Board

4.4.1.3 Number of Cattle Marketed

Figure 34 below presents the total number of cattle marketed in the country through various marketing channels. Across all marketing channels, the number of cattle marketed in 2018 declined indicating that the entire industry was affected. As of 2018, exports of live cattle to South Africa accounted for 75 percent of all cattle marketed during the same period. This has always been a policy concern given that a significant number of livestock are exported without any value addition. Furthermore, only 18 percent of all cattle marketed to export channels are slaughtered with minimum value added to products while the rest 82 percent are exported as live cattle.

Figure 34: Number of Cattle Marketed

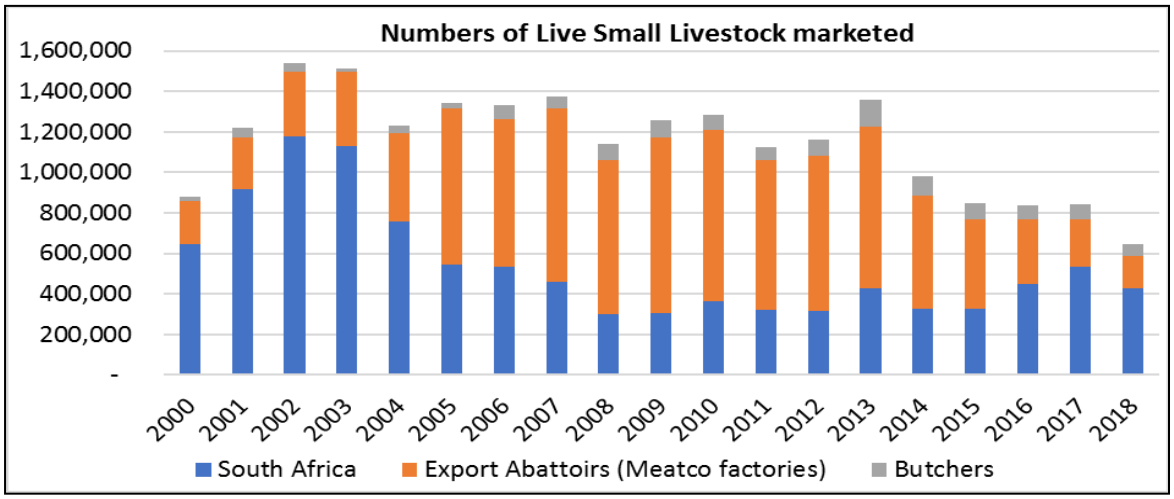


Sources: Meat Board

4.4.1.4 Number of Small Livestock Marketed

In line with the trend of cattle population, the number of small livestock marketed fell to 620,000 in 2018 from 820,000 in 2017. Of the 620,000 marketed in 2018, 62 percent were exported to South Africa as live animals, and 23 percent was marketed to Meatco factories. Local butcheries only received 8 percent of total small livestock marketed in the same year *(see figure 35 below)*.

Figure 35: Number of Small Livestock Marketed

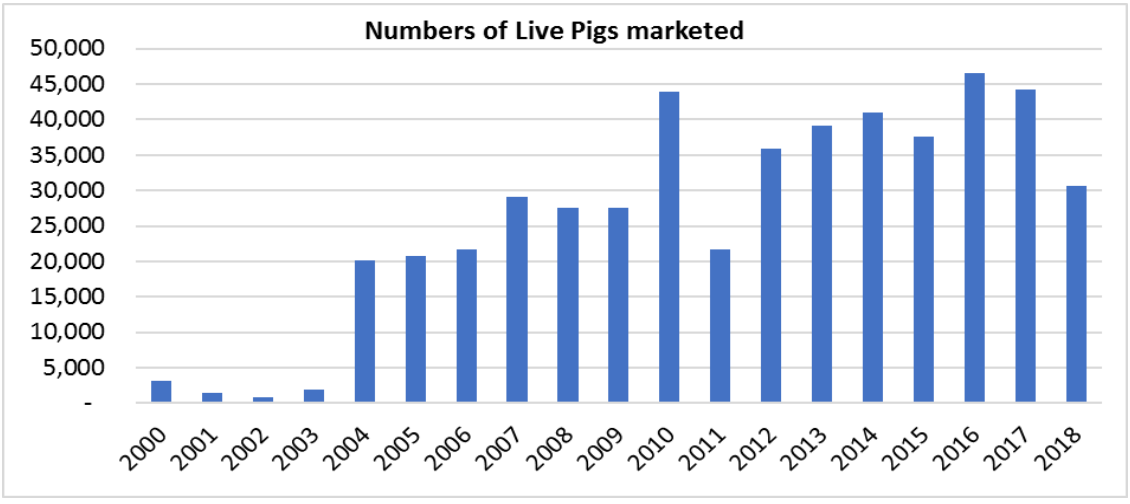


Sources: Meat Board

4.4.2 Number of Pigs Marketed

Prior to 2003, the population of pigs in Namibia was very small at less than 2000 pigs. With a major investment by the Government Institutions Pension Fund (GIPF) production rose significantly with total pigs marketed in 2004 reaching 20 000. The number of pigs marketed doubled in 2010 reaching 43 000 and further reaching an all-time high of 46,514 pigs marketed in 2016 *(see figure 36 below)*. However, the sector lost its momentum in 2018 with pigs marketed declining to 30 000. Overall, since the year 2000, the number of pigs marketed has been rising at an average growth of 60 percent per annum.

Figure 36: Number of Pigs Marketed



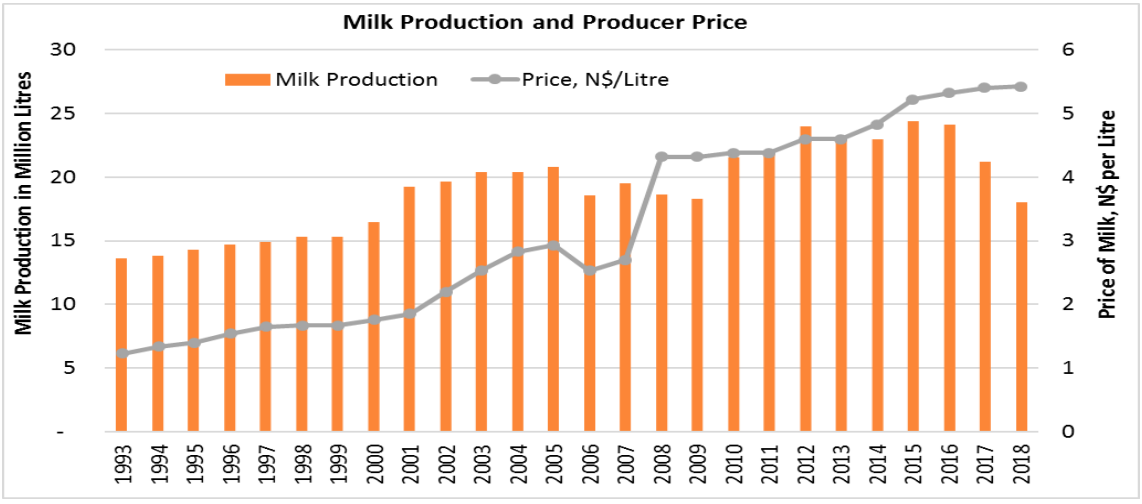
Source: Meatboard

4.4.3 Milk Production

The production of dairy products like milk is regulated by the standards of the Namibian standard institute which ensures that just like any other item produced for consumption meets the required standards. Namibia diaries remains the only supplier of diary products in the country with milk supplied from its farm located in Mariental and other Small-scale suppliers of milk countrywide who supplies the milk to Namib diaries for processing and production of dairy products. Unlike livestock farming, which is highly competitive, dairy farming has little weak competition with only one single player (Namib Diaries) dominating the market with a 75 percent market share in terms of milk production while other small-scale producers countrywide, only supply 25 percent.

Figure 37 below shows that milk production in Namibia increased from 13 million litres in 1993 to a peak of 24 million litres in 2015 before contracting to 21 million litres in 2017 and further down to 18 million litres in 2018. Currently, Namibia's annual demand for milk stands at 43 million litres or 18 litres per capita which is much higher than the annual milk production of 21 litres. In other words, domestic supply is equivalent to 50 percent of the local demand of milk.

Figure 37: Namibia Milk Production

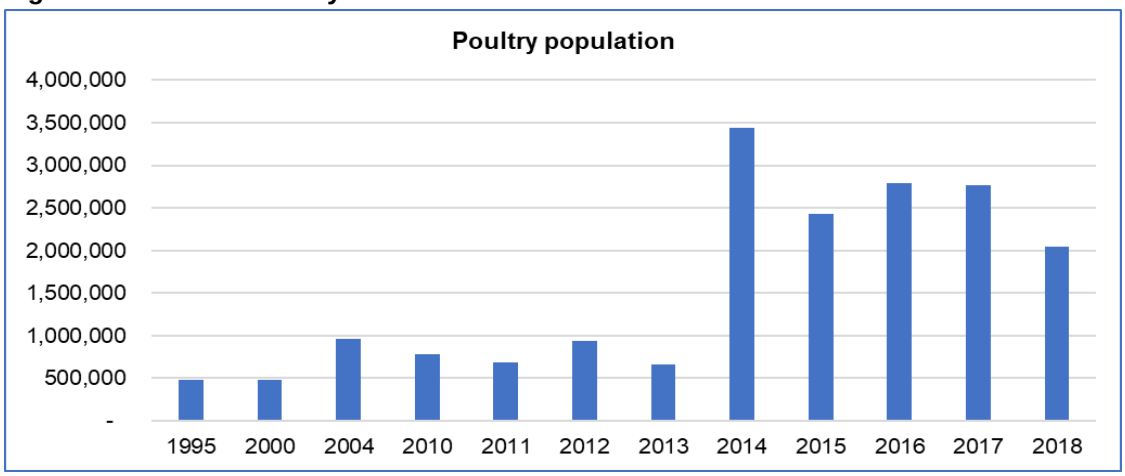


Sources: Namib Diaries

4.4.4 The poultry industry

The poultry stock has continued to rise throughout the country and in general, production has been driven by the stimulus of local demand. The poultry industry in Namibia is still in its ealry development stage, thus it makes up a marginal proportion of the agricultural sector. As of recent, the sector has seen various local small scale producers joining the market. Even though local producers have shown enthusiasm to join the industry, there are still considerable bottlenecks to entering this market. The sector remains highly depended on the import of input products from neighbouring countries like south Africa and Zambia. Nevertheless, there is still high potential in terms of job creation and growth in the poultry industry. Figure 38 below shows a trend in poultry production over the years since 1995. Although production was almost flat between 1995 to 2013, poultry production increased significantly from 2014 when it reached a peak of 3.4 million before declining 2.0 million in 2018.

Figure 38: Namibia Poultry Production

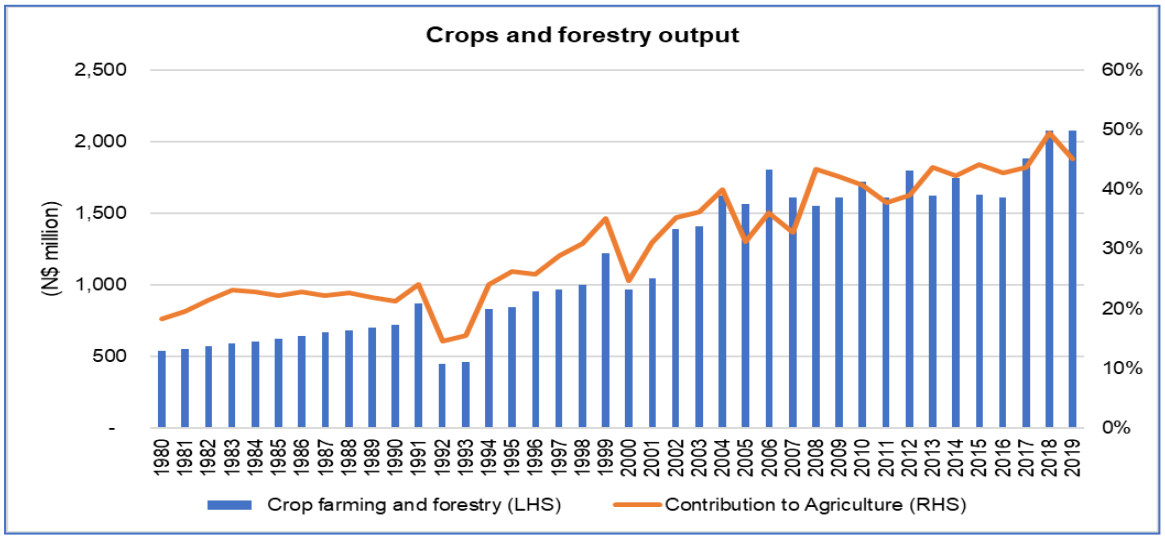


Sources: MAWF

4.4.5 Crops, Vegetable and Horticulture sector

The main categories of crops produced in Namibia include maize, wheat, pearl millet and barley. Vegetables include onions, cabbages, spinach, and many others. Pearl millet is mainly produced at a subsistence level while maize, wheat and barley are only produced at a commercial level. In addition, subsistence farmers in Namibia do not grow vegetables. The crops subsector is a net importer which includes fruits and vegetables. Figure 39 below summarizes the output for crops and forestry sector in N$ million. The subsector's output evolved remarkably over the years, from contributing less than 20 percent of total agricultural output during 1980s, to 47 percent of output in 2019. This is expected due to the initiatives that were employed with the aim of encouraging crop farming.

Figure 39: Crops and forestry output

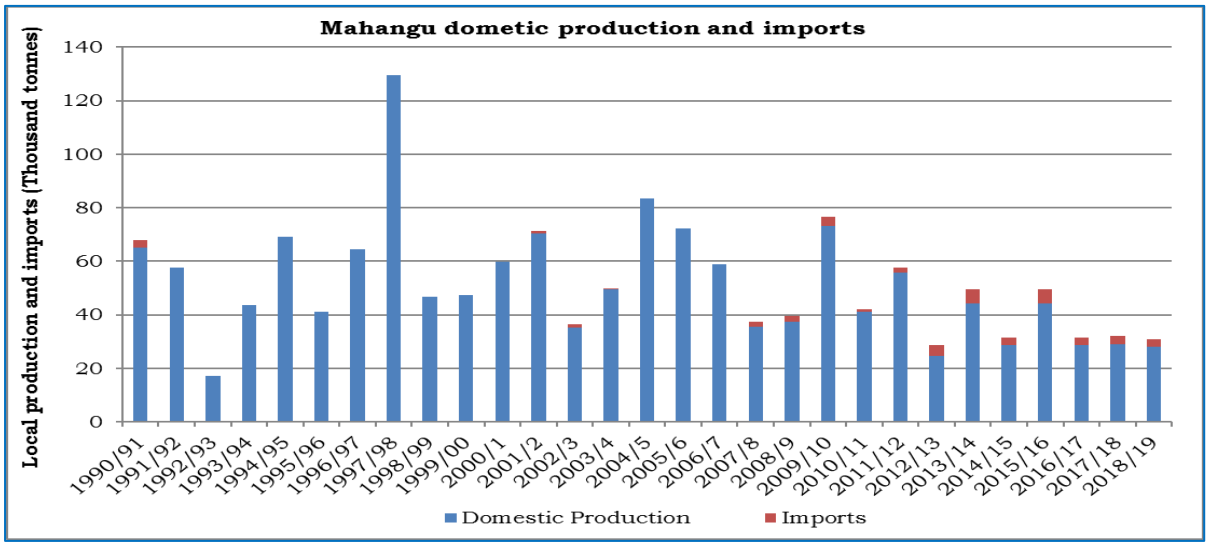


Source: NSA

4.4.5.1 Mahangu

Mahangu, also known as pearl millet, which is a common stable food of more than 50% of the population remains predominantly produced by subsistence farmers in northern and partly central parts of the country. Namibia is self-sufficient when it comes to Mahangu producing 95% of its Mahangu and imports less than 5% of its Mahangu needs and in some years Namibia does not import Mahangu (see figure 40 below). The highest production for Mahangu was in the period 1997/1998 when the country produced a record of more than 120 000 tonnes of Mahangu. However, Mahangu production has been declining over the years, producing an average of 30 000 tonnes of Mahangu between 2016 and 2019. Despite, the collapse in production, imports of Mahangu remains relatively small below 5%. These could be attributable to availability of substitutes such as rice, maize etc.

Figure 40: Mahangu Production and Imports

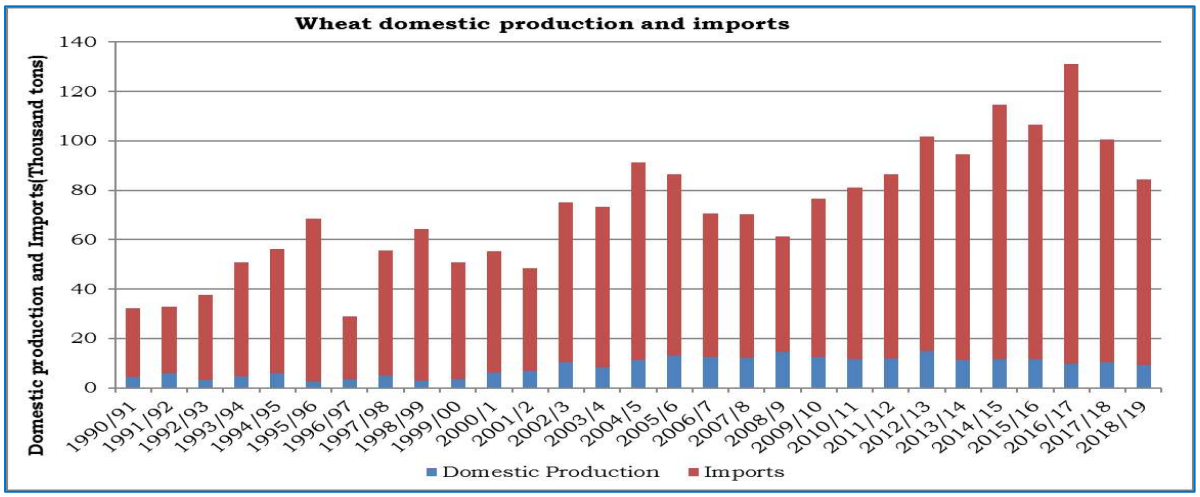


Source: NSA

4.4.5.2 Wheat

Namibia remains a net importer of wheat and the country has not achieved much success in the production of wheat since 1990. Figure 41 below shows that since 1990/91, Namibia produced less than 10% of its wheat needs and imports around 92% of its needs. In 2016/17 the total demand for wheat was estimated at 131,000 tonnes of which 9,822 was produced locally in the same period representing seven percent of the total demand while the remaining 93 percent of demand was covered by imported grains. There appears to be no strategy or policy on wheat production and its is therefore not surprising that the sector remains untransformed since 1990 with the country relying on imports.

Figure 41: Namibia Wheat Production

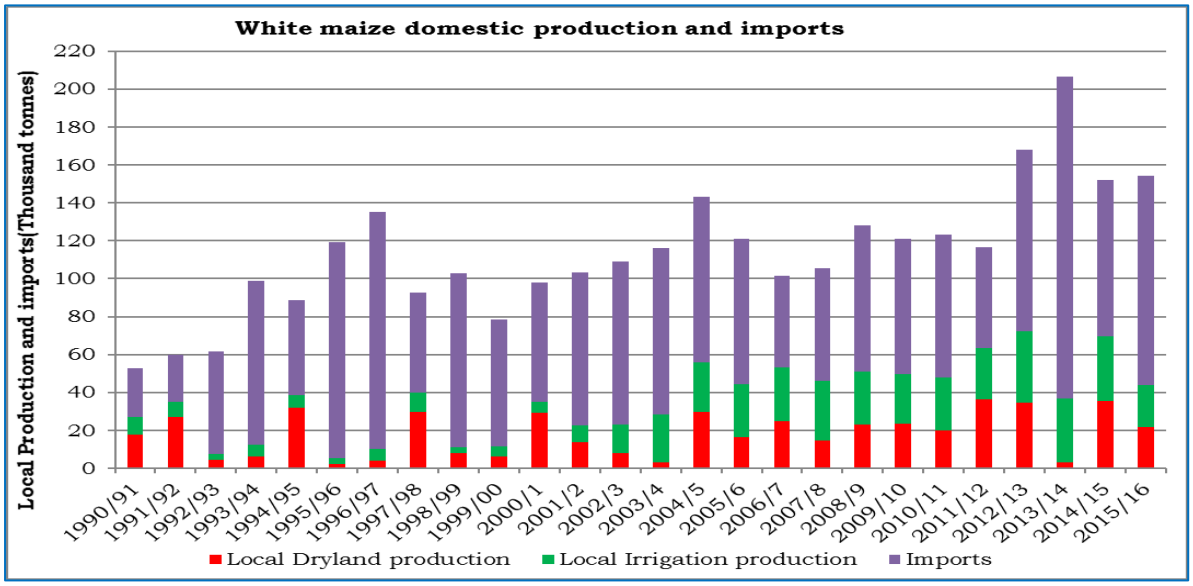


Sources: AMTA & NAB

4.4.5.3 White Maize

Namibia white maize production increased over the past years with the country producing 50% of its needs and the remaining 50% is imported. Over the years, production of maize through irrigation system had gained momentum as a means of sustaining output levels in times of limited rainfall. However, output levels from Dry-land systems are always volatile with the rainfall conditions in each year. Figure 42 below shows local output in the production of white maize both from dry-land and irrigation systems as well as imported maize grains supplementing domestic production to meet demand. In 2015/16, the year which had one of the severe droughts in history, local production fell by 35 percent as output levels from dry-land and irrigation systems were 39 and 35 percent down respectively relative to the year before. The domestic local production of 43,948 tonnes from both dry-land and irrigation systems accounted for nearly 30 percent of the domestic demand. Much of the supply deficit in maize is always covered by imports from South Africa.

Figure 42: Namibia White Maize Production

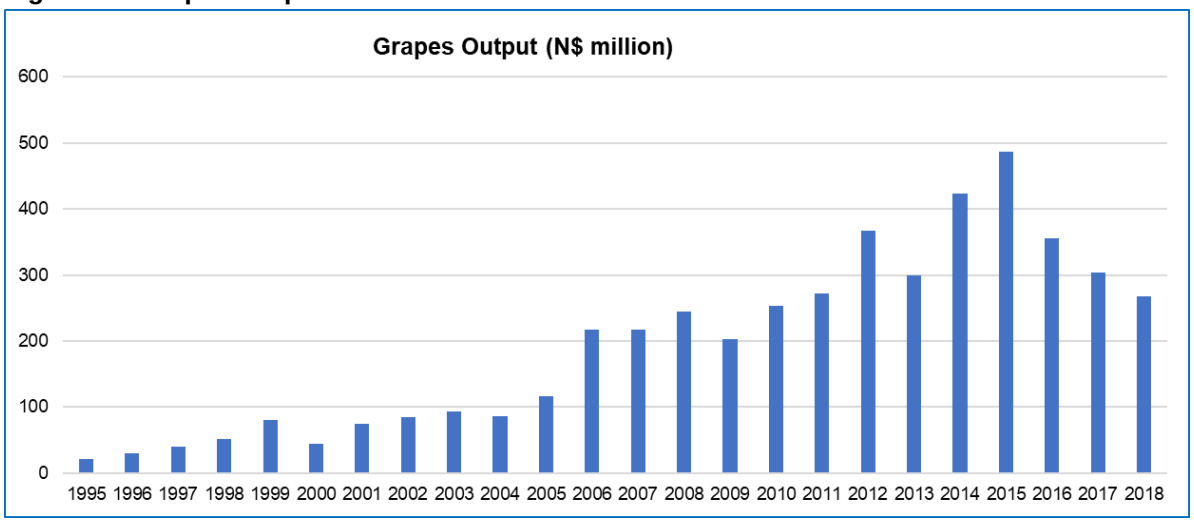


Sources: AMTA & NAB

4.4.5.3 Grapes Production

Figure 43 below presents the production of grapes over the years between 1995 to 2018. Grape farming contributes a significant portion of crops output (averaging 14% per annum) as well as crops exports as summarized by figure 44. However, grapes output has been gradually declining from 2016, narrowing the sector's contribution to about 7% while reaching N$ 268 million from N$ 304 million in 2017. Overall, the output of grape farming was at a peak in 2015 when it reached N$ 486 million.

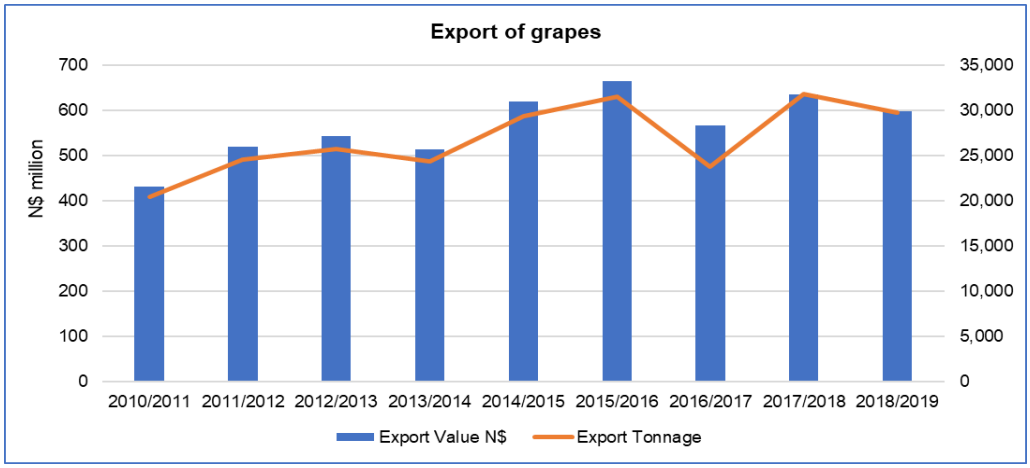
Figure 43: Grapes Output Overtime



Sources: NSA, MAWF & NAB

Figure 44 below evidences that exports of grapes stabilized over the period. In line with grapes output in 2015, exports were striking over the same period.

Figure 44: Grapes exports



Source: NAB

4.5 Contribution of the Agricultural Sector to Employment

4.5.1. Employment

In terms of its contribution to employment, agriculture sector is the largest employer in the economy, employing 22 percent of the employed labour force by 2018. Table 18 below depicts the sectoral composition of employment in the agriculture sector over 4 periods. During these periods, the share of employment declined from 31 percent in 1991 to 37 percent in 1997, it further declined from 27 in 2004 to 22 percent 2018. Although an increase in the number of employed persons in 2018 can be observed, the percentage share drastically reduced. One of the obvious factors could be the growth of other sectors as well as the slow growth in agriculture. Although agriculture contribution to GDP declined from 5.4% in 2004 to 4.6% in 2018, employment in the sector increased by more than 50 000 although most of these jobs were created in the subsistence farming segment.

Table 15: Agriculture Employment

	1991	1997	2004	2018
Total employment	137,000	401,140	385,329	725,742
Agriculture employment	43,000	146,899	102,636	157,681
Agriculture share	31%	37%	27%	22%

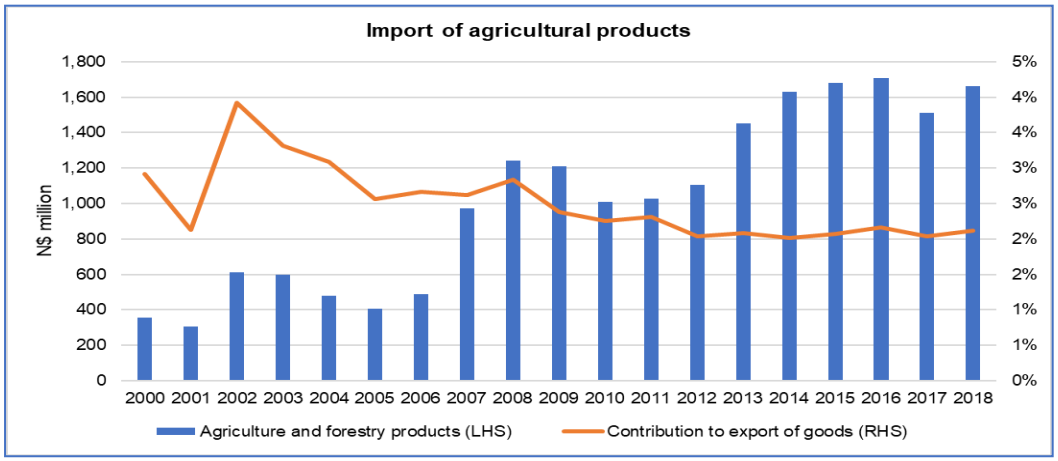
Source: NSA

4.6 Contribution of the Agricultural Sector to Trade (Exports and Imports)

4.6.1. Imports

Figure 45 below shows overall agriculture sector imports as well as the composition to total imports. Agricultural goods take up an average of 3 percent of total imports. Import of agricultural goods has seemingly been stabilizing over the years as shown below. In the early 2000, these imports used to take up more than 4 percent, this has changes due to improved local production of crops. In monetary value, the import industry for this sector was valued at more than N$ 1.7 billion in 2018. Overall, Namibia remains a net exporter of agricultural goods. However, the import of crops, vegetables and fruits remains remarkably high.

Figure 45: Overview of imports

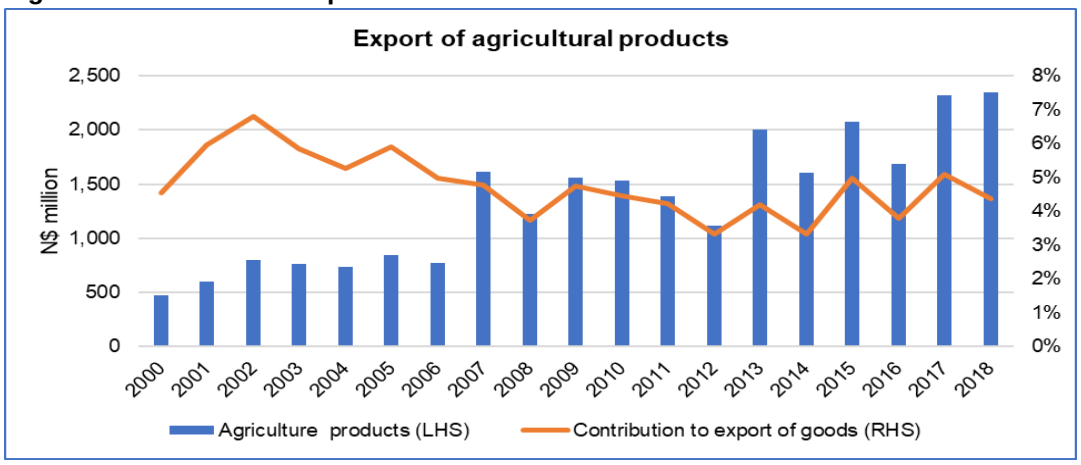


Source: NSA

4.6.2. Exports

Figure 46 below shows overall exports of agricultural goods from 2000 to 2018. Overall, an average of 5 percent of export revenue comes from agriculture sector. The figure below shows that agriculture exports picked up significantly from 2013. In monetary value, the export industry for this sector was valued at more than N$ 2 billion in 2018, from a mere N$472 million in 2000.

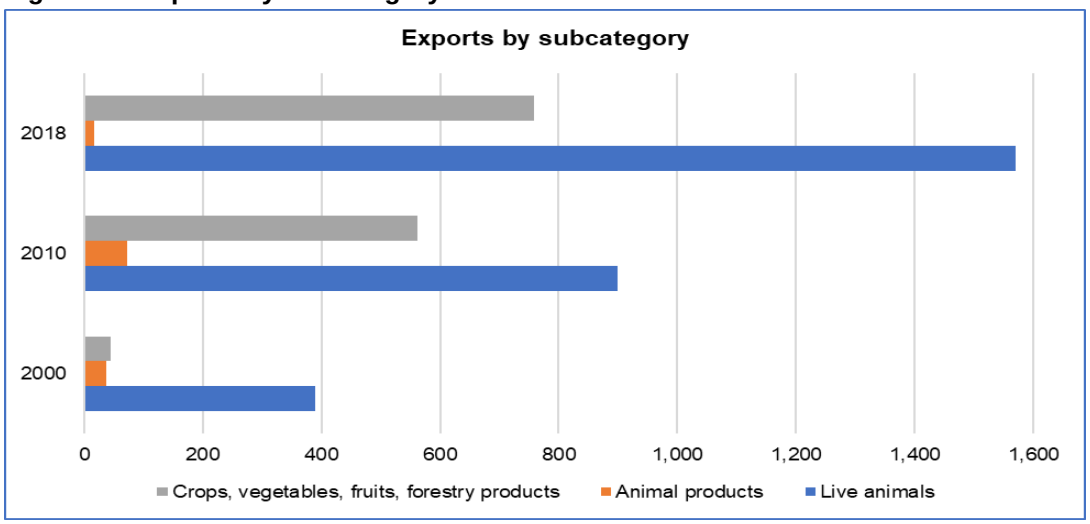
Figure 46: Overview of exports



Source: NSA

The following figure 47 indicates the composition of agriculture exports between 2000 and 2018. Overall, the export of live animals has been the largest contributor to total agriculture exports accounting for an average of more than 65 percent per annum. In 2018 alone, the sector was worth more than N$1.7 billion. The second largest category is Crops, vegetables, fruits, forestry products composing 31 percent. The figure further shows that there has not been improvement in animal product exports.

Figure 47: Exports by subcategory

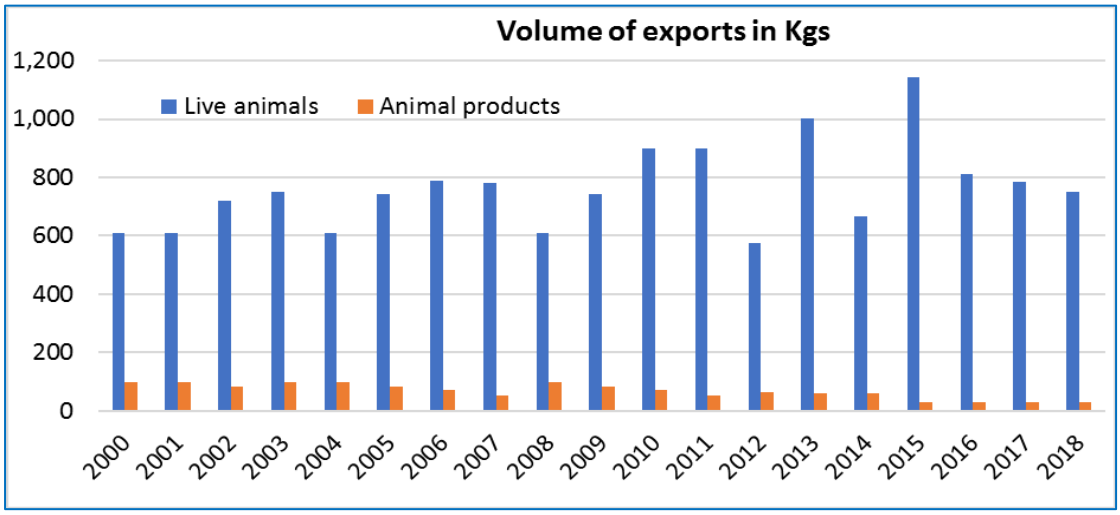


Source: NSA

Overall, Namibia's volume of live animal exports far exceeds the volume of animal products. Over the past 10 years since 2008, Namibia's exports of live animals averaged 600 Kgs

relative to 30 kgs of animal product exports meaning that live animals accounts for 90 percent of the total volume of all live animals and related products exports.

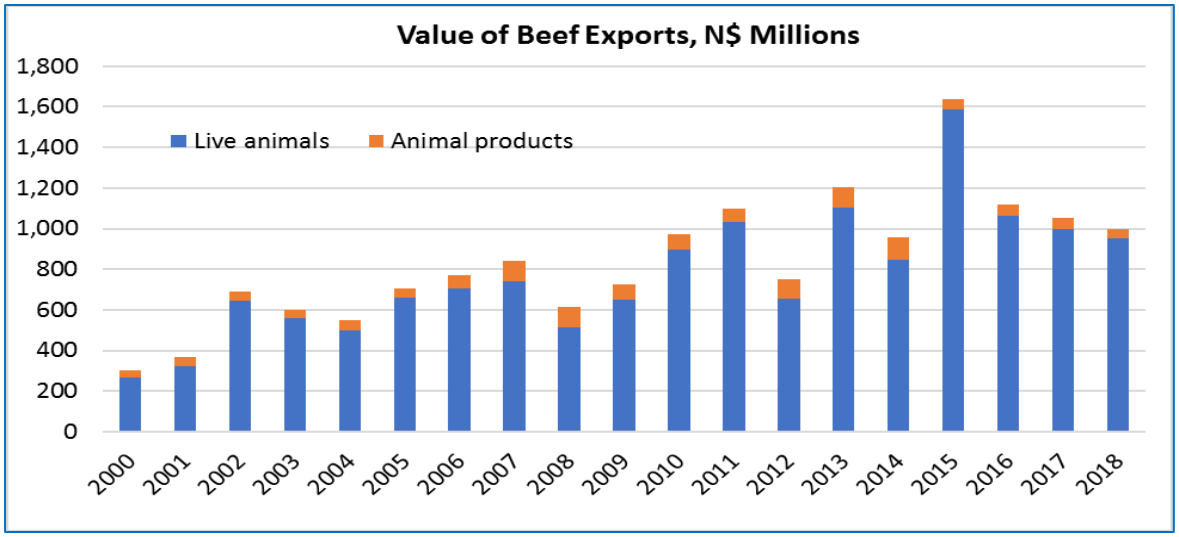
Figure 48: Volume of Exports



Sources: BoN & NSA

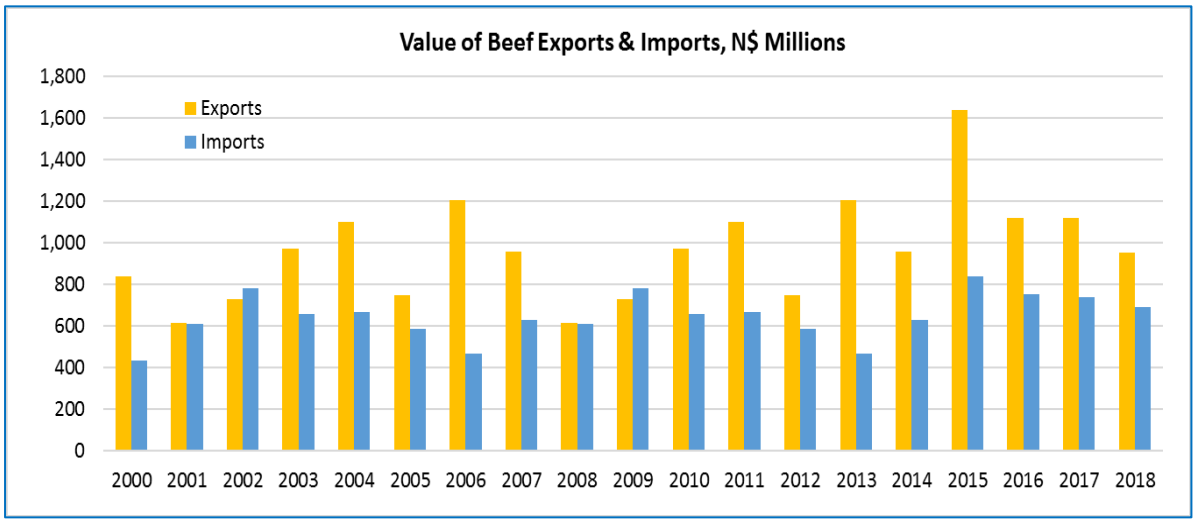
Beef being the major export product of animals have on average exported products worth N$1 billion per annum since 2010. Similar to the trend of all livestock, beef exports remain dominated by live animal as opposed to beef products. In 2018, N$950 million worth of live beef animals were exported compared to N$20 million beef products exported in the same period.

Figure 49: Value of Beef Exports



Sources: NSA & BoN

Figure 50: Value of beef exports & imports



Sources: BoN, & NSA

4.7 Agricultural Sector Share in Total Investment

4.7.1. Investments

Fixed Capital Formation (Investment) into the agriculture sector remained stagnant over the past 30 years and even reducing marginally. As per table 19 below, the share of investment in agriculture was 7 percent of total investment in 1991 which has declined to 6 percent in 2018. Out of total capital inflows of more than N$30 billion that entered the Namibian economy in 2018, only a mere N$1.9 billion was channelled towards agriculture and this has been the trend since 1990. The bulk of this investment was channelled to mining.

Table 16: Investment

	1991	1997	2004	2018
Total investment (N$ million)	998	2,866	7,922	30,881
Agriculture Investment (N$ million)	70	182	432	1,978
Agriculture share	7%	6%	5%	6%

Source: NSA

4.8 Agricultural Sector Productivity

As of 2018, the agriculture sector had generated N$ 4,2 billion of value added and employed more than 157 thousand persons. Table 20 below shows the growth of this sector in terms of output, employment as well as investment. The labour productivity of the sector has been significantly declining, reaching N$ 27,000 per employed person. Although decreases were recorded labour productivity, it is important to mention that these are due to the slow growth in sectoral output as compared to employment growth. This could also highlight lack of innovation. On the other hand, improvements can be noticed in the investment per employed person which grew over 3 periods regardless.

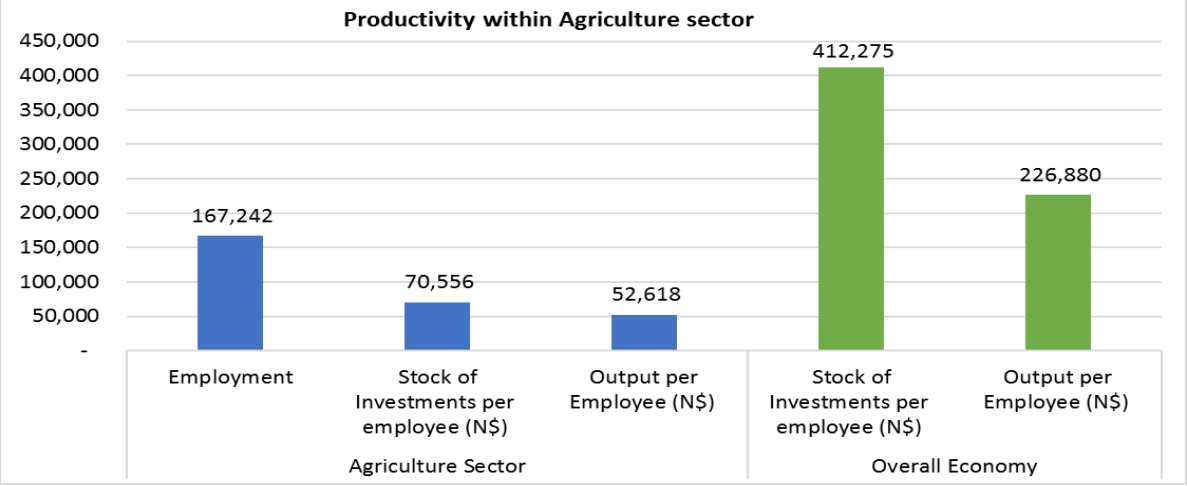
Table 17: Productivity

Indicator	1991	1997	2004	2018
Agriculture output (N$ million)	3,589	3,332	4,073	4,205
Number of employed persons	43,000	146,899	102,636	157,681
Labour productivity (N$ thousand)	83	23	40	27
Agriculture Investment (N$ million)	70	182	432	1,978
Investment per employed person (N$ thousand)	2	1	4	12

Source: NSA, FC Research

Given the mix of capital and labour employed in the agricultural sector, productivity can be calculated to show how much output an average factor of production produces. Using 2018 information, Namibia's output per employee in the agriculture sector stood at N$52,618 with an average capital use valued at N$70,556 per employee. This annual output per employee translates to a monthly output of N$4,384 per month. Compared to other sectors, the agriculture sector productivity levels remain low thereby limiting the opportunity of higher wages for those employed in this sector, which explains why the sector average wage per employee is low compared to other sectors. According to the 2018 NLFS, an average employee in the agriculture sector earns a monthly wage of N$3,393 compared to the National average of N$7,700. Productivity levels in the agriculture sector remain very low compared to most sectors in the economy, N$52,618 for Agriculture sector vs. N$226,880 for the overall economy. Equally capital investment intensity in the agriculture sector remain comparably low to other sectors with an average capital stock of N$70,556 per employee in this sector compared to the overall economy average of N$412,275 worth of capital investments per employee.

Figure 51: Productivity



Sources: NSA

4.9 Land Tenure as a Measure Agricultural Transformation

Another measure agricultural sector transformation over the years is land tenure. Productive agricultural land mostly falls under government and commercial land, this is because communal landowners mainly use their land or production for personal reasons or consumption. Since 1902, we can see that commercial land share has substantially improved rising from 6 percent to 42 percent in 2018. It is further evident that commercial land was gained, a loss of government land share which declined from 64 to 23 percent over the period

as indicated by table 21 below. It is also important to recognise that communal land allocation is as crucial due to the fact that locals rely on subsistence agriculture for food production.

Table 18: Land allocation

	1902	1955	1964	2001	2010	2018
Communal land	30%	27%	40%	39%	36%	35%
Commercial/Freehold land	6%	47%	44%	43%	44%	42%
Government land	64%	27%	16%	18%	20%	23%

Source: NSA

4.10 Demographic Transition as a measure of Agricultural Transformation

According to Mellor 2017, the demographic transition is the extraordinary evolution of population growth from slow growth, with high death rates and birth rates and periodic fluctuations in death rates, to rapid population growth as death rates decline far faster than birth rates, to slow and even declining population growth with low birth and death rates. Table 22 below shows a transition in terms of urbanisation, from 28 percent in 1991 to 43 percent 2011. In terms of population growth, it has slowed down from 3.1 percent in 1991 to 1.4 percent 2011. Death rates have not stabilized or changed as such however we can see slow declines in birth rates. In terms of the description provided above, Namibia has not met the criteria as provided thus we cannot say the country has transitioned.

Table 19: Demographic transition

	1991	2001	2011
Urbanisation	28%	33%	43%
Population growth	3.1%	2.6%	1.4%
Death rate per 1000 people	8.8	12.7	10.7
Birth rate per 1000 people	37.4	30.7	29.4

Source: NSA, UN

4.11 Has the Agricultural Sector in Namibia Transformed

Using the measures presented above, we conclude that the agricultural sector in Namibia has not transformed for the following reasons:

1. The share of land allocated for commercial land/farming remained relatively unchanged at 44% percent in 1990 to 42 percent in 2018, while communal land used for production declined slightly from around 40% in 1990 to 35% in 2018. Part of government strategy to transform the agriculture sector was to increase and allocate more land for commercial agriculture and as this seem not to have taken place.
2. The agricultural sector contribution to GDP declined from 16% in 1990 to 7% in of GDP in 2019, contrary to government's goals of increasing this ratio. Namibia's comparative advantage lies in its vast land, abundant, unskilled and health rural based labour force and enough river and underground water. Since independence government has invested heavily in rural electrification, rural water supply and country road, railway, and communication infrastructure. All these factors are in Namibia's favour to expand its agriculture sector, but this has not happened, and the agriculture sector continue to contract and decline.

3. The agriculture sector production structure remains relatively unchanged with livestock sector share of 57% in 2018 where it was in 1990. Namibia still imports 60% of its food needs by 2018, the same amount it imported in 1990.
4. The agriculture sector exports are still dominated by live animals (78% of agriculture exports are live animals).
5. Agricultural sector still the biggest employer (23%) in 2018, the same percent as in 1995. The bulk of those employed in the agriculture sector are in the subsistence farming whose output is very low.
6. Fixed Capital Formation (Fixed Investment) into the agriculture sector remained stagnant over the past 30 years and even reducing marginally from 7 percent of total investment in 1991 to 6 percent in 2018. The low fixed investment into this sector explains why the agriculture sector contribution to GDP has contracted over the past 30 years.
7. Agriculture productivity has declined substantially with more labour employed in the sector producing less goods. The majority of those employed in the agricultural sector are concentrated in the subsistence farming.

Recommendation

Agricultural sector holds the key to Namibia's future and compared to other sectors in the economy, the country can produce most of the imported products and produce cash-crops such as cotton for inputs in the manufacturing sector and export markets. We recommend that agricultural sector contribution to GDP be increased from the current 7% in 2019 to 15% by 2025 and to 30% by 2030. Increasing agricultural sector contribution to 30% will position Namibia to build its manufacturing base. In order to achieve this, investment in agriculture by both government and private sector need to increase substantially. All countries that reached industrialized and advanced stage could only do so by first increasing agriculture as a percent of GDP to 30% and in Brazil's case agriculture sector was increased to 60% of GDP before coming down and overtaken by manufacturing. If Namibia indeed want to industrialize and become a prosperous nation, it must first unlock and unleash the agricultural sector's hidden potential and increase the sector's contribution to a minimum of 30% of GDP by 2030.

CHAPTER 5: NAMIBIA SERVICE SECTOR TRANSFORMATION

Namibia is particularly advanced in the sector of services with the services sector accounting for more than 50% of the economy and has served as the main engine and source of economic growth since independence. Governments have long overlooked or ignored the service sector on its economic transformation agenda but focussed more on transforming sectors such as agriculture and manufacturing sectors. This thinking and approach views the service sector as a lagging and reactive sector and is in line with the theoretical literature dating back to Adam Smith that did not give the service sector a prominent role in the early stage of economic development. The empirical literature on growth in developing countries has also placed relatively little emphasis on services until recently.

The services sector was seen as following economic transformation, with demand increasing as incomes rise and services being endogenous to a country's structural position. While this might have been true in many countries that experienced rapid industrialization, Namibia service sector is large and has the potential if well nurtured to support and lead economic transformation and structural change. The service sector has both a direct and indirect effect on the economy. The direct effect is the service sector's contribution to the gross domestic product (GDP), job creation and exports. The indirect effects is through making other sectors productive and grow faster, for example, the growth and advancement of the country's information and communications technology (ICT) and banking/financial services make other sectors and companies grow faster and become more productive. In Namibia both the indirect and direct role of the service sector has been prominent and unleashed high growth and productivity in many sectors of the Namibian economy. The service sector is composed of several sub-sectors such the banking/financial sector, transport sector, the ICT sector and tourism services. In this chapter we discuss the journey travelled by the service sector since independence and how the sector has been transforming. We assess the role of services in economic transformation based on the following indicators:

- Share of the service sector in gross national product (GDP).
- Share of the service sector in employment given a level of income.
- Share of the service sector in exports.
- Share of the service sector in total investment.
- Level and growth of productivity in services and the rest of the economy.

Table 20: Government Services sector at a glance

Governement Services Sector at glance		
Sectoral Contribution	Government Services to GDP	N$ 45.8 billion or 25.6% of GDP
Subsectoral Contribution	Public Administration and defence	N$ 20.9 billion (46% of Government services GDP)
	Education	N$ 18.8 billion (41% of Government services GDP)
	Health	N$ 6.0 billion (13% of Government services GDP)
Average GDP Growth	Government Services to GDP	3.5%
	Public Administration and defence	4.6%
	Education	3.7%
	Health	2.8%
Social Indicators	Gini-Coefficient	0.56
	Poverty Incidence	17.0%
	Unemployment Rate	33.4%
Health Output	Health Expenditure per Capita	N$ 2,729 (2017/18)
	Infant Mortality rate	45%
Education Output	Education Expenditure per school going population	N$ 18,717 (2017/18)
	Literacy rate	87.1%
Government Debt Profile	Total Debt	N$ 96.9 billion (53% of GDP)
	Domestic Debt	N$ 62.3 billion (67% of total debt)
	Foreign Debt	N$ 30.9 billion (33% of total debt)
Fiscal Indicators	Governement Revenue	N$ 58.4 billion (30% of GDP)
	Governement Expenditure	N$ 66.6 billion (34% of GDP)
	Budget Balance	N$ 8.1 billion (4.5% of GDP)
Government Expenditure	Basic Education Budget	N$13.8 billion (23% of total budget)
	Health Budget	N$ 6.9 billion (11% of total budget)
	Defence Budget	N$ 5.9 billion (10% of total budget)
	Overall Budget (2019/20)	N$ 60.1 billion

Source: FC Research & Various sources

Table 21: Financial Services sector at a glance

Financial Services Sector at glance		
Sectoral Contribution	Financial services to GDP	N$ 12.4 billion or 7.0% of GDP
Average GDP Growth	Financial Services	8.1%
Financial Indicators	Inflation rate	1.6%
	Repo rate	4.3%
	Asset growth	7.6%
	PSCE (growth)	6.7%
	Debt Servicing to Disposable Income	20.1%
Banking Sector	Total Banking Sector Assets (2019)	N$ 142.2 billion
	Net loans and advances	N$ 103.9 billion (72% of total)
	short-term negotiable instruments	N$ 15.7 billion (11% of total)
	cash and balances	N$13.9 billion (10% of total)
Non-Banking Sector	Total Assets (2019)	N$ 316.3 billion (N$ 158.5 or 55% pension funds)
	Pension Fund Assets (2019)	N$ 173.4 billion
Liquidity	Liquid asset holdings	13.4%
	Loan-to-Deposit Ratio	92.9%
	Loan-to-Funding Ratio	84.9%
Debt	Corporate Sector Debt	N$ 127.2 billion (N$ 85.7 or 67% foreign debt)
	Corporate Sector Debt to GDP	71.2%
	SOE's Debt	N$ 11.1 billion (N$ 10.1 or 91% foreign debt)
Investment in Financial Sector	Investments in 2018	N$ 4.0 billion (13% of total)
	Investment stock as of 2018	N$ 59.4 billion (18% of total)
Employment Creation	Total Employement	13,861 (1.9% of total employed)
	Formal Employement	12,325 (89% of total employment)
	Informal Employement	1,536 (11% of total employment)
Average wage	Financial services	N$ 20,459 (N$ 7,935 National average)

Source: FC Research & Various sources

Table 22: Electricity sector at a glance

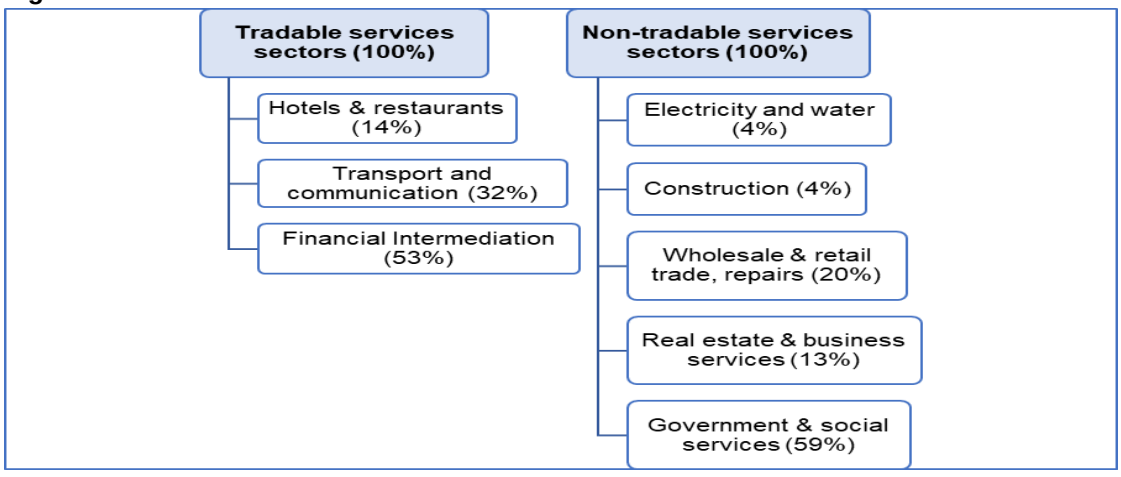
Electricity Sector at glance		
Sectoral Contribution	Electricity and Water to GDP	N$ 6.1 billion or 3.4% of GDP
Average GDP Growth	Electricity and Water	2.2%
Electricity Generation	Local generation	40%
	Imports	60%
Electricity Consumption	Total Consumption	2,437 GWh
Investment in Electricity and Water	Investments in 2018	N$ 761 million (2% of total)
	Investment stock as of 2018	N$ 18.4 billion (5% of total)
Employment Creation	Total Employement	3,278 (0.5% of total employed)
	Formal Employement	2,870 (88% of total employment)
	Informal Employement	408 (12% of total employment)
Average wage	Electricity, gas & related industries	N$ 17,795 (N$ 7,935 National average)
Import	Electrical machinery and apparatus	N$ 2.8 billion (4% of total import of goods)
	Electricity	N$ 3.0 billion (4% of total import of goods)
Government Expenditure	N$ 229.2 million (0.4% of total budget)	N$ 251 million (0.4% of total budget)

Source: FC Research & Various sources

5.1 Structure of Namibia's Service Sector

The service sector contributes approximately more than 50 percent of Namibia's total GDP and accounts for 40% of total employment in the country. In Namibia, the sector is decomposed into the tradable and non-tradable service sector. The tradable sector contains all those services in which there is exposure to international competition (such as tourism, transport & communication as well as financial intermediation) and the non-tradable service sector, comprising all other services (utilities, construction, government and social services). Overall, the largest service sector in terms of GDP contribution is the non-tradable service sector which contributes 41 percent of the total GDP per annum while tradable services contributes 11 percent. Namibia's National Accounts distinguish among the following services (see figure 52 below): hotels and restaurants (14%), transport and communication services (32%) financial intermediation (53), electricity and water (4%), construction (4%), wholesale & retail, trade, repairs (20%), real estate & business services (13%), government and social services (59%) .

Figure 52: The structure of the service sector



Source: NSA

5.1.1 Services sector contribution to GDP

The share of the services sector usually increases as the country's income (GDP) rises and other sectors of the economy transforms and expands. Table 26 below summarizes contribution of individual sectors to GDP as well as the contribution of tradable and non-tradable sectors. Unlike agriculture and manufacturing whose contribution to GDP remained relatively unchanged since 1990, we observe in table 26 below that some components of the service sector has expanded and increasing their contribution to GDP. The tradable sector has evolved substantially from contributing 8.5 percent to GDP in 1980 to 12.4 in 2010 and increasing to 14.7 percent in 2018. The Non-tradable services is the largest, increasing its contribution from 30 percent of GDP in 1980 to 41.9 percent in 2010 and further increasing to 48.2 percent in 2018. The wholesale and retail sector grew considerably since 1980 when it contributed 1.1 percent, increasing to 6.8% in 1990 and reaching 10.2 percent in 2018. The financial sector emerged significantly from 1.6 percent in 1980 to 3.6 percent in 2000 and increasing further to 8.6 percent in 2018.

Table 23: Contribution to GDP

	1980	1990	2000	2010	2019
Tradable service sector contribution to GDP (%)					
Tradable service sector	**8.5**	**9.2**	**9.8**	**12.4**	**13.7**
Hotels and restaurants	1.1	1.1	1.7	1.7	2.2
Transport, and communication	5.8	6.1	4.5	5.1	4.5
Financial intermediation	1.6	2.0	3.6	5.6	7.0
Non-tradable service sector contribution to GDP (%)					
Non-tradable service sector	**30.1**	**41.8**	**41.9**	**44.1**	**47.7**
Electricity and water	1.9	1.9	1.9	1.9	3.4
Construction	4.7	2.0	2.0	3.2	2.1
Wholesale and retail trade, repairs	1.1	6.8	10.1	11.2	10.2
Real estate and business services	6.3	2.0	3.6	5.6	6.4
Government and social services	16.1	29.0	24.2	22.2	25.6

Source: NSA

5.1.2 Services Sector growth

Table 27 below highlights the average growth rates per annum over various periods as indicated. It can be observed from the table that the highest growth rates in different subcomponents of the service sector was recorded in two periods of 1991 – 2000 and 2001 - 2010 periods that coincides with high economic (GDP) growth in Namibia. In line with sluggish economic growth after 2012, growth rates in most of the service sector components contracted between 2011 – 2018 apart from government and electricity and water.

Table 24: GDP growth

	1981-1990	1991-2000	2001-2010	2011-2019
Tradable Sectors average GDP growth (%)				
Hotels and restaurants	1.7	7.8	6.2	4.2
Transport and communication	2.4	5.8	11.1	3.5
Financial intermediation	1.1	8.1	10.1	6.9
Non-tradable Sector average GDP growth (%)				
Electricity and water	4.4	2.7	- 0.6	3.9
Construction	- 7.2	5.4	12.0	4.6
Wholesale and retail trade, repairs	1.2	5.7	6.4	3.3
Real estate and business services	1.1	3.4	5.6	2.4
Government and Social services	7.2	2.6	2.4	4.6

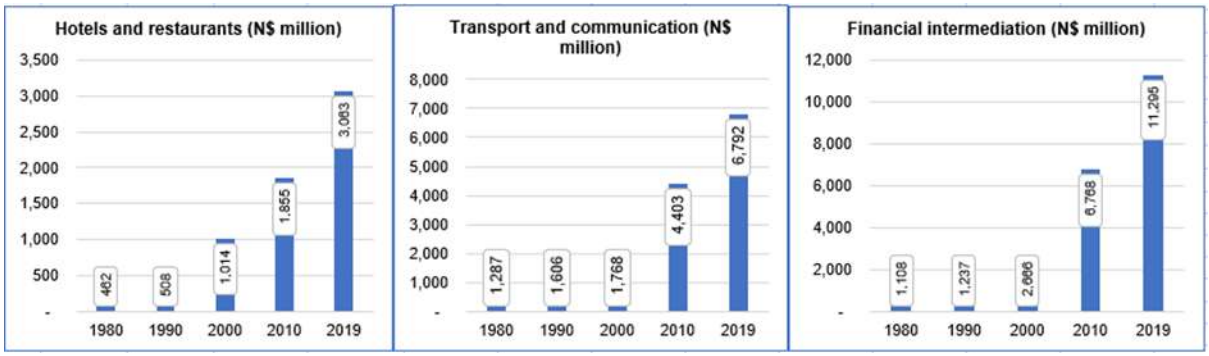
Source: NSA

5.2 Services Sector output

Figure 53 below illustrates the output of tradable services sectors over time. As of 2019, the sector was valued at more than N$ 21 billion and employs around 7 percent of the total labour force. As observed in figure 59, the hotels and restaurants sector evolved marginally from over the years from 1980 to 2018. The substantial growth is attributed to the growth in tourist arrivals as well as tourism receipts over the same period. As of 2018, the transport and communication sector were valued at a around N$ 5.6 billion contributing more than 2 percent to total output and employing at least 4 percent of the population. The largest subsector is the transport sector which contributes an average of 47 percent in output per annum followed by post and telecommunication with 37 percent. However, from 2017, the trajectory changed as post, and telecommunication surpassed the transport subsector. As from 2010, this sector has seen a substantial growth mainly attributed to the fast growth in post and telecommunications subsector.

Over the past 28 years, the growth in financial intermediation outstripped the growth in overall GDP by 4 percent on average. While its output was at N$ 1.2 billion in 1990, the sector's output reached N$ 11.2 billion in 2019.

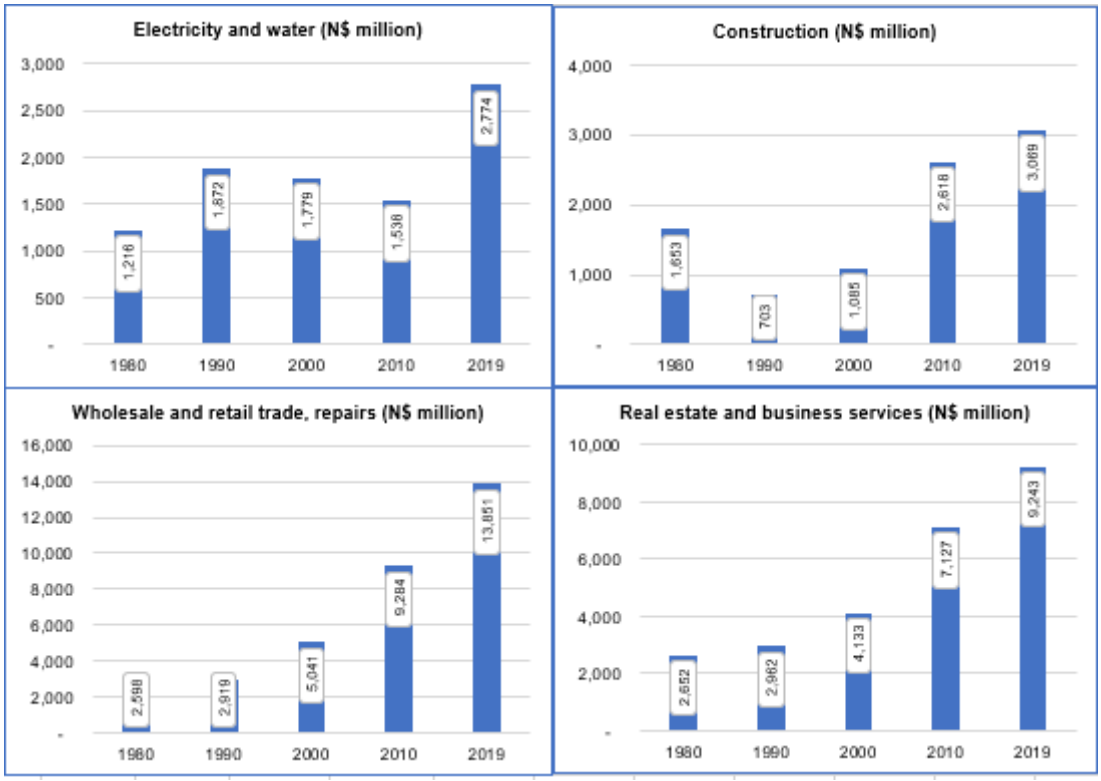
Figure 53: Tradable services output



Source: NSA

Figure 54 summarizes output from non-tradable service sectors. The electricity and water sector contributes 2 percent of service sector output on average yearly and employs 1 percent of the total labour force. The sector's output has been declining between 1990 to 2010 but there has been a gradual rise from 2010 to 2019. As of 2019, the construction sector was valued at around N$ 3 billion contributing more than 2.5 percent to total output and employing at least 6 percent of the labour force. However, the construction sector picked up from 2000 as a result of the large number of construction projects that took place over the same period. The wholesale sector is the second largest of non-trading service sector. It contributes an average of 8 percent per annum to total service output and employs more than 11 percent of the total labour force. As of 2019, the sector was worth more than N$ 13 billion in real value. Figure 60 below shows how the sectoral output behaved over the periods. Since independence, output has gradually been increasing and as of 2019, the real estate sector employed 4 percent of the labour force and it was worth more than N$ 9 billion.

Figure 54: Non-tradable services output



Source: NSA

5.3 Contribution of Services sector to Employment

The service sector is the biggest employer in Namibia with close to 40 % of Namibia's labour force employed in the sector by 2018**.** Table 28 below shows the share of services sector in total employment for the period 1997 to 2018. The table reveals interesting finding that non-tradable service sector share of employment is much higher than that of tradable service sector. For example, the non-tradable service sector employs more than 50 percent of the labour force on average per annum. Government and social services employ more than half of the people working in non-tradable services sector. It is also interesting to observe that, although non-tradable service sector is the biggest, the sector seem to have stagnated and increased from 48% in 1997 to 51% in 2018, meaning there are few additional people being absorbed and employed by the non-tradable service sector.

All the sub-components of the non-tradable sector seem to have lost momentum in terms of job creation with wholesale and retail sector that increased its share from 18% in 1997 to 27% in 2004 losing momentum with its share reducing to 22% by 2018. Despite the disappointing employments results from the non-tradable service sector, the tradable service sector recorded large increases in number of people employed over the same period, increasing its share in employment from 6% in 1997 to 18% 2018. Between 2004 to 2018, employment in the tradable sector doubled mainly due to outstanding performance of the hotels and restaurants sector with the sector employment share rising from 12 percent in 1997 to 36 percent and 65 percent in 2004 and 2018 respectively. Despite major investments that has gone into the transport and communication sectors, the sector share of employment declined from 56 percent in 1997 to 25 percent in 2018. Table 28 below raises a number policy questions and lessons. Before undertaking fiscal expansionary policy or major investment with an intention to create jobs, it is important and critical to understand the potential and capacity

of that sector in terms of job creation. It appears that the non-tradable sectors have more indirect effect in job creation through stimulating growth in other sectors. For example, a massive expenditure on construction will directly impact GDP growth positively but the sector will not create jobs directly but indirectly through rising income levels that will stimulate purchase power in sectors such as wholesale and retail. Massive spending on infrastructure such as energy, electricity and water will have very little direct impact on job creation but will indirectly create jobs through its positive growth on GDP and this may only happen in the long-term (3 – 10 years) and not short -term (1-3 years).

Table 25: Employment

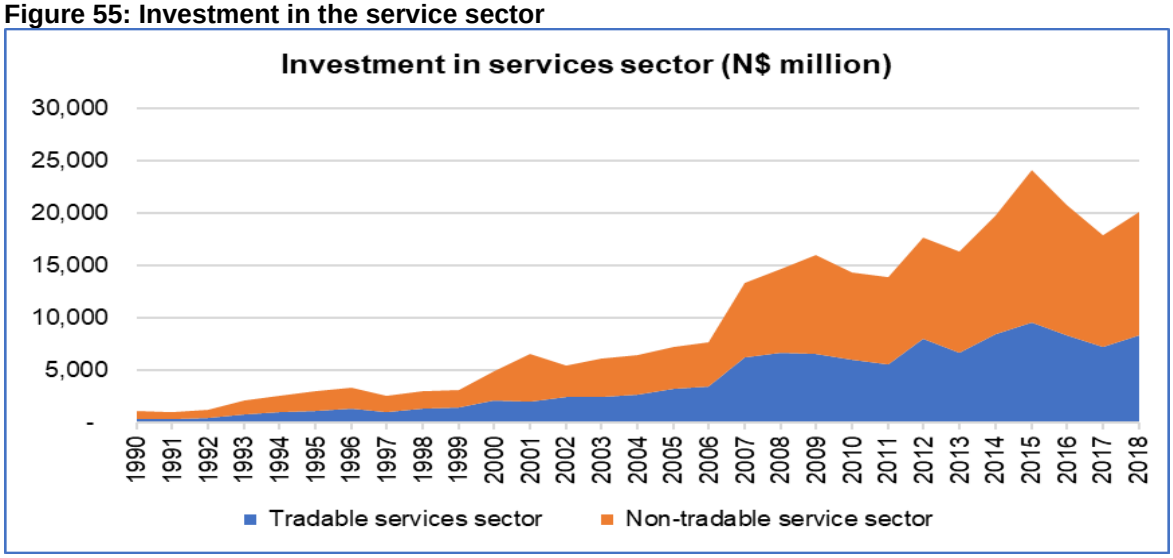
Employment by sector	**1997**	**2004**	**2018**
Total Employment	**401,140**	**385,329**	**716,657**
Tradable service sector to total employment	**6%**	**9%**	**18%**
Hotels and restaurants	12%	36%	65%
Transport and communication	56%	43%	25%
Financial intermediation	32%	21%	11%
Non-tradable service sector to total employment	**48%**	**52%**	**51%**
Electricity and water	2%	3%	2%
Construction	10%	10%	12%
Wholesale and retail trade, repairs	18%	27%	22%
Real estate and business services	11%	5%	8%
Government and Social services	59%	56%	55%

Source: NSA

5.4 Services sector Investment

The service sector is both the biggest employer (40% of total labour force) and largest contributor to the country's GDP (accounting for more than 50% of GDP). It is no surprise that the sector receives the biggest allocation of the country's total fixed investment and government capital budget. Figure 55 below shows both non-tradable and tradable service sectors have experienced significant capital inflows since 1990 where investment in both sectors increased from N$2 billion in 1990 to more than N$20 billion in 2016. It is further observable that investment in both tradable and non-tradable roughly declined in 2017/18 after the economy recorded a major contraction in GDP growth.

Figure 55: Investment in the service sector



Source: NSA

The structure of investment in tradable service sector did not change as indicated below. Table 29 below summarizes investment into service sectors over certain periods as indicated. Noticeably, at independence, the financial sector recorded significant amount of investment inflows at 57% of total tradable service sector investment in 1990 before retreating to 33% in 2010 and rising to 47% in 2018. The sub-sector within the tradable service sector that significantly benefited investment inflows is the transport and communication sector which more than doubled from 26 percent in 1990 to 45 percent in 2018. Despite the massive investment in the transport and communication sector, we have seen above that the sector did not create many jobs compared to the tourism sector (hotels and restaurants). The transformation and structural change that has been observed in the service sector could with no doubt be attributed to the large inflows of capital that has been channelled in this sector since independence.

Table 26: Investment

Investment by sector	**1990**	**2000**	**2010**	**2018**
Total investment (N$ million)	**1,291**	**5,848**	**20,884**	**30,881**
Tradable service sector to total investment	**27%**	**35%**	**29%**	**27%**
Hotels and restaurants	17%	13%	20%	8%
Transport and communication	26%	44%	47%	45%
Financial intermediation	57%	43%	33%	47%
Non-tradable service sector to total investment	**56%**	**49%**	**40%**	**38%**
Electricity and water	7%	6%	16%	6%
Construction	2%	7%	9%	9%
Wholesale and retail trade, repairs	8%	9%	18%	6%
Real estate and business services	28%	31%	24%	33%
Government and Social services	55%	47%	36%	46%

Source: NSA

5.5 Services Sector Productivity

Empirical evidence shows that the service sector is more productive than other sectors and that it can lead to greater productivity in other sectors of the economy. In this section we use both National Accounts and the Labour Force Survey Database to examine service sector labour productivity. Table 30 below present relative labour productivity levels for both tradable and non-tradable service sector and its subcomponents. The results in table 30 suggest that services are generally much more productive compared to agriculture. As of 2018, the tradable service sector had generated around N$ 15,4 billion of value added and employed more than 129 thousand persons. Table 30 below shows the growth of this sector in terms of output and employment. Overall, the financial intermediation is the most productive with continual increase in productivity. Transport sector productivity is also improving with time. In addition, the hotels and restaurants sector has recorded considerable declines in productivity. On the other hand, the non-tradable service sector is worth more than N$ 54 billion and employs more than 50 percent of those employed. In terms of labour productivity, the utilities sector thrived over the period. In addition, the construction has marginally shifted from N$ 58 thousand in 1990 to N$ 75 thousand in 2018.

Table 27: Productivity

Productivity by sector	1997	2004	2018
Tradable service sector productivity (N$ thousand)			
Hotels and restaurants	246	77	24
Transport and communication	103	148	175
Financial intermediation	201	364	564
Non-tradable service sector productivity (N$ thousand)			
Electricity and water	278	234	304
Construction	58	82	75
Wholesale and retail trade, repairs	128	119	157
Real estate and business services	190	547	295
Government and Social services	112	139	132

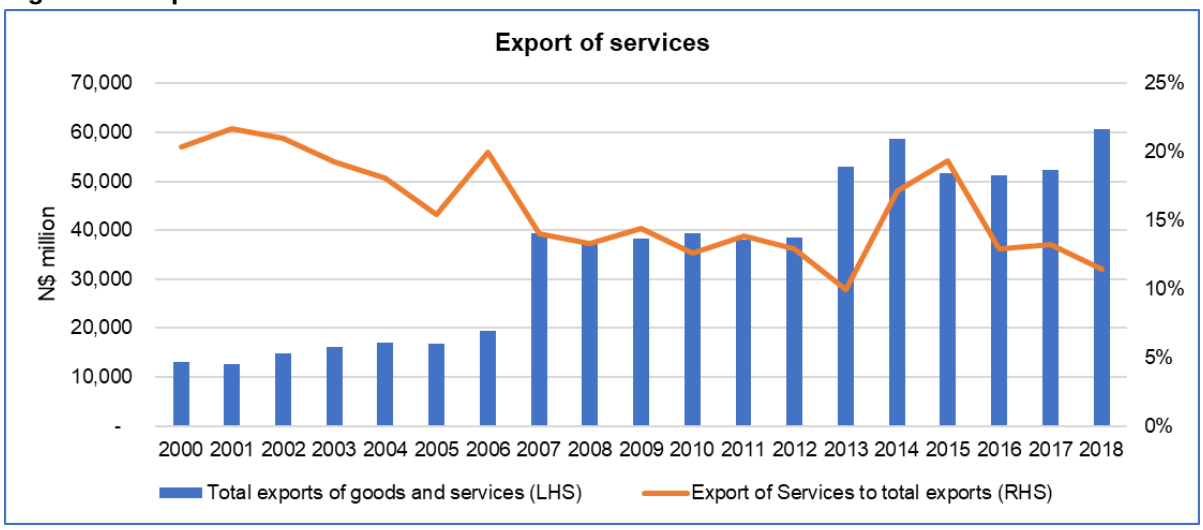
Source: NSA, FC Research

5.6 Share of the services sector in trade (imports & exports)

5.6.1 Export of services

Namibia's service sector is vital to the country's economy. Contributing an average of 11 percent to total export of goods and services, the service sector has grown substantially over the years in monetary value from N$ 3 billion in 2000 to 7 billion in 2018. However, the sectors contribution to total export of goods and services contracted over the same period. As per figure 56 below, it is evident that the sector contributed over 20 percent to total exports during early 2000s and the it has recently contracted to amounts below 15 percent.

Figure 56: Export of services

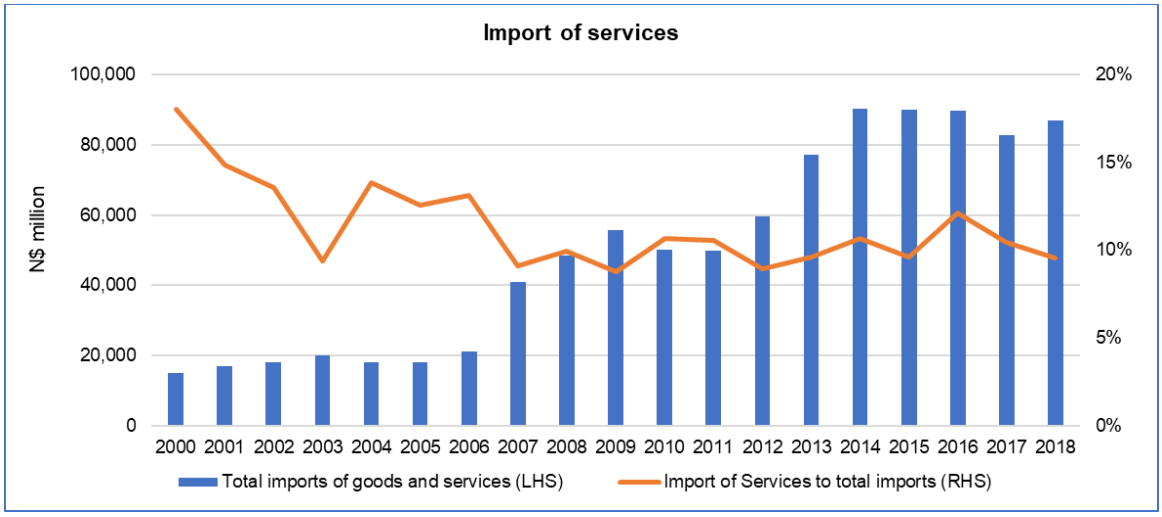


Source: NSA

5.6.2 Import of services

In line with many other sectors, the services sector remains a net importer. The figure below illustrates the contribution of import of services to total import of goods and services between 2000 and 2018. Before the year 2007, import of services constituted more than 10 percent of total import of goods a service. Thereafter, the margin lowered substantially which is a favourable indicator for the country's balance of trade.

Figure 57: Import of services



Source: NSA

5.7 Services Sectors and Economic Transformation

5.7.1 Tourism Sector and economic transformation

Tourism is one of the largest sectors within the service sector in terms of employment creation and output. The sector was valued at N$ 3 billion in 2019 and employs around 7 percent of the total labour force. The tourism sector is one of the fasted growth sectors and now employs more people than sectors such as mining, agriculture and manufacturing. The Namibian government has deemed tourism a key sector as it has the potential to contribute to growth in GDP, generate employment, reduce poverty in both urban and areas and a good sector for

start-up entrepreneurs. Has tourism sector been transforming in Namibia? Tourism has a role in the economic transformation of a country and the sector can affect economic transformation in several ways, including direct and indirect effects.

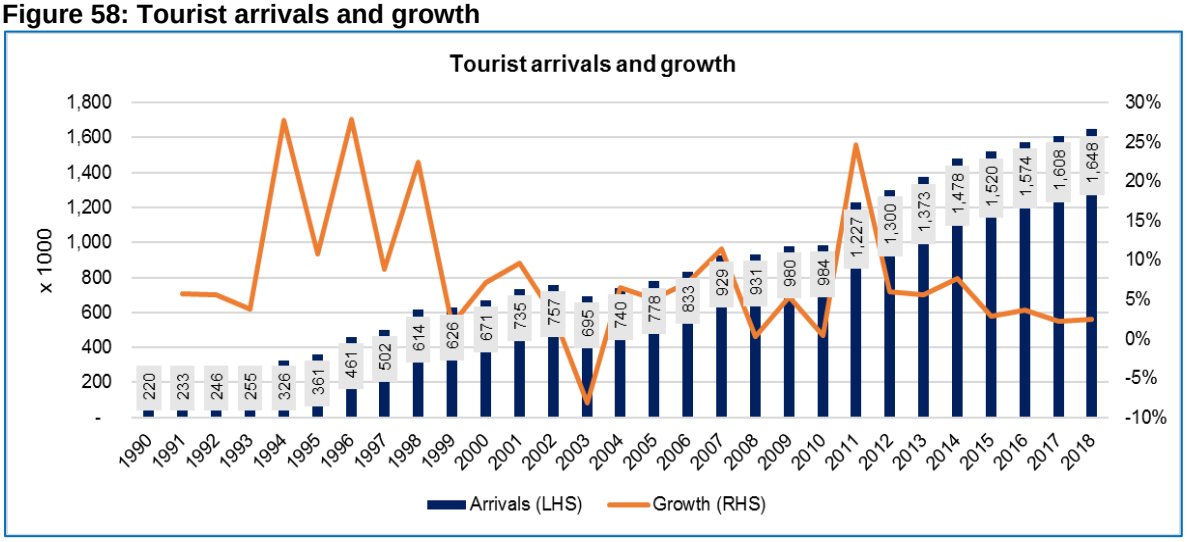
5.7.1.1 Direct Effects

The most important direct effect of tourism is through number of tourists arriving in the country, occupancy rates at hotels and tourist attractions (which includes lodging, bed and breakfast, restaurants, transportation, etc), employment and contribution to GDP.

5.7.1.1.1 Tourist Arrivals and Growth

In 1990 only 220,000 tourists visited Namibia, and this number more than tripled in a period of 10 year and stood at 600,000 by end 2000 (figure 58). With more incentives and more attractive environment for tourists, the number of visitors in Namibia stood at 1.6 million by the end of 2018 which is significantly above the targeted 1.5 million tourist arrivals in the National Tourism Investment Profile & Promotion Strategy. Most visitors continue to come from other African countries (1.2 million) followed by European tourists (313 hundred thousand) in 2018. Growth in tourists was very volatile in the late 90s up to 2010 and has since stabilized from 2012. Significant developments have been observed between 2016 and 2017, where tourist arrivals from china rose subsequently by 17 percent and 11 percent in North American markets as opposed to a 0.3 percent decline in African markets. Using this measure/indicator, Namibia can be proud that the measures and programs implemented to transform the sector were effective.

Figure 58: Tourist arrivals and growth

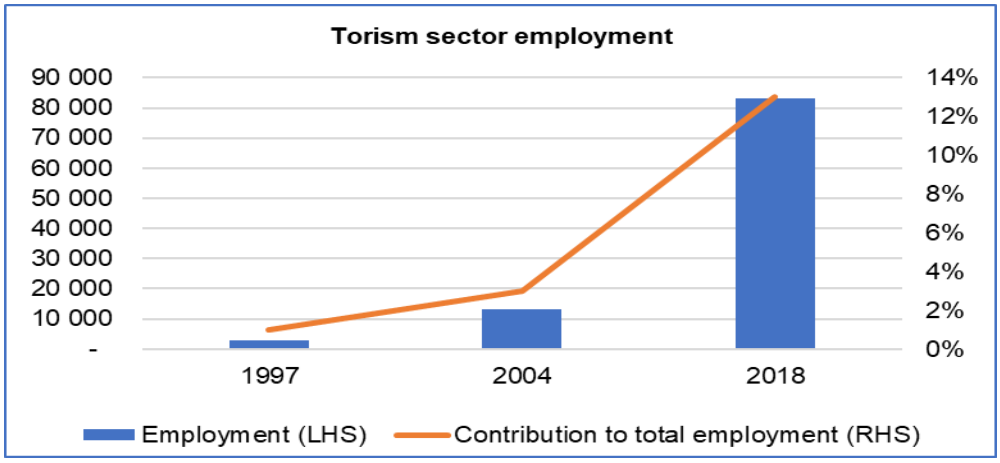


Source: MET, NTB, FNTA

5.7.1.1.2 Number of Jobs Created

The tourism sector is now one of the largest employers and have absorbed more workers over the past 30 years than any other sectors. Given the high levels of unemployment among the unskilled and in the informal sector, especially among the youth, tourism employs a high number of unskilled workers. Employment in the sector includes a wide range of skills, from low-skill employment (e.g. cleaning, service and catering staff) to higher-skilled employment requiring professional training and/or tertiary education (e.g. professional hotel and restaurant staff, guides and park wardens and business support staff, including management, accounting and marketing personnel).

Figure 59: Tourism sector employment



Source: NSA

5.7.1.2 Indirect effects

Tourism has created many indirect effects on the Namibian economy through secondary demand for goods and services. These include through backward-linked industries such as the transport, handicrafts, conservation, catering and companies supplying goods and services to hotels, restaurants etc. As the number of tourists continue to increase, the tourism sector also created linkages and spill over effects that has led to expansion and upgrading of both domestic airport facilities, including the construction and expansion of Hosea Kutako international airports. The indirect effects of Namibia might be much higher than currently assumed and without the fast growth and transformation of the tourism sector other sectors such as the transport and food sector would have suffered and contracted.

5.7.1.2.1 Tourism Supply

To measure the capacity of the tourism sector, we have looked at the average number of rooms and the occupancy rate for these rooms per year. We have further positioned the country against neighbouring and other common benchmarked countries in the continent in order to see how Namibia is doing as compared to its peers. According to various studies conducted in the tourism sector, an occupancy rate must range between 55 and 65 percent in order for it to be deemed as profitable. Namibia has an average occupancy rate of 53 percent per annum, which is slightly below the range of the benchmarked 'success' rates. This implies that the country still needs to do much more in terms of tourism promotion by employing measures that can help attract more tourists to the country. Seasonal tourism has as well proved to be a contributor to low average occupancy rates in Namibia.

On average, the coastal region has the highest occupancy rates above 60 percent while southern regions have the lowest rates averaging 56 percent. Notably, these rates compare very well to South Africa which had an average of 62 percent. Among these choices of countries, Mauritius is an outlier with the highest occupancy rate of 79 because of its demonstrated ability to attract tourists and attractions that are found in the country.

Table 28: Tourism supply

	Namibia	South Africa	Mauritious	Kenya
Number of rooms	7,442	61,700	13,400	19,300
Room occupacy	53%	62%	79%	53%

Source: World bank, FC research

5.7.1.2.2 The Travel & Tourism Competitiveness

The World Economic Forum's Travel & Tourism Competitiveness Index (TTCI) uses certain elements and policies to measure sustainable development of the travel and tourism sector. The index covers 140 countries globally with ranks ranging from 1 to 7 where 1 = worst and 7 = best. Table 1 indicates how Namibia's tourism sector compares against some of its regional competitors. Overall, Namibia is ranks at number 81 with a score of 3.7 which is significantly lower below the global average on the index. Based on some of the TTCI indicators as shown below, Namibia scored high (after Botswana) on price competitiveness with 5.7. This shows that compared to its peers listed below, Namibia has an advantage over pricing in terms of attracting tourists. However, it scored one of the lowest on cultural resources and business travel, with a mere 1.2 while neighbouring South Africa scored 3.2.

In Sub-Saharan Africa, Mauritius scored the highest with 4.0 with a global rank of 54 followed by South Africa with a score of 4.0 and a ranking at position 61. Overall, Sub-Saharan region has scored well on safety and security with 5.3 followed by price competitiveness which had a score of 5.1. Despite its commonly recognized variety of natural resources, the region scored very low on natural resources and business travel indicator which can also be as a consequence of low scores on other indicators.

Table 29: Competitiveness

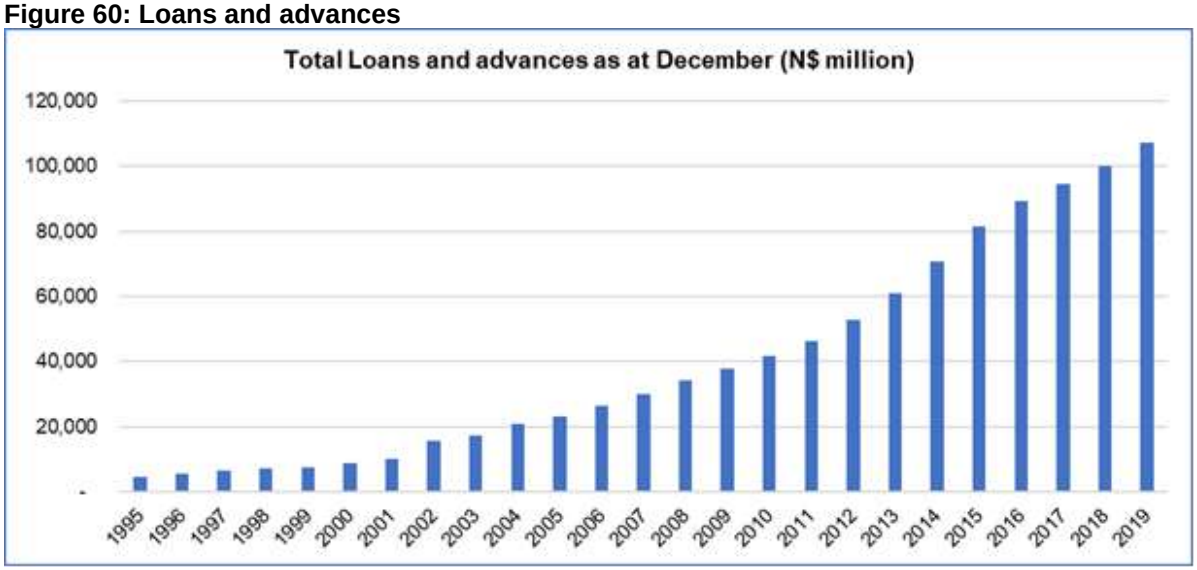
List of Indicators	Namibia	South Africa	Mauritius	Kenya	Botswana	Zambia	Sub-Saharan Africa
Travel & Tourism	**3.7**	**4.0**	**4.0**	**3.6**	**3.5**	**3.2**	**3.1**
Safety & Security	5.0	3.9	5.8	4.6	5.3	5.3	5.0
International Openness	2.8	2.5	3.6	3.0	2.3	2.9	2.5
Price Comptitiveness	5.7	5.6	4.6	4.9	6.0	5.1	5.3
Tourist Service Infrastructure	4.6	4.3	5.0	2.9	3.6	2.5	2.8
Natural Resources	4.3	4.5	2.4	4.5	3.4	3.6	2.9
Cultural Resourses & Business Travel	1.2	3.2	1.3	1.5	1.2	1.3	1.3
Rank	**81**	**61**	**54**	**82**	**92**	**113**	

Source: WEF

5.7.2 Financial Sector Services and economic transformation

Financial services currently account for a significant portion of GDP. The sector contribution increased from 2.0 percent in 1990, increasing to 5.6 percent and in 2018 it represented 7% of Namibia's GDP or $7.8 billion and employed 2 percent of the employed labour force. The sector has experienced massive inflow of new institutions especially within the non-banking segment that witnessed new insurance companies, a new micro finance and asset management industry that emerged after 1990. The banking industry however remains relatively unchanged in terms number of banks. The two new commercial banks that were established after independence collapsed and were liquidated and currently only four banks that existed at the time of independence remains. Figure 60 below shows the size of financial intermediaries in Namibia in terms of loans and advances. Overall, there was an increase in size of intermediaries, increasing significantly from N$ 16 billion in 2002 to N$ 105 billion as of September 2019. This trend has been backed by the consistent growth in the two largest categories of loans and advances namely loans to households and corporations. Loans to households took up the largest chunk of 57 percent as of September 2019, followed by 39 percent to corporations. Government and non-residents only compose 4 percent of the total loan book.

Figure 60: Loans and advances

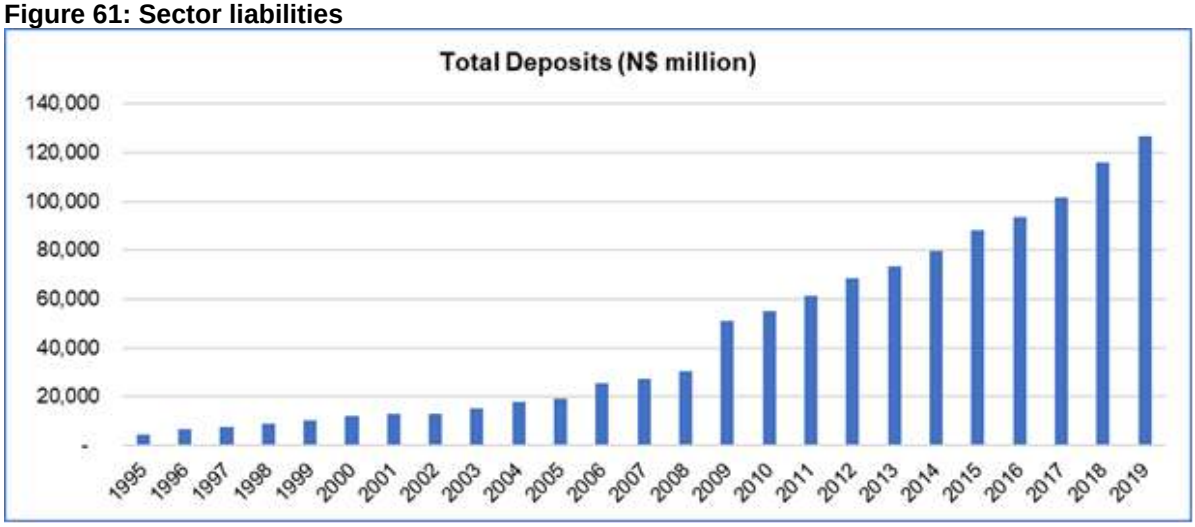


Source: BON

5.7.2.1 Financial Sector liabilities

Total deposits are a considerable margin of savings in an economy, thus have a major impact on the country's economic performance. Figure 61 below summarizes the sum of total Deposits (which includes deposits Included and excluded in broad money) as well as other deposits. The figure evidences that the deposits held with financial sector have been substantially growing especially from 2009. Over the period of 24 years as shown below, deposits grew from less than N$ 10 billion in 1995 to more than N$ 127 billion in 2019.

Figure 61: Sector liabilities



Source: BON

5.7.2.2 The role of financial services in economic transformation

The transformation and attractiveness of the financial sector depends upon the benefits that it will bring to the country and its economic transformation. Financial Intermediation increases the efficiency of the allocation of capital which has a positive impact on economic growth. Table 33 below shows the allocation of financial resources by means of loans to different sector over 3 periods. Individuals segment took up most of the loans availed, but this has declined marginally between 2009 to 2014, and improved in 2018. The second biggest sector is real estate and business services. Table 33 below show that the bulk of loans advanced by commercial banks is channelled to individuals (50% of total loans) and very little goes to productive sectors such agriculture (5%), manufacturing (2%), fishing (1%) and mining (2%). Although the tourism sector lending increased from 4% in 2009, it increased to 20% by 2014 before contracting to 10% in 2018. The low percent of loans allocated to industries (agriculture, manufacturing and fishing) reflects the low transformation and structural change that has taken place in those sectors and the high perceived risks.

Table 30:Commercial Bank Funding

Sectoral Financing	2005	2010	2015	2019
Agriculture & Forestry	4%	3%	4%	4%
Fishing	5%	3%	1%	1%
Mining	3%	2%	2%	2%
Manufacturing	2%	2%	3%	3%
Construction	2%	3%	5%	3%
Electricity , Gas & Water	1%	0%	1%	3%
Trade & Accommodation	4%	17%	19%	7%
Transport & Communication	3%	2%	2%	2%
Finance & Insurance	5%	3%	3%	7%
Real Estate & Business Services	9%	18%	12%	11%
Government Services	2%	1%	7%	6%
Individuals	55%	44%	39%	46%
Other	7%	2%	3%	6%

Source: BON

5.8 Has the Service Sector in Namibia Transformed

Using the measures presented above, we conclude that the service sector in Namibia is the most transformed and diversified sector as demonstrated by the indicators below. The service sector benefited heavily from the rise in the middle-class in Namibia, that demanded quality service to be offered in proportion of the growth in their income. This is in addition to supportive policies that were conducive to growth of the subsectors.

1. The service sector contributes approximately more than 50 percent of Namibia's total GDP. Some components of the service sector have expanded and increasing their contribution to GDP. The tradable sector has evolved substantially from contributing 8.5 percent to GDP in 1980 to 12.4 in 2010 and increasing to 14.7 percent in 2018. The Non-tradable services sector is the largest, increasing its contribution from 30 percent of GDP in 1980 to 41.9 percent in 2010 and further increasing to 48.2 percent in 2018. The wholesale and retail sector grew considerably since 1980 when it contributed 1.1 percent, increasing to 6.8% in 1990 and reaching 10.2 percent in 2018. The financial sector emerged significantly from 1.6 percent in 1980 to 3.6 percent in 2000 and increasing further to 8.6 percent in 2018. The service sector using this indicator is said to have transformed and diversified its product offering.
2. The service sector accounts for 40% of total employment in the country and most of this employment is in non-tradable sub-service sector (50%). Despite being the largest, the non-tradable service sector seem to have stagnated and increased from 48% in 1997 to 51% in 2018, but the good news is that the tradable service sector recorded large increases in number of people employed over the same period, increasing its share in employment from 6% in 1997 to 18% 2018. Between 2004 to 2018, employment in the tradable sector doubled mainly due to outstanding performance of the hotels and restaurants sector with the sector employment share rising from 12 percent in 1997 to 36 percent and 65 percent in 2004 and 2018 respectively. In the process of economic structural change and transformation, the preference is to have more people employed in the tradable subsector of the service sector.
3. The service sector receives the biggest allocation of the country's total fixed investment estimated at 65% of total gross fixed capital formation including government fixed investment. Both non-tradable and tradable service sectors have experienced significant capital inflows since 1990 where investment in both sectors increased from N$2 billion in 1990 to more than N$20 billion in 2018.
4. The service sector is much more productive compared to agriculture and manufacturing, with the tradable sector being the most productive sector compared to the non-tradable service sector.

CHAPTER 6: NAMIBIA MANUFACTURING SECTOR TRANSFORMATION

Transformation of Namibia's manufacturing sector has been on the cards since 1990 in line with the Ministry of Industrialisation, Trade and SME Development (MITSMED)'s vision of being "**A leading agent for economic structural transformation in Namibia**". MITSMED's mission is "To create and sustain a conducive business environment through value addition, enterprise development, market access and investment promotion for the benefit of all". Namibia's Vision 2030 aspires to transform the country into a prosperous and industrialized country with the capacity to compete globally and the manufacturing sector has been identified as the key sector that will serve as an engine of growth and bring economic transform by 2030. In the First National Development Plan (NDP 1), the manufacturing sector was identified as a key sector with high potential for employment creation and that its development could strengthen the value chain and linkages in the economy. The target in NDP 1 was for Namibia to focus on the manufacturing of basic products that include processing of mineral products, processing of agricultural and fish products (food), beverages, building materials, basic chemicals, pharmaceuticals, and others. The importance of this sector again was emphasized in NDP 2 to NDP 5 where the sector was seen as having a strategic role in linking economic sectors together and diversify the production structure.

In this chapter we investigate whether the manufacturing sector in Namibia has been transforming over the past 30 years and to enable us do that we focus on the basic structural relationships that exist between the manufacturing sector and the national economy. Four basic structural relationships are examined: (i) the sectoral composition of manufacturing output, or more specifically, manufacturing's share of total output (GDP); (ii) change in the structure (new products) of the manufacturing sector; and (iii) manufacturing sector in the external trade sector (exports and imports); (iv) manufacturing's share of employment; (v) diversification of the manufacturing output. Many questions have been asked by politicians as to why the Namibian economy is not changing structurally. The answer could lie in what has happened to the manufacturing sector in terms of the above relationships.

Policies and Institutional Framework for Manufacturing Sector Transformation

For MITSMED to carry out its mission and vision of economic structural transformation and industrialization that ensures the development and growth of the manufacturing sector sound and progressive industrial policies, legal and institutional framework continue to be developed and implemented over the past 30 years (1990 – 2020). Below we discuss briefly some of the policies that government introduced targeting the manufacturing sector.

White Paper on Industrial Development in Namibia (1992)

Attempts to restructure and transform Namibia's manufacturing sector started in 1992 with launch of the White Paper on Industrial Development in Namibia (1992). The aim of this paper was to help diversify and integrate the economy, increase manufacturing value addition targeting the fishing sector (fish processing), mining (mineral beneficiation and processing, diamond cutting and polishing) and adding value to agricultural products (food processing) and production of beverages. This policy framework provided parameters in which industrial development, including manufacturing activities was to take place in Namibia.

Export Processing Zones (EPZs)

In 1995, Namibia announced the proclamation of the Export Processing Zones Act (Act No. 9 of 1995) and the Act was amended in 1996 (Act No. 6, of 1996). With this amendment, the Namibian tax free EPZ regime got off the ground effectively in 1996. The main objectives of the EPZ regime included: (i) attraction, promotion or an increase of the manufacture of export goods; (ii) the creation or increase of industrial employment; (iii) the creation or expansion of export earnings; (iv) the creation or expansion of industrial investment, including foreign investment; and (v) the encouragement of technological transfers and the development of management and labour skills in Namibia. Following the implementation of this Act, Export Processing Zones (EPZ) has been established at Walvis Bay and Oshikango. In addition, industrial parks have been established in Windhoek, Ongwediva, Outapi, Nkurenkuru, Ondangwa and Katima Mulilo. SME modules were also established in Gobabis, Rundu, Eenhana, Ohangwena, Otjinene, Karibib, Mariental, Keetmanshop and Luderitz and a multipurpose centre was set up at Otjiwarongo and a business centre at Opuwo. In addition, a Government manufacturing facility was also set up at Ovitoto.

Namibia Industrialization Policy Framework

In 2013, Namibia Industrial Policy (NIP) was introduced and implemented as part of the policy package aimed at transforming the economy. The policy was anchored on Vision 2030 and was developed as a framework to spearhead Namibia's industrialization process and diversification of the manufacturing sector. The overall objective of the policy is to achieve change in production structure, change in export structure, and stimulate wealth creation by small- and medium-scale enterprises (SMEs). NIP was formulated in such a way that the following Vision 2030 targets with respect to industrialisation would have been achieved. More specifically, the Vision states that, by 2030:

(a) The manufacturing and services sectors constitute about 80% of the country's gross domestic product (GDP).

(b) The country largely exports processed goods, which account for not less than 70% of total exports.

(c) Namibia has an established network of modern infrastructure that includes railways, roads, telecommunications, and port facilities, and

(d) Namibia has a critical mass of knowledge workers, and the contribution of SMEs to GDP is not less than 30%.

Other Policies

A number of policies and Acts have been formulated and implemented over the past 30 years aimed at developing and transforming Namibia's industrial and manufacturing base. Among others are; the Foreign Investment Act, Namibia Mineral Policy, Industrial Upgrading and Modernization Programme of Namibia, MSME policy, Investment Promotion Policy.

Namibia's manufacturing sector has remained stagnant at around 11% of GDP over the past thirty years. Table 34 below presents a summary of manufacturing sector. Manufacturing activities in Namibia are concentrated in the subsectors of meat processing, grain meal products, other food products, beverages, textile & wearing apparel, leather & related products, wood & wood products, publishing & printing, chemical & related products, rubber & plastic products, basic non-ferrous metals, fabricated metals, diamond processing and other

manufacturing products. as per classification of the Namibia Statistics Agency (NSA). Furthermore, the largest component of manufacturing is beverages (14%) followed by basic non-ferrous metals (13. In this chapter we present Namibia's manufacturing sector and investigate whether the sector has registered some amount of diversification and transformation to become a competitive global player producing high income and employment for the population. We assess the role of manufacturing in economic transformation on the basis of the following indicators:

- Evolving structure of the manufacturing sector.
- Share of the manufacturing sector in gross national product (GDP).
- Share of the manufacturing sector in employment given a level of income.
- Share of the manufacturing sector in exports.
- Level and growth of productivity in services and the rest of the economy.

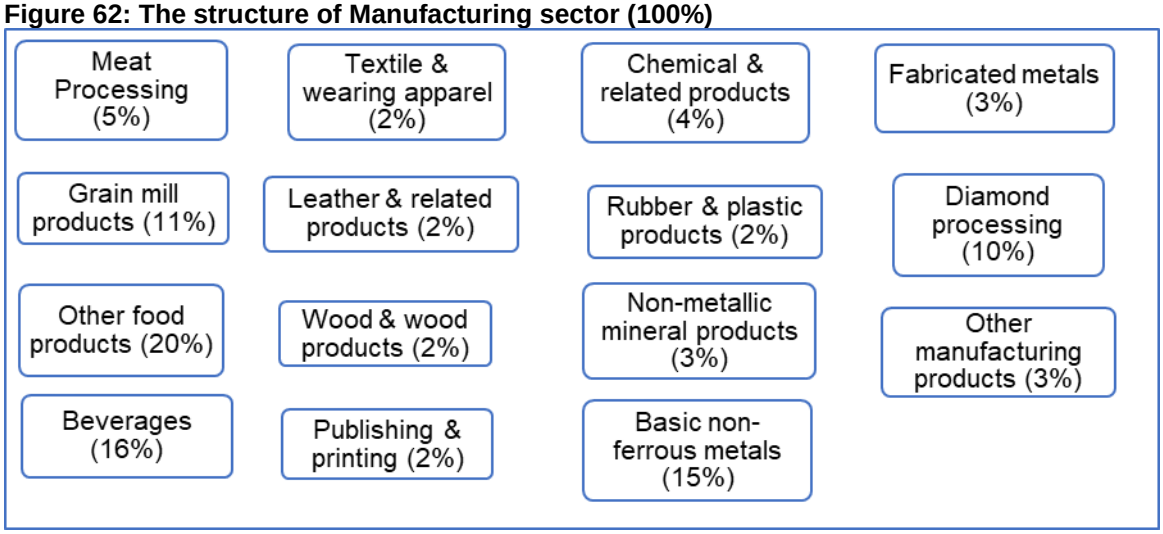
Table 31: Manufacturing sector at a glance

Manufacturing Sector at glance		
Sectoral Contribution	Manufacturing to GDP	N$ 21.0 billion or 11.7% of GDP
Subsectoral Contribution	Grain Mill products	N$ 2.5 billion (12% of manufacturing sector)
	Beverages	N$ 2.9 billion (14% of manufacturing sector)
	Basic non-ferrous metals	N$ 2.6 billion (13% of manufacturing sector)
	Diamond processing	N$ 2.4 billion (12% of manufacturing sector)
Average GDP Growth	Manufacturing Sector	3.5%
	Grain Mill products	7.6%
	Beverages	3.2%
	Basic non-ferrous metals	-64.4%
	Diamond processing	14.3%
Investment in Manufacturing	Investments in 2018	N$ 4.6 billion (15% of total)
	Investment stock as of 2018	N$ 7.9 billion (2% of total)
Employment Creation	Total Employement	45,057 (6% of total employed)
	Formal Employement	24,018 (53% of total employment)
	Informal Employement	21,044 (47% of total employment)
Average wage	Manufacturing	N$ 5,749 (N$ 7,935 National average)
Import	Ores and Minerals	N$ 2.4 billion (3% of total import of goods)
	Textiles, clothing, leather prod, foowear	N$ 3.2 billion (4% of total import of goods)
	Refined petroleum products	N$ 12.1 billion (16% of total import of goods)
	Chemical products, rubber & plastics products	N$ 10.7 billion (14% of total import of goods)
	Food products (ex meat & fish)	N$ 6.0 billion (8% of total import of goods)
Export	Total export of manufactured goods	N$ 25.7 billion (46% of total export of goods)
	Copper & Zinc refined	N$ 5.5 billion (21% of manufactured goods)
	Cut and polished diamonds	N$ 5.7 billion (22% of manufactured goods)
	Prepared and preserved fish	N$ 10.0 billion (40% of manufactured goods)
	Beverages	N$ 1.1 billion (5% of manufactured goods)
	Meat, meat preparations	N$ 909 million (4% of manufactured goods)

6.1 Structure of Manufacturing Sector

Activities in the manufacturing sector in Namibia have to a great extent been concentrated in food categories as well as beverages accounting for 20% and 16% respectively. Figure 62 below outlines the structure of Namibia's manufacturing sector.

Figure 62: The structure of Manufacturing sector (100%)

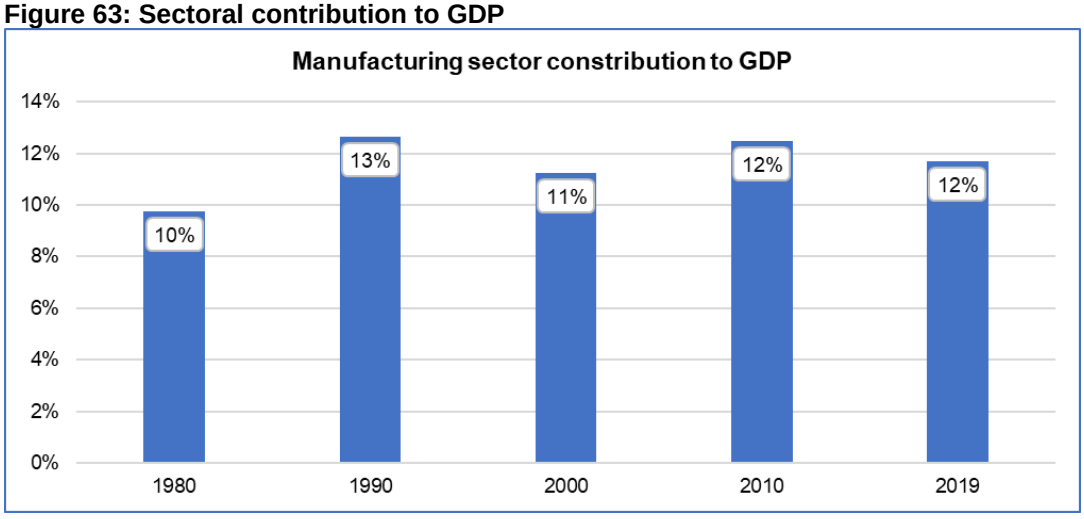


Source: NSA

6.1.1 Manufacturing sector share/ contribution to GDP

Manufacturing, as one of the most important components of the Namibian industry, remains vitally important for the whole economy through its contribution to output, exports, and economic development. Figure 63 below shows the contribution of manufacturing sector to total output/GDP since 1980. In 1998 manufacturing shares of GDP was at 10% and had increased to 13% at the time of independence in 1990. However, the sector declined to 11% in 2000 and increased to 12% of GDP by 2018. After the rebasing of the national accounts based on the 2015 prices, the manufacturing sector share increased from 10% in 1980 to 12% in 2019. According to literature on economic development, when a country industrializes and reaches middle to high income status, manufacturing sector should be expanding and increasing its share to GDP to a range of 20% - 30% of GDP. If Namibia want to reach the goals and targets set in Vision, manufacturing as a share of GDP cannot remain stagnant at 12% but the sector's contribution to increase to a minimum of 30% of GDP by 2030. Using the measure of manufacturing share of GDP at 12% shows that the sector has not transformed, and not much structural change has taken place.

Figure 63: Sectoral contribution to GDP

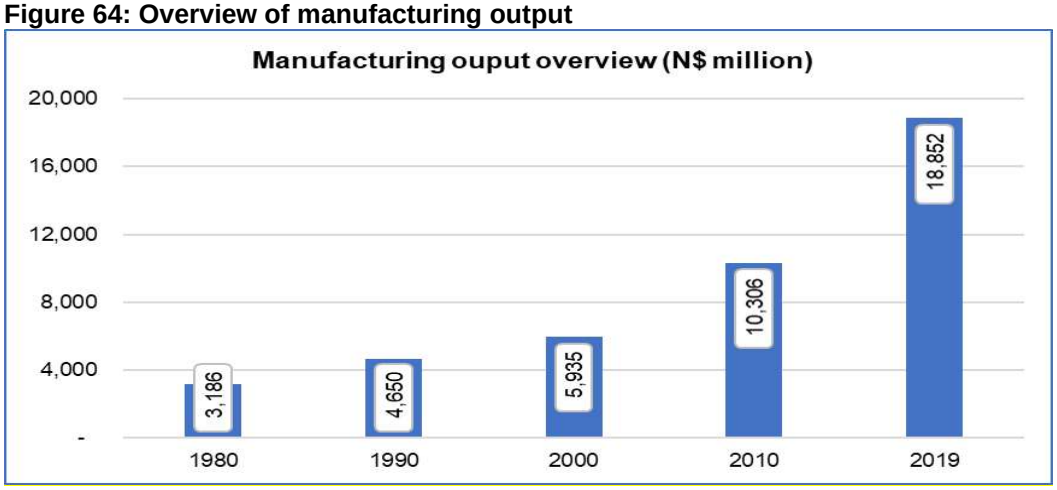


Source: NSA

6.1.2 Manufacturing sector output

Figure 64 below clearly illustrates the evolution of the manufacturing sector production since 1980. In monetary terms, manufacturing sector output was valued N$ 2.8 billion in 1980, increasing to around N$6.0 billion in 2000 and more than triple to reach N$ 18.9 billion in 2019. Looking at the magnitude of the growth in the sector, the growth of the manufacturing sector was spiking between 2000 and 2019.

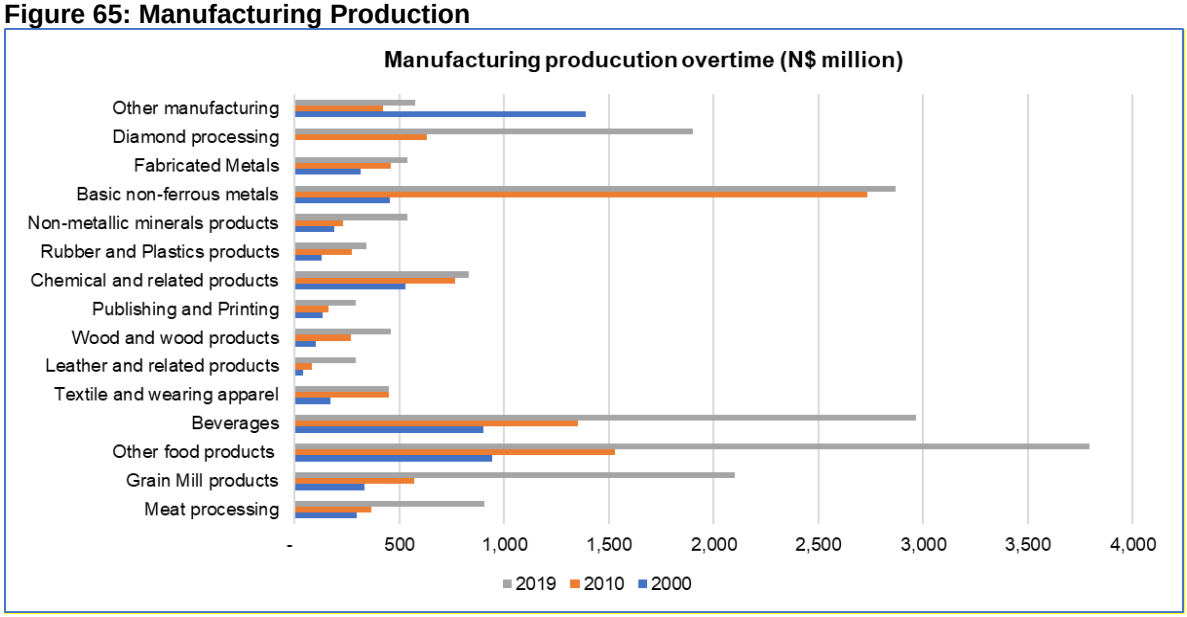
Figure 64: Overview of manufacturing output



Source: NSA

The growth in manufacturing has mainly resulted from the favourable growth of subcategories of diamond processing, non-ferrous metals, grain mill products and many other. Figure 65 below, captures the changing structure of the manufacturing sector where we witness that the composition of manufacturing subcategories has been slowly changing. In 2000, the subcategory other manufacturing which is made of brickmaking, jewellery making, electrical manufacturing and other various manufacturing products was the major contributor to total sectoral output. However, this segment lost momentum by 2010 to 2019 and overtaken by basic non-ferrous metals, other food products, diamond processing and beverages. Basic non-ferrous metal which contribute a chunk of around 15 percent of total manufacturing output performed exceptionally well since 2000 becoming the largest subsector by 2010. This subsector grew from 8 percent contribution to total manufacturing to 19 percent in 2019. Beverages saw a slight growth between 2010 and 2019 while other food products registered a positive growth between 2000 and 2010. It is encouraging to see that the sub-category of grain mill products has registered a positive upward growth trend since 2000 overtaking sectors such as other manufacturing, chemicals, and related products. Other subsectors like meat processing, leather & related products as well as publishing & printing have almost remained stagnant over the 18-year period. As per figure below, we see that Namibia's manufacturing sector is small but highly diversified and with targeted investment, the potential and opportunity exist to expand these sub-sectors.

Figure 65: Manufacturing Production

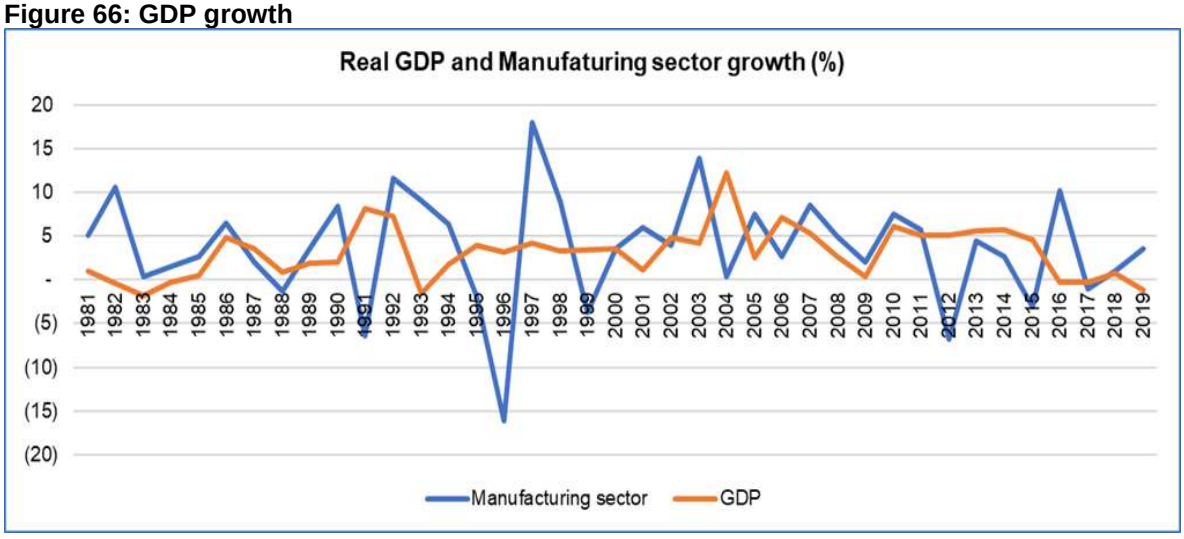


Source: NSA

6.1.3 Manufacturing Sector Growth Volatility

Manufacturing sector performance depends on the performance of other sectors such as agriculture, fishing and mining. Over the past 30 years, all these sectors experienced major upward and down swings in production levels. For example, due to serious droughts and low rainfall seasons, the growth of the agriculture sector has been volatile with a standard deviation coefficient of 11. Overall, the growth of the manufacturing sector has been volatile with a standard deviation coefficient of 6 as compared to the growth in GDP which has been somehow stable with a standard deviation coefficient of 3 over the years since 1981. The correlation coefficient of -0.10 has indicated that there is a very weak negative correlation between the growth in manufacturing sector and overall GDP. This implies that for every increase in the manufacturing sector, the economy slows by a mere 0.10. The manufacturing sector recorded contractions in 1991, 1996, 2012 and 2015. In 1996, the sector passed through a deep contraction above 16 percent which resulted from the slowdown in mining which translated into low manufacturing of mining products.

Figure 66: GDP growth



Source: NSA

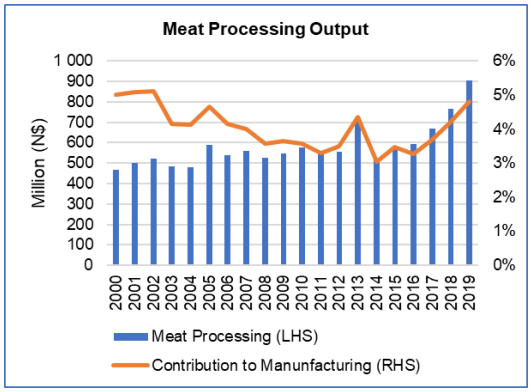
6.2 Individual Subsector Analysis

Namibia has a relatively small manufacturing sector, which is largely based on its resource endowment. Therefore, the manufacturing sector consists predominantly minerals production, agriculture as well as fishing sectors. The 3 sectors normally come in through manufacturing activities include food processing, mineral processing etc. As classified by NSA, for this paper we will focus on the following subsector under manufacturing sector: meat processing, grain meal products, other food products, beverages, textile & wearing apparel, Leather & related products, wood & wood products, publishing & printing, chemical & related products, rubber & plastic products, basic non-ferrous metals, fabricated metals, diamond processing and other manufacturing products.

6.2.1 Meat Processing

As of 2019, the meat processing industry was worth close to N$ 900 million representing an average contribution of 5 percent to total manufacturing output. Based on figure 6 below, the output of this subsector has been growing substantially from 2012. As of recent, Namibia has managed to tap into lucrative markets like the United States and China, which gives hope especially in terms of export growth. Namibia remains a net exporter of meat products.

Figure 67: Meat processing output

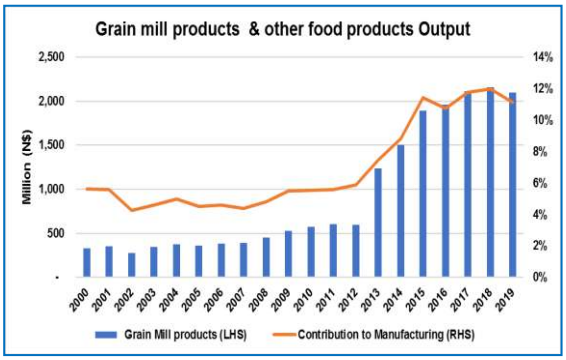


Source: NSA

6.2.2 Grain Mill products

In the early 2000s, the grain mills subsector was one of the infant industries. The grain mill products manufactured in Namibia include bread, pasta, macaroni, bread, corn, flour and many more. Figure 68 highlights how this sector has evolved over the past 18-year period. In terms of contribution to sectoral GDP, grain mill products contribute an average of 11 percent on average per annum. As of 2019, the sector was worth more than N$ 2.0 billion, which accounted for 11 percent of manufacturing output. Even though this sector has grown, most of production inputs are still being imported, especially grains.

Figure 68: Grain mill products



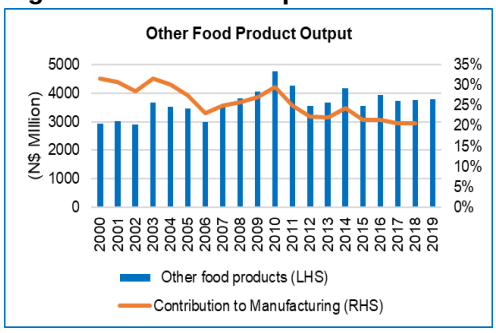
Source: NSA

6.2.3 Other food products

Other food products subcategory include sugar, preserved fish, any edible oils, dairy products, fruits, vegetables etc. By 2019, this sub-category was worth around N$ 3.5 billion representing 20 percent contribution to total manufacturing output on average per year. The structure of the industry has not changed much over the past 18 years, although its contribution to manufacturing

output declined from 30 percent in 2000s to 20 percent in 2019. This does not necessarily imply that the sector did not grow but shows that other sub-sector categories grew much faster. Namibia remains a net food importer.

Figure 69: Other food products

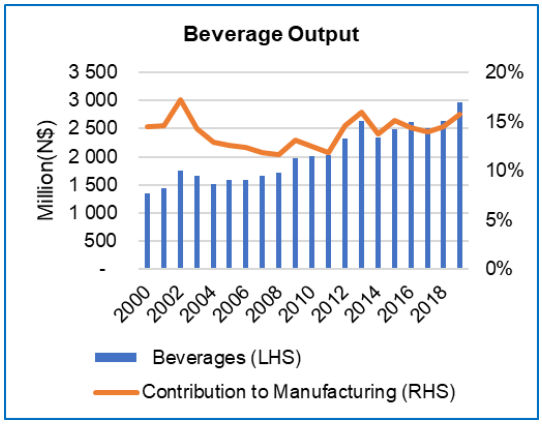


Source: NSA

6.2.4 Beverages

The food and beverage processing industry are a highly regulated industry and faces unique challenges, especially when it comes to standards of hygiene. The beverage industry contributes significantly to the manufacturing sectors output. Beverages contribute an average of 16 percent per annum to manufacturing output. Overall, Namibia is a net importer of beverages with the import bill worth more than N$ 1.2 billion.

Figure 70: Beverages

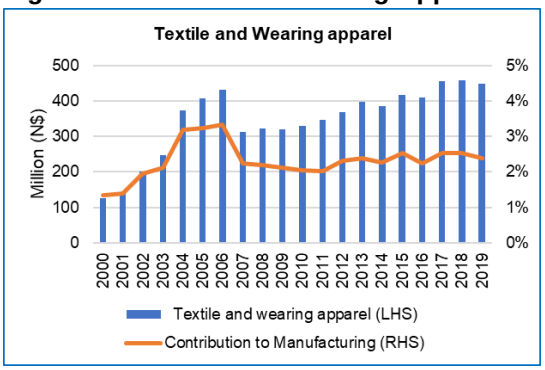


Source: NSA

6.2.5 Textiles and Wearing Apparels

The textile and wearing apparel accounts for 2 percent of total manufacturing output on average per annum. The Export Processing Zones (EPZ) Act passed in 1995 meant to attract foreign investments, saw a significant investment of N$1 billion in 2001 from a mega Malaysian leading textile enterprise. The Ramatex textile plant in Windhoek was in operation by 2001 which employed about 6,000 employees by 2006 and increased production from N$200 million in 2001 to around N$600 million by 2006. Figure 71 below shows the trend in output over the past 18 years. Despite the closure of Ramatex, other small producers entered the market and continue to produce with an output of N$400 million by end of 2019. Namibia does not export any textile products however total imports was valued at more than N$ 5 billion in 2018.

Figure 71: Textile and Wearing Apparel



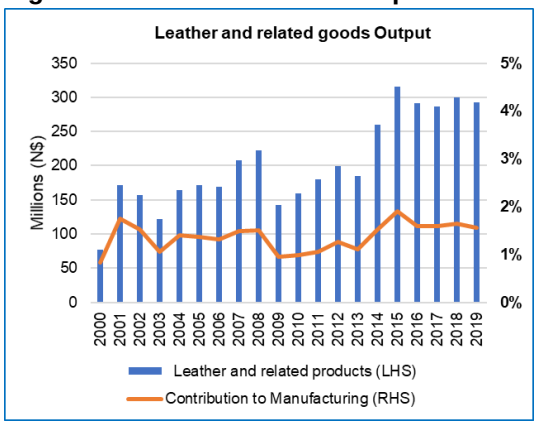
Source: NSA

6.2.6 Leather and related products

As of 2019, the leather products produced by the subsector was worth about N$ 300 million, contributing an average of 2 percent to manufacturing output per annum. The leather subsector in Namibia has contributed marginally towards GDP compared to the other manufacturing subsectors in Namibia. Although we have a significant a number of companies that manufacture leather related products namely, August 2006, Nakara Namibia,

Shilongo Leather works, Leder chic, Myeisha Leather Products, Leon Engelbrecht Design cc and The Peace Jewellery Collection which manufactures leather shoes, (veldskoene), safety shoes leather bags, which are made predominantly from Namibian and African leathers etc. According to figure 72 below, production of leather products increased significantly from N$ 70 million in 2000 to N$ 290 million in 2019.

Figure 72: Leather and related products

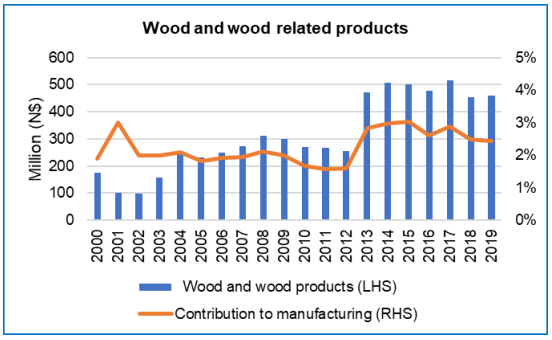


Source: NSA

6.2.7 Wood and wood products

As of 2019, the wood products produced by the subsector was worth about N$ 400 million having increased from N$100 million in 2001. It contributes an average of 5 percent to manufacturing output per annum. The wood production industry in Namibia is not well developed to its full potential level. Wood and wood product industry consist of thousands of small and medium scale entrepreneurs in both rural and urban areas. The Kavango regions are rich in wood particularly timber, although it has not gravitated towards exporting except for charcoal. There is quite a significant amount of wood manufacturing companies namely: Inchcape shipping services, Ombahe Trading Enterprises, Transvehco, Coastal Panel manufctures, Gecko Salt, Green coal Namibia CC, The wood connection, Namibia Charcoal experts and Logistic building solutions. The above companies manufactures various products from Firewood, Pellets and Residues, Flooring and Exterior Decking, Forest and Logs, Furniture and Garden Products, Machinery, Hardware And Chemicals, Pallets, Packaging and Packaging Timber, Sawn and Structural Timber, Veneer and Panels, Wood Components, Mouldings , Doors & Windows to Houses. The graph below show, an increase in production since 2000 to 2019.

Figure 73: Wood and wood products



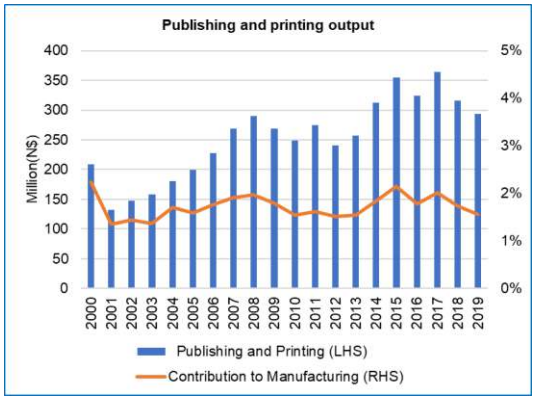
Source: NSA

6.2.8 Publishing and Printing

The Namibian publishing industry has predominately focused on producing educational materials in the past; with global publishing company Macmillan operating in the country via Gamsberg Macmillan Publishers, which is based in Windhoek. Another educational publisher worthy of note is Zebra Publishing for educational material development requirements of Ministry of Education'. The University of Namibia and the Namibia University of Technology publish scientific journals. In 2012 a new avenue was opened up in the Namibian publishing industry when Wordweaver Publishing House, the country's first fiction publisher, was launched. The aim of Wordweaver is to highlight the talent of Namibian writers, who have largely been disregarded in the past. There are various publishing and printing companies in the country: The

three-dimensional printing CC, John Meinert Printing, NAMPA, Galaxy advertising, Namprint, Prime press, Gerrad Botha Photography and many more. The subsector has been performing well with a contribution of production output of N$ 320 million in 2018 compared to N$ 140 million to manufacturing output in 2000 (*figure below 74*)

Figure 74: Publishing and Printing

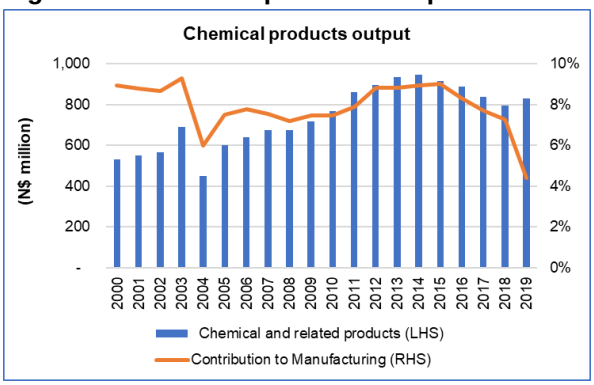


Source: NSA

6.2.9 Chemical products

Chemicals and related products include paints, agro-chemicals and hygienic related products. This subsector contributes an average of less than 5 percent to total manufacturing output. In terms of size, the N$ 800 million worth subsectors experienced a minor shift. The subsector was very volatile between 2002 and 2008 with output falling to its all-time lowest of N$ 450 million in 2004. It gradually grew from 2009 until it reached a peak of more than N$900 million in 2014 before declining to N$800 million in 2018 and slightly rising to above N$800 million by 2019. The country does not export any chemicals. However, it imports more than N$ 5 billion worth of chemical, rubber and plastic products which presents an opportunity for local producers to explore.

Figure 75: Chemical products output

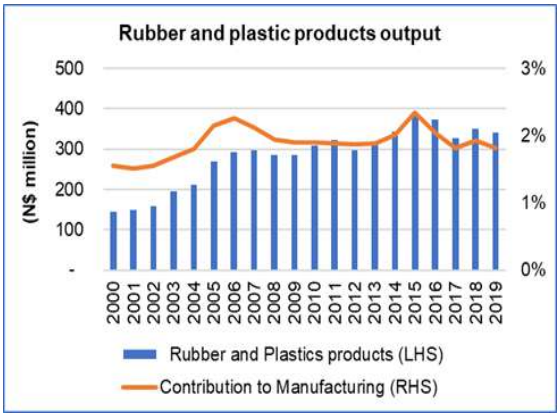


Source: NSA

6.2.10 Rubber and Plastics products

By 2019, the rubber and plastics industry was worth about N$ 360 million representing a 3 percent contribution to total manufacturing output on average per year. This category is composed of products made from polyvinyl chloride (PVC), polyethylene, polystyrene and polypropylene. The industry has shown favourable growth over the past 18 years growing from N$ 129 million in 2000 to over N$ 369 million in 2019. Namibia does not export any rubber and plastic related products. The import bill of rubber and plastic products has increased to surpass N$ 9 billion in 2018.

Figure 76: Rubber and Plastics products output



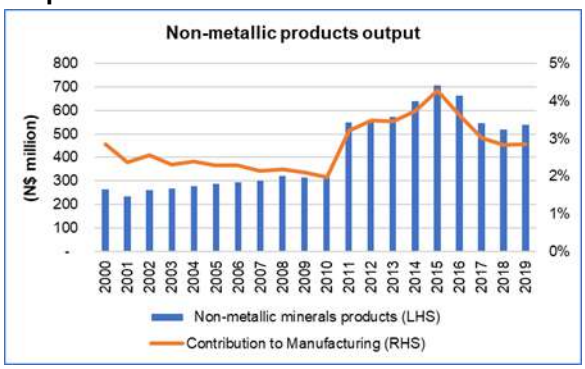
Source: NSA

6.2.11 Non-metallic minerals products

Non-metallic minerals in Namibia include limestone, coal, gypsum, dolomite,

phosphate, salt, manganese, granite to mention a few. This industry contributes an average of 3 percent to manufacturing output per annum. The non-metallic mineral industry is valued at more than N$ 400 million. According to figure 77 below, the growth in non-metals industry was stable until 2010 when it grew significantly in both output and contribution to Manufacturing output. Though Namibia produces some non-metallic mineral products, it remains a net importer of these products with the industry valued at more than N$ 1 billion, which has been significantly growing over the recent years.

Figure 77: Non-metallic minerals products output

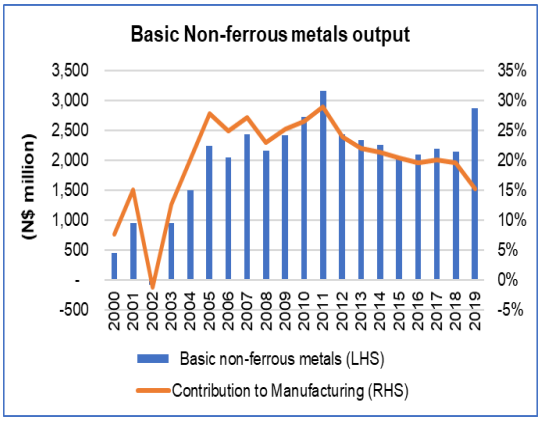


Source: NSA

6.2.12 Basic non-ferrous metals

Namibia produces some critical non-ferrous metals such as copper, lead, nickel, tin and zinc. Basic non-ferrous metal industry is the major contributor to manufacturing sector's output with a share of 21 percent of total manufacturing production. As per figure 78 below, the industry was performing favourably between 2005 and 2012, however, it has been slowing since then. This subsector was at a peak in 2011 when it was worth more than N$ 3 billion, contributing more than 30 percent to manufacturing sector output. This development was mostly attributed to the output of metal ores that spiked by 28 percent over the same period. Namibia is net exporter of copper and refined zinc products valued at more than N$ 4 billion.

Figure 78: Basic non-ferrous metals output

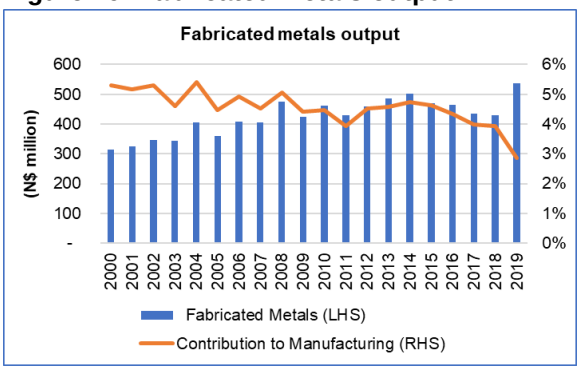


Source: NSA

6.2.13 Fabricated Metals

The fabricated metal industry contributes an average of 5 percent to total manufacturing per annum. In 2019, the industry was worth around N$ 520 million. Figure 79 below shows the sub-sector growing steadily from N$300 million in 2000 to more than N$500 million in 2019.

Figure 79: Fabricated Metals output



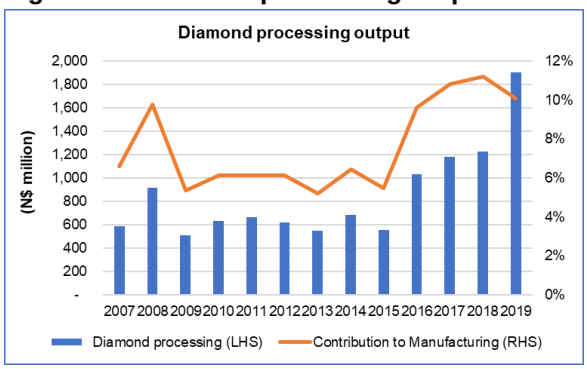
Source: NSA

6.2.14 Diamond processing

Diamond processing which began in 2007 and has evolved since then, from a mere N$ 600 million to over N$ 1,2 billion in 2018 and rising to more than N$1.8 billion in 2019. Between 2008 and 2009, after enjoying more than two decades of almost uninterrupted price increases amid buoyant demand, the global diamond market suffered in the first quarter of 2009 as

diamond sales and prices plunged, which explains the reduction in production over the same period. Diamond processing in Namibia significantly slumped as a result of diamond mining which reduced production by more than 50 percent over the same period. Namibia is a net exporter of polished and cut diamonds with the export market valued at more than N$ 4 billion. Since 2016, the diamond processing industry has been growing significantly.

Figure 80: Diamond processing output

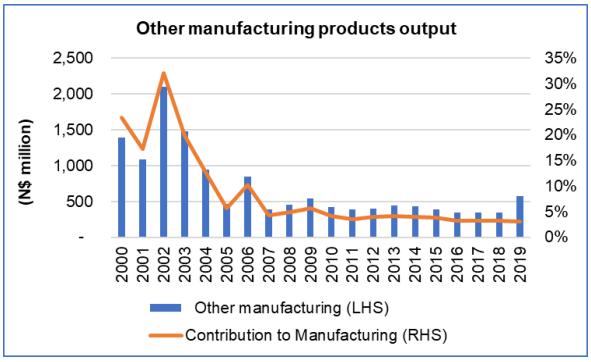


Source: NSA

6.2.15 Other manufacturing products

This subsector contains brickmaking, jewellery making, electrical manufacturing and other various manufacturing products. Figure 81 below indicates that in the early 2000's, this sector was quite significant. One can see that after 2007, the sector's performance and contribution to total manufacturing output stabilized though dropping from 2006 to 2018.

Figure 81: Other manufacturing products output



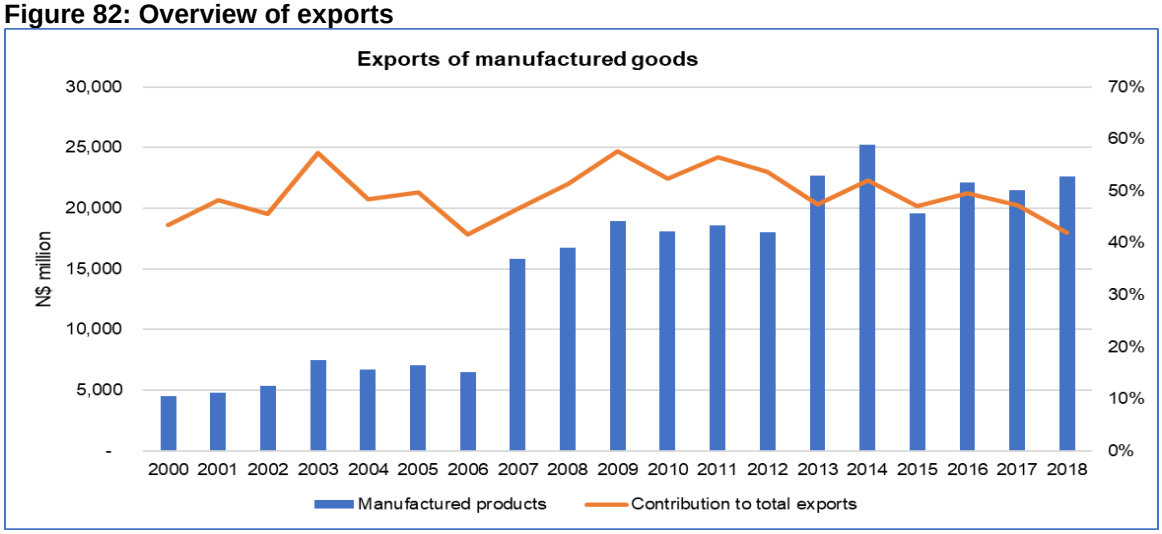
Source: NSA

6.3 Share of Manufacturing Sector to total trade (Exports & Imports)

6.3.1 Exports

The manufacturing sector accounted for close to 45 percent of all exported goods by 2018 having reached a peak of more than 60% in 2009. In line with the increased production of manufactured products, exports of manufactured products increased from N$ 4.5 billion in 2000 to more than N$20 billion in 2018. This is an impressive performance given that Namibia is small economy competing against the bigger giant economies. Figure 82 below shows overall exports of manufactured goods from 2000 to 2018. The data below shows that manufacturing exports picked up significantly from 2007. Overall, Namibia remains a net importer of manufactured goods.

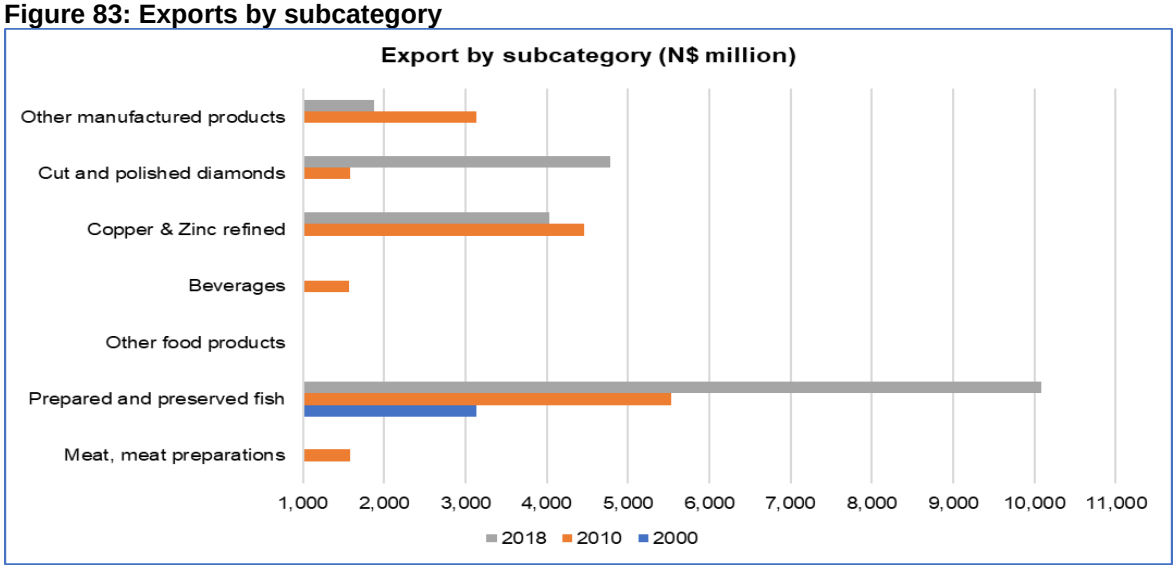
Figure 82: Overview of exports



Source: NSA

Figure 83 below shows the composition of the manufactured products exported by Namibia between 2000 and 2018. In 2000 the only major manufactured products exported was the prepared and preserved fish with a total value of N$3.2 billion. Exports of processed fish has now increased from N$3 billion to more than N$10 billion. The new measures to promote exports of manufactured products seem to have worked as by 2010, Namibia became one of the important exporter of manufactured with copper & zinc becoming the second largest export category followed by cut and polished diamonds composing 10 and 8 percent respectively. The figure below further shows that there has been a significant improvement in diamond exports. Another significant development is slump in meat preparations and beverages categories. The meat category declined due to drought conditions in 2017 and 2018.

Figure 83: Exports by subcategory



Source: NSA

6.3.2 Imports

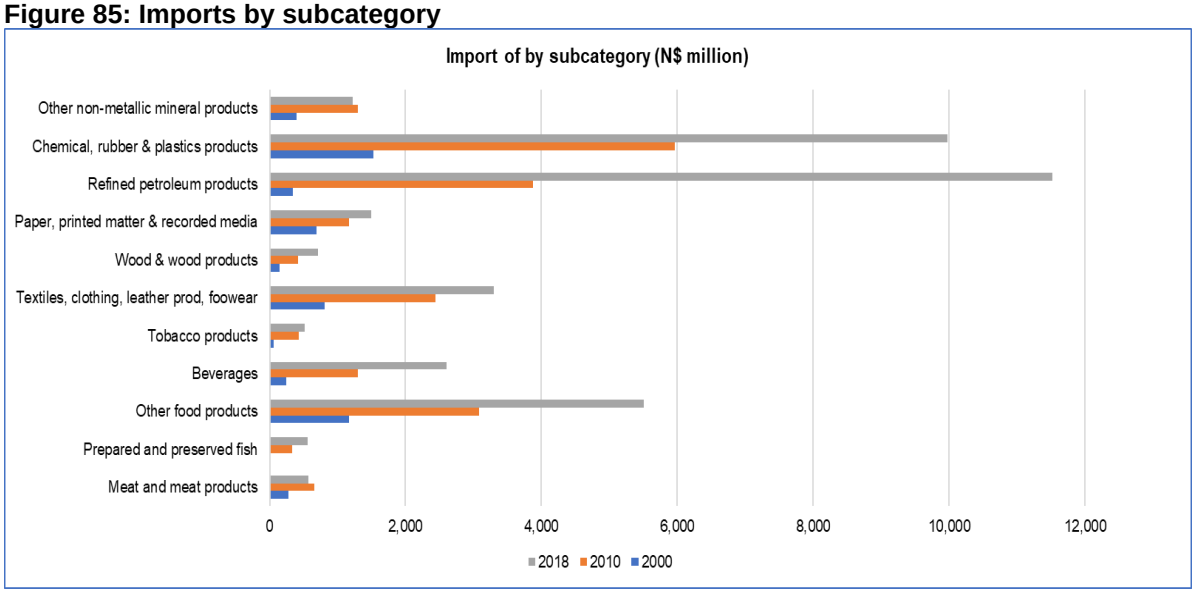
In terms Figure 84 below shows overall manufacturing sector imports as well as the composition to total imports. Manufactured goods take up an average of 47 percent of total imports. Import of manufactured goods has seemingly been increasing significantly over the years as shown below. In monetary value, imports were valued at more than N$ 37 billion in 2018. Overall, Namibia remains a net importer of manufactured goods.

Figure 84: Overview of imports

Source: NSA

Figure 85 indicates the composition of the manufactured imports between 2000 and 2018. It is evident that in the manufacturing basket of imports, refined petroleum products take up the largest share which is reasonable because Namibia does not produce petroleum products. Although Namibia produces some chemicals, rubber and plastic products, it is still a net importer of these goods making it the second largest subcategory of imports. Developments in the refined petroleum and other food products clearly indicate a fast increase in imports of these goods between 2010 and 2018, the former spiked by more than 78 percent while the latter more than doubled.

Figure 85: Imports by subcategory



Source: NSA

6.4 Contribution of Manufacturing Sector to Total Employment

In terms of its contribution to employment, manufacturing sector is the 5th largest employer and 6th most productive sector in the economy. Table 35 below depicts the sectoral composition of employment in the manufacturing sector over 4 periods, although the sector contribution declined from 9% in 1991 to 6% in 2018, in absolute value the number of people employed in the sector increased from 12000 in 1991 to 27,755 in 2004 before increasing to a total of 45,057 people employed by the sector in 2018. During the periods, the share of employment reduced from 9 percent in 1991 to 6 percent from 1997 to 2018. An increase in the number of employed persons in the industry can be noticed, however the structure did not change.

Table 32: Employment

	1991	1997	2004	2018
Total employment	137,000	401,140	385,329	725,742
Manufacturing employment	12,000	25,983	23,755	45,057
Manufacturing share	9%	6%	6%	6%

Source: NSA

6.5 Contribution of Manufacturing Sector to Fixed Capital Formation (Investment)

Investment in the manufacturing industry has been growing substantially. As per Table 36, below, the share of investment in manufacturing was 3 percent of total investment in 1991 which has grown to 16 percent in 2018. The growth in total investment can also be seen. This indicates that efforts are being made in attempt to grow the industry.

Table 33: Investment

	1991	1997	2004	2018
Total investment (N$ million)	998	2,866	7,922	30,881
Manufacturing Investment (N$ million)	27	256	833	4,910
Manufacturing share	3%	9%	11%	16%

Source: NSA

6.6 Productivity of the Manufacturing Sector

According to Namibia Statistics Agency, the most recent data (for 2018) highlights that the manufacturing sector generated N$ 10.9 billion of value added and employed more than 45 thousand persons. Data from Table 37 below shows the growth of this sector in terms of output, employment as well as investment. However, the labour productivity of the sector has been significantly declining in 2018 reaching N$ 242,000 per employed person. Although decreases were recorded labour productivity, it is important to mention that these are due to the slow growth in sectoral output. Employment figures have shown a significant increase between 2004 and 2018, which can explain the decline in productivity given that the output of the sector's did not grow as fast as employment in the sector. On the other hand, improvements can be noticed in the investment per employed person which grew over the 4 periods regardless.

Table 34: Productivity

Indicator	1991	1997	2004	2018
Manufacturing output (N$ million)	4,350	5,464	7,469	10,923
Number of employed persons	12,000	25,983	23,755	45,057
Labour productivity (N$ thousand)	363	210	314	242
Manufacturing Investment (N$ million)	27	256	833	4,910
Investment per employed person (N$ thousand)	2	10	35	109

Source: NSA, FC Research

6.7 Has the Manufacturing Sector in Namibia Transformed

Using the measures presented above, we conclude that the manufacturing sector in Namibia has not transformed for the following reasons:

1. Namibia's manufacturing sector has remained stagnant at around 10% of GDP over the past thirty years lower than the 20% to GDP targeted by government. In 1980 manufacturing shares of GDP was at 10% and had increased to 13% at the time of independence in 1990. However, the sector declined to 11% in 2000 and further declined to 10% of GDP by 2018, the same level where it was in 1980. This stagnation is despite being the most favoured sector by government with all manufacturing incentives and favourable policy regime. Using the measure of manufacturing share of GDP at 12% shows that the sector has not transformed, and not much structural change has taken place.
2. The manufacturing sector structure remains small and relatively unchanged from 1990 as by 2018, the sector still consists predominantly of minerals processing food processing and processing of fishing products.
3. The manufacturing sector exports are still dominated by exports of minerals and fish processed products accounting for more than 70% of total exports since 1995.
4. One indicator of sector transformation is the change or increase in share of sector employment. In all the country that have industrialized, manufacturing is one of the biggest employers as workers move from rural sector into urban centres are accommodated in the manufacturing sector. In Namibia, the manufacturing sector share of employment declined from 9% in 1991 to 6% in 2018.
5. Fixed Capital Formation (Fixed Investment) into the manufacturing have been increasing. The share of investment in manufacturing was 3 percent of total investment in 1991 and has grown to 16 percent in 2018.
6. Manufacturing productivity has declined substantially with more labour employed in the sector producing less goods. Labour productivity of the sector has been significantly declining from N$363 000 in 1991 to N$ 242,000 per employed person in 2018.

Recommendation

Manufacturing sector holds has been identified as a priority sector by government. According to Vision 2030 and Namibia's National Industrial Policy both manufacturing and services sectors constitute about 80% of the country's gross domestic product (GDP) by 2030. According to literature on economic development, when a country industrializes and reaches middle to high income status, manufacturing sector should be expanding and increasing its share to GDP to a range of 20% - 30% of GDP. If Namibia want to reach the goals and targets set in Vision, manufacturing as a share of GDP cannot remain stagnant at 12% but the sector's contribution to GDP must increase to a minimum of 30% of GDP by 2030. Contrary to the target of Vision 2030 where manufacturing and sector must account for 80% of GDP by 2030, we recommend that, for Namibia to reach Vision 2030, agriculture and manufacturing my account for 50% of GDP by 2030, while mining and fishing contributes 15% of GDP and the service sector contributes 35% of GDP with tradable service sector accounting for close to 60% of the total service sector output.

CHAPTER 7: FISHING SECTOR AND ECONOMIC TRANSFORMATION

Namibia is said to have one of the cleanest marine waters and good quality marine ecosystem due to low pollution. This is because much of the country's coastline is desert, and has few urban settlements, unlike other coastlines around the world that tend to be very densely populated. The cleanliness of Namibian waters ensures that the country has access to high quality fish with an international appeal (IMF, 2011). The Namibian government has since independence in 1990 prioritized fishing sector as a sector to be transformed to benefit the wider population through allocations of business rights. Before independence, the sector's most species were overexploited by foreign fleets with very few Namibians benefiting and to control and stop the overexploitation of Namibia's fish resources, the government proclaimed an exclusive economic zone (EEZ) to establish exclusive rights over marine resources within a 200 nautical mile distance from the shore, in line with the United Nations Law of the Sea (AGRODEP, 2016). To achieve its goals of transforming the sector, the government implemented reforms and formulated a policy framework to rebuild fish stocks and to manage marine resources more sustainably. A fishery sector white paper was developed with three main objectives: (i) rebuilding fish stocks and controlling their exploitation; (ii) establishing effective mechanisms for the monitoring and surveillance of resource use and exploitation; and (iii) establishing a flourishing fishing industry that would add value to the resource and empower the Namibian public (AGRODEP, 2016).

The new fishing policy framework emphasized the need for the 'Namibianisation' of the fishing sector through affirmative action policies aimed at promoting the participation and ownership of fish resources by formerly disadvantaged Namibians. To ensure the realization of these objectives, the Namibian government introduced the Sea Fisheries Act in 1992 which sets out the institutional framework for the operation and management of the fishery sector, including the granting of non-transferable quota rights, the setting of total allowable catches (TACs), and the directing of data collection and research on marine resources (AGRODEP, 2016). The 1992 Act was repealed in 2000 and replaced by the Marine Resources Act. The new Act was supported by the 2001 Regulation No. 241, which regulated the exploitation of marine resources. The regulations govern the granting of rights, allocation of quotas, and licensing of activities in the fishery sector. They also govern the non-commercial exploitation of marine resources (e.g. recreational activities) conservation measures (e.g. control of trawling activities and measurement of meshes) and determine the fishing seasons for various species. Further, the regulations outline the compliance and control measures provided for under the Act, as well as applicable offences and penalties.

In 2004, another Policy (Marine Resources Policy of 2004) was introduced to further strengthen the management and operation of the fishing sector in Namibia. This policy emphasizes the need for greater involvement of Namibians in the management and exploitation of the country's fish resources. The policy covers issues of marine sector resource development and ownership, as well as the implementation, monitoring, and control of resource use (AGRODEP, 2016). The 2004 Policy also encourages onshore processing of wet fish to create employment. In all the five National Development Plans (NDPs) and Vision 2030, the fishing sector is given prominence as a core sector that will support industrialization and value addition through fish processing. As at end of 2018, the fishing sector accounted 2.6 percent of GDP. The Government of Namibia has made aquaculture a top priority as defined in Namibian Vision 2030 document. Aquaculture is expected to play a major role in

the enhancement of food security, alleviate poverty, and improvement of livelihood in rural communities in the near future.

Structure of the fishing industry in Namibia

The fishing sector is estimated at N$ 5.0 billion in value addition and contributes 2.8% to GDP in 2018. Table 38 below presents the fishing sector at a glance. This sector is composed of marine and aqua cultural species farming. The structure of the fishing sector can be classified as follows:

1. **Fish that dwell close to the surface of the ocean**: This includes small and pelagic fish, that is (e.g. some species of tuna, pilchards, and anchovy). After a significant increase in catches in the 1990s, pelagic fish harvests declined toward the end of the decade, resulting in a prohibition on trawling in shallow waters (Sherbourne, 2013). The collapse of pelagic fish stocks also resulted in a reduction in the processing capacity onshore, culminating in job losses. Sherbourne (2013) reports that by 2012, there was only one pelagic fish cannery and two fishmeal plants in Walvis Bay. Since 1991, tuna has also been caught in Namibian.
2. **Fish that dwell in mid-water of the ocean:** This type of fish is found between the ocean surface and the bedrock and includes horse mackerel and hake which are harvested all year round. Mid-level fish are mainly harvested using trawling methods. Many quota holders do not own vessels, so they hire labor, mainly from abroad. Mid-level fishing forms the core of the Namibian fishing industry; since independence I 1990, the hake industry in particular has contributed significantly to onshore jobs.
3. **Fish that dwell near or at the bottom of the ocean**: In this category we find species like hake, sole, and monk. The fish are either processed on-board and/or ferried for onshore processing.
4. **Fish that dwell in deep - water of the ocean**. In this category we find species like orange roughly (processed onshore) and alfonsino (processed offshore). Since deep-water fishing began, the catch size has declined consistently over time.
5. **Other sea products in Namibia include** crabs, rock lobster, oysters, seals, guano, and seaweed. Crabs are processed offshore, while rock lobster lands onshore wet. Oysters are farmed and sold both locally and internationally. Male seals and pups are harvested for fur, fat, and meat, and two types of seaweed are harvested.

Aquaculture Production and Management

The second part of the fisher sector is aquaculture. Aquaculture is divided into freshwater fisheries (mainly tilapia and catfish) and mari-culture or marine-based fish farming (mainly oysters, abalone and seaweed). The fresh water sub-sector products are geared for the local market, for food security reasons, but they also find their way into neighbouring countries (specifically Botswana, Zambia, and Angola). The marine-based sub-sector is generally capital intensive; its products are of high value and are geared for the export market.

Table 35: Fishing sector at a glance

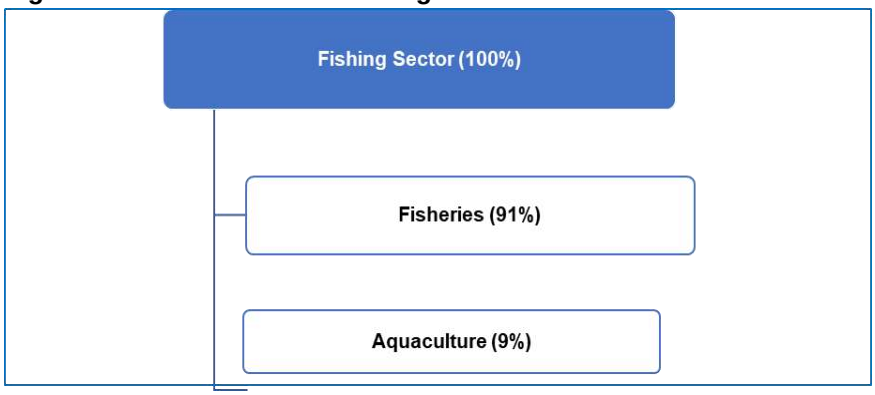
Fishing Sector at glance		
Sectoral Contribution	Fishing to GDP	N$ 5.0 billion or 2.8% of GDP
Average GDP Growth	Fishing and fish processing	6.9%
Fishing Output	Vessels capacity	1,502 cubic meter
	Lobster processing	134.95 million tons
Fishing capacity	Available for Agriculture	687 square meter (84% of total)
Quota Utilization	Total quota allocation (Hake)	10,843 mt (7,115 for SWC)
	Lobster and monk utilization	51 & 210 mt respectively
	Governmental objectives allocation	104,000 mt (16% hake, 84% horse mackerel)
Investment in Fishing	Investments in 2018	N$ 1.5 billion (5% of total)
	Investment stock as of 2018	N$ 65.4 billion (19% of total)
Employment Creation	Total Employement	167,242 (23% of total employed)
	Formal Employement	20,705 (12% of total employment)
	Informal Employement	146,537 (88% of total employment)
Average wage	Agriculture, forestry & fishing	N$ 3,393 (N$ 7,935 National average)
Food Security	Local fish Production	N$ 5 billion
	Import of fish products	N$ 25 million
Exports	Fish products	N$ 181 million (0.3% of total export of goods)
Exports of Manufactured goods	Total export of manufactured goods	N$ 25.7 billion (45% of total export of goods)
	Prepared and preserved fish	N$ 10.0 billion (40% of manufactured goods exports)
Government Expenditure	Overall Budget (2019/20)	N$ 240.0 million (0.4% of total budget)

Sources: NSA, MoF and FC Calculations

7.1 The Structure of the fishing sector

The commercial fisheries in Namibia are dominated by three species: hake, horse mackerel and pilchard though Namibia still produces monks, kingklip, tuna, crab, lobster alfonso and many more on a small scale. In this chapter the analyses is on the structure of Namibia's fishery sector, which consists of both fisheries and aquaculture subsector. The evolution of fishery stocks is measured through its catch effort (fish output), sectoral contribution to GDP, employment, and contribution to international trade. Namibia is a net exporter of fish.

Figure 86: Structure of the fishing sector



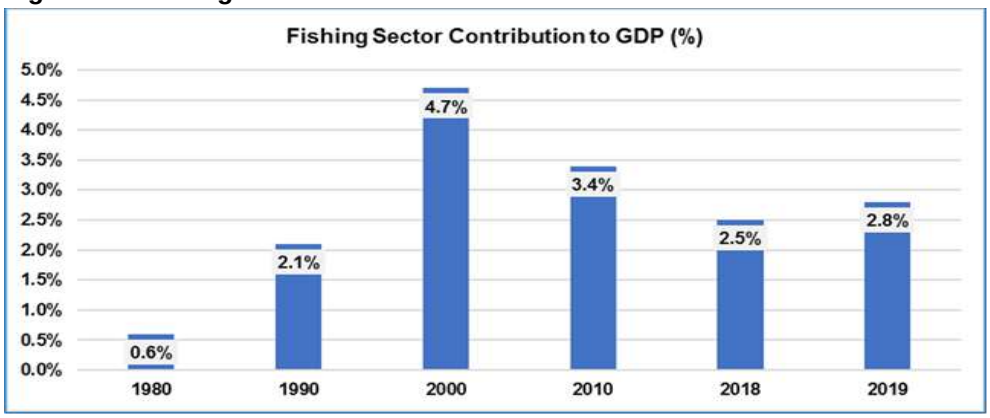
Sources: NSA&MFMR

7.1.1 Share of fishing sector to GDP

The fishery sector as one of the most important components of the Namibian industry, is very important to Namibia in terms of job creation, foreign exchange earnings, food and income generation. The sector in 2018 contributed 2.8 percent which in monetary value is N$ 5.0 Billion to GDP, compared with N$ 154 million in 1990. Contribution to GDP from fisheries has declined over the last five years (0.4 percent) from 3.0 percent in 2013 to 2.8 percent 2018.The decline brought on by the decrease in the TAC for hake as well as severe conservation and

management measures in the small aquaculture industry. Most contribution to the fisheries subsector is the horse mackerel and hake. Figure 87 below, shows the contribution of the Fishing sector to GDP over the years. There has been a gradual increase of the sector's contribution to GDP from 1980 to 2019, though its contribution is one of the lowest in comparison to other sectors. In 1980 the sector contributed 1 percent to GDP and growing in 20 years to 5 percent in 2000 and then dropped from 5 percent to 3 percent in 2019.

Figure 87: Fishing Sector Contribution to GDP

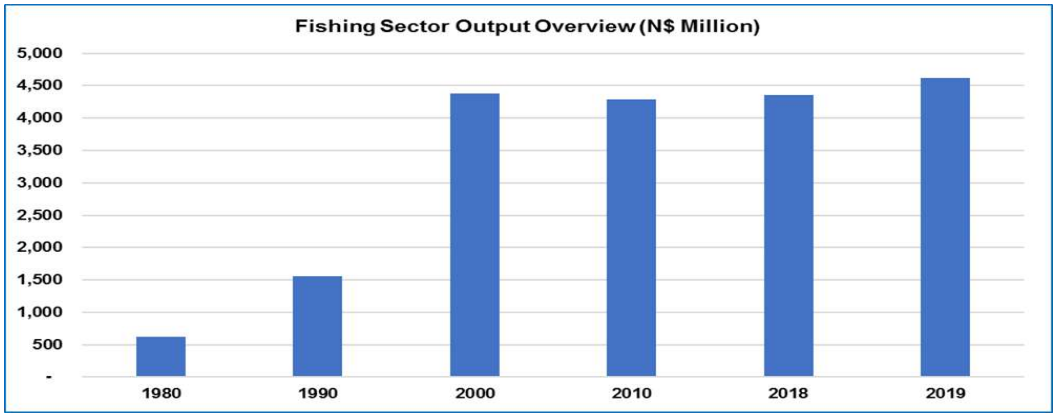


Source: NSA

7.1.2 Fishing sector output

Figure 88 below clearly shows the evolution of the fishing sector overtime. As mentioned above, government prioritized the fishing sector and introduced some reforms to transform the sector since 1990. The sector seems to have responded positively to these reforms with production more than doubling from 1990 to 2000. Overall, the sector grew from N$ 384 million in 1980 to N$5.0 billion in 2019. The fishing sector started to show a visible increase in stocks of both hake and horse mackerel that constitutes 94% of the fisheries subsector output.

Figure 88: Fishing sector output

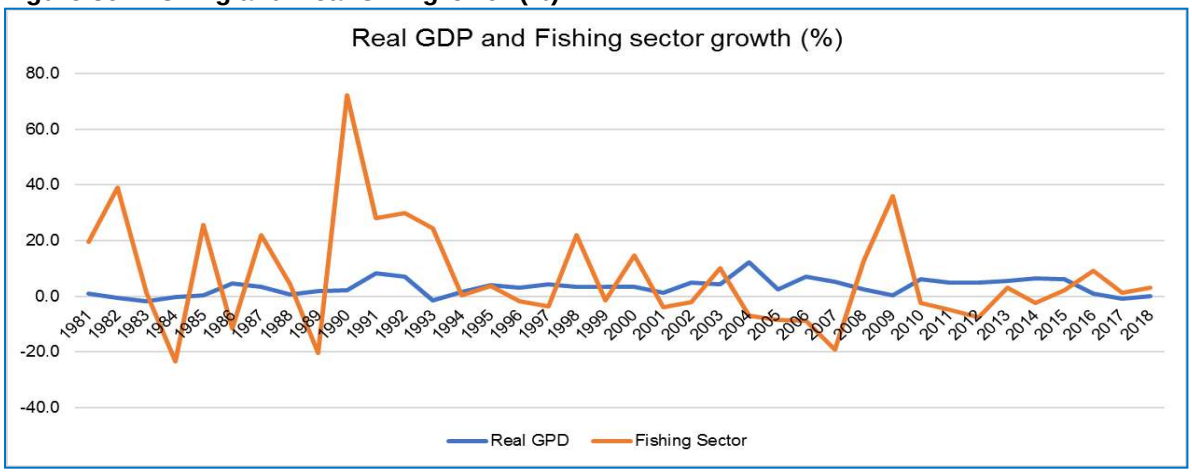


Sources: NSA

7.1.3 Volatility of the Fishing Sector

Overall, the growth of the Fishing sector has been very volatile with a very high standard deviation coefficient of 18.8. The correlation coefficient of -0.2 is an indication that there is a negative correlation between the growth in fishing sector and the overall GDP. This implies that increase in fishing sector does not have a significant impact on the real GDP growth. In 2007/08, the sector passed through a deep contraction of about 20 percent which could be explained by the global financial crisis that occurred in 2007/208. As a net export of fish, Namibia's exports were heavily affected due to declines in the market prices and global demand for fish.

Figure 89: Fishing and Real GDP growth (%)



Sources: NSA

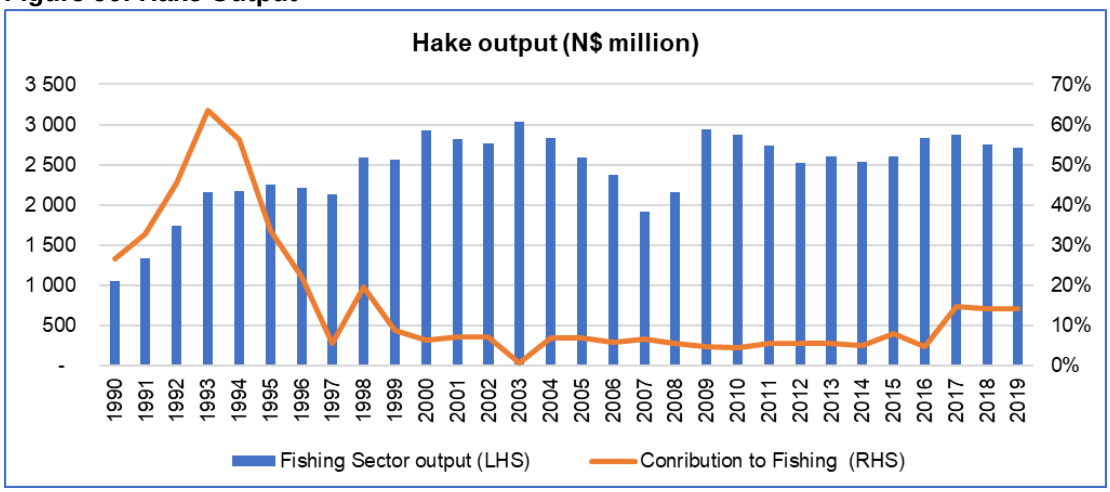
7.2 Fishing Subsector Analysis

For the fisheries subsector both the horse mackerel and hake constitute 94 percent of the output while pilchard constituting 2.5 percent of the subsector in 2019. According to many other reports, the pilchard fishery has been subject to large fluctuations, all but disappearing in 1995 to 1996 and ending the decade much lower than it began in the 1990s.

7.2.1 Hake

Currently the hake industry is one of the backbones of the export-oriented fishing industry while the horse mackerel, makes up the bulk of the catches, with average landings of 350, 000 tonnes sustained over the past decade. The hake industry has also been the centre of a flow of investment among fishing companies in the past years. According to figure 90 below, hake output was very high in the early 1990s hitting an all-time of 60 percent composition of the sectors total output and started falling severely in 1996/97 and picking up slightly in 1998. The lowest production of hake in Namibia was recorded in 2003.

Figure 90: Hake Output

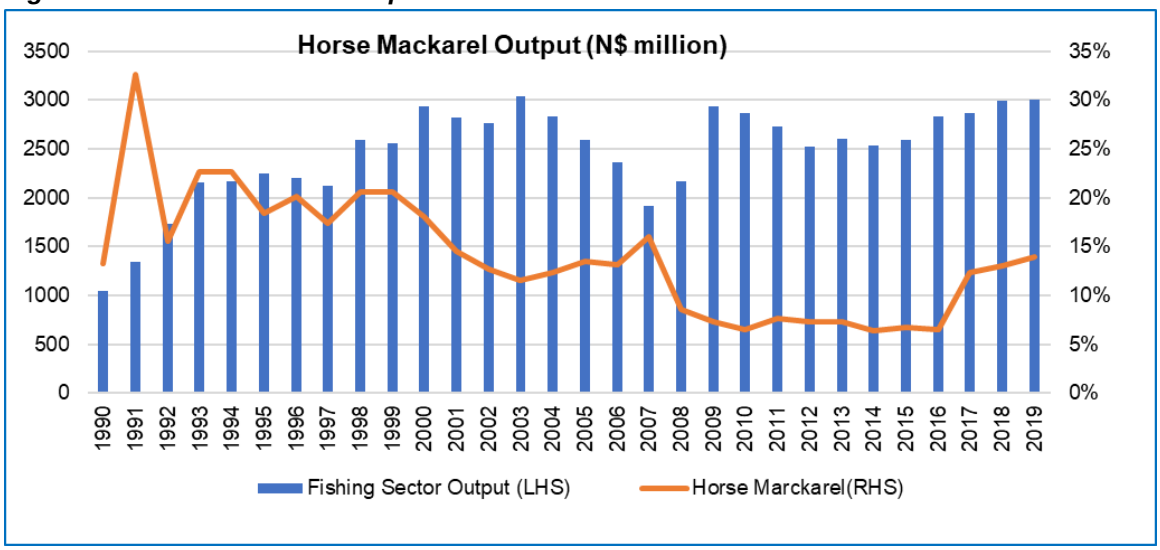


Sources: FAO, MFMR & Various Fishing Companies

7.2.2 Horse Mackerel

Namibian horse mackerel is the dominating species in terms of volume in the Namibian waters. It contains only three to eight percent body fat, and it is both healthy and highly nutritional as well as a vital staple food source for many nations in the region. It is the most locally consumed of all the fish species in Namibia due to its affordability especially those from a low-income earning household. According to figure 91 below, horse mackerel had a high output in the early 1990, slightly decreasing from 1995/96. However, it has remained somewhat stable and constitutes 13 percent of the fishing sector.

Figure 91: Horse Mackerel Output

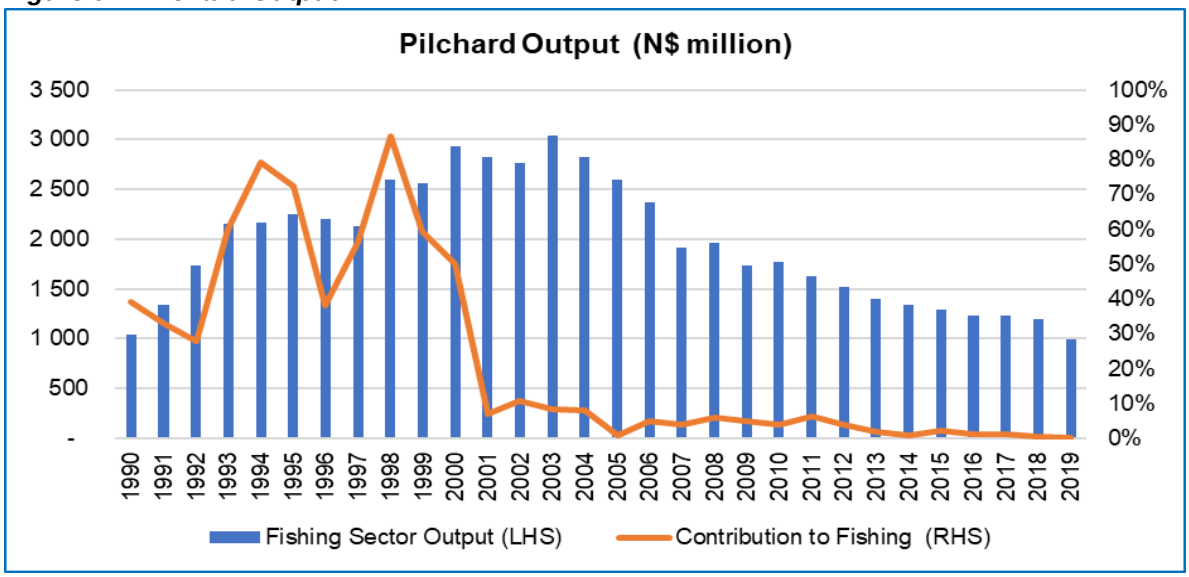


Sources: FAO, MFMR & Various Fishing Companies

7.2.3 Pilchard

Pilchards use to be one of Namibia's most dominating fishery species. It was the best performing in terms of output in the early 1990's compared to hake and horse mackerel. Overtime Pilchards became almost extinct according to the ministry of Fisheries and Marine resources. This can be attributed mainly to overfishing and other factors. While pilchard contributed close to 80% of total sector output in late 1990s, the subsector's contribution has now declined to less than 2% by 2018 (figure 92). It is evident that pilchards have suffered unsustainable harvesting in the past, which resulted in a drop in catches, the ministry had to put strict measures in terms of fishing right to protect the growth of pilchards.

Figure 92: Pilchard Output

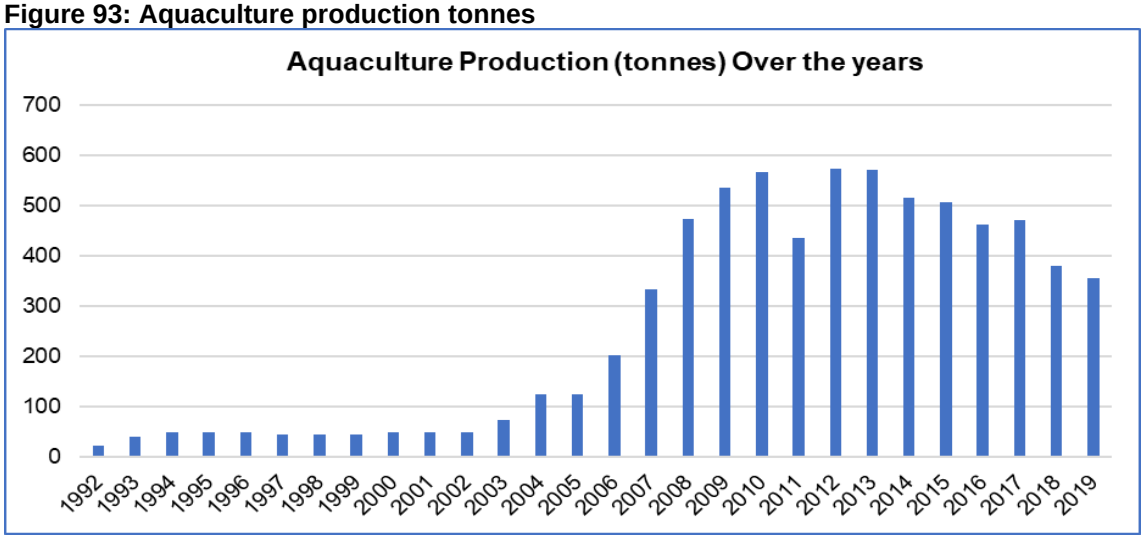


Sources: FAO, MFMR & Various Fishing Companies

7.2.4 Aquaculture production

Inland fisheries from rivers and lakes are not commercially exploited, but many households and communities derive their livelihoods from these waters. Most common aquaculture in Namibia are the freshwater aquaculture namely the fingerlings, tilapia, and catfish. According to the graph below total production of aquaculture in Namibia has been increasing over the years, slightly declining in 2011 but picked up again in 2012.

Figure 93: Aquaculture production tonnes



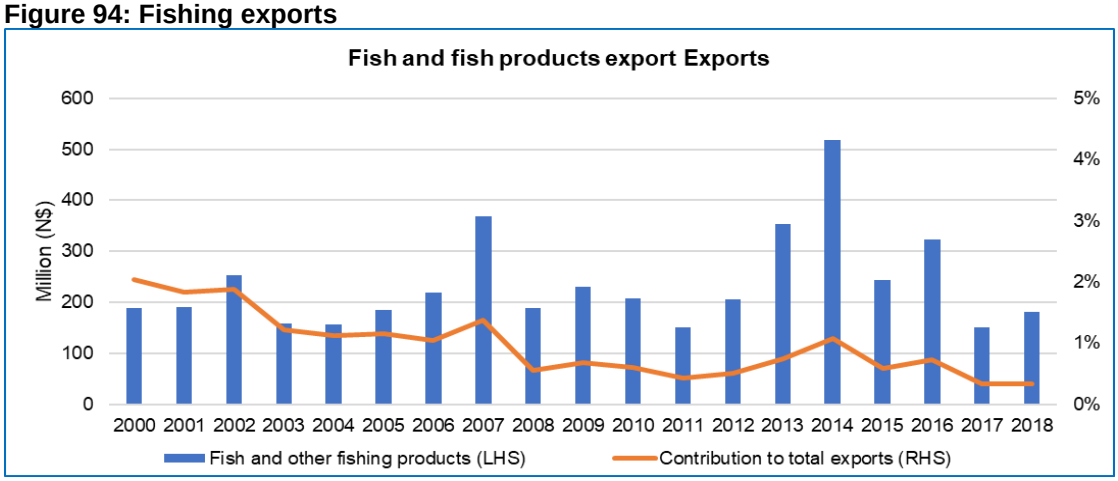
Sources: FAO, MFMR & Various Aquaculture Companies

7.3 Fishing sector contribution to trade (exports and imports)

7.3.1 Exports

The country exports more than 90 percent of its fisheries production in various product forms, primarily to international markets including EU, USA, the Far East as well as some African markets. Fish exports account for around 1% of total exports on average per annum, valued at around N$ 181 million in 2018. Hake and Horse Mackerel main still the main exported fisheries to the traditional European markets and others due to their good quality there is an international demand for them. According to the Namibia Statistics Agency, the third quarter of 2018 of the National account report has shown that fish was among the top five commodities, and the only food item among exports that included minerals such as diamonds and precious metals, ores and concentrates.

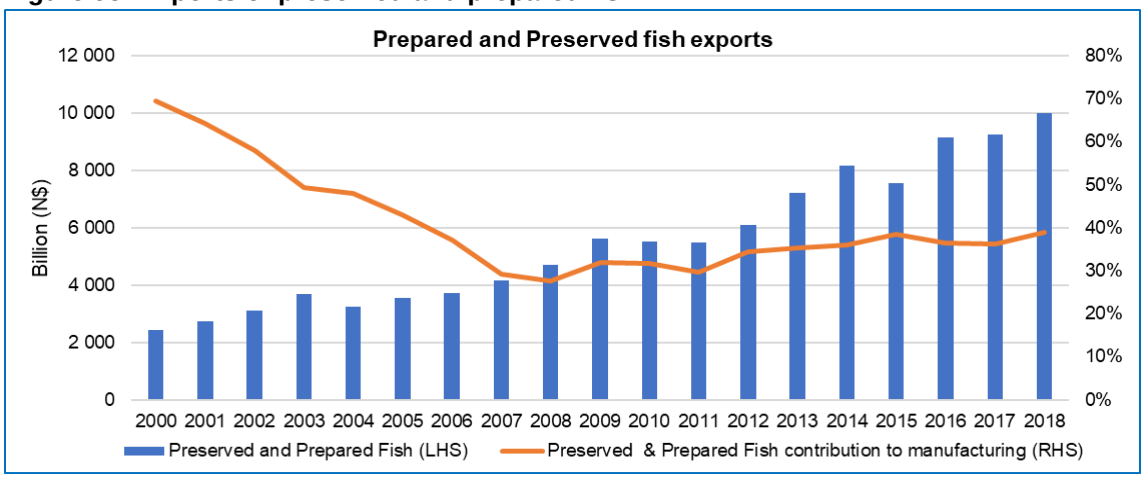
Figure 94: Fishing exports



Sources: NSA

In addition, the fishing sector contributed substantially to the exports of manufactured goods through prepared and preserved fish. Figure 95 below evidences that this export subsector conributes an average of 41% to the export of manufactured goods per annum. It futher presents that the sector has evolved substantially over the years growing from N$ 2.4 billion in 2000 to more than N$ 10 in 2018.

Figure 95: Exports of preserved and prepared fish

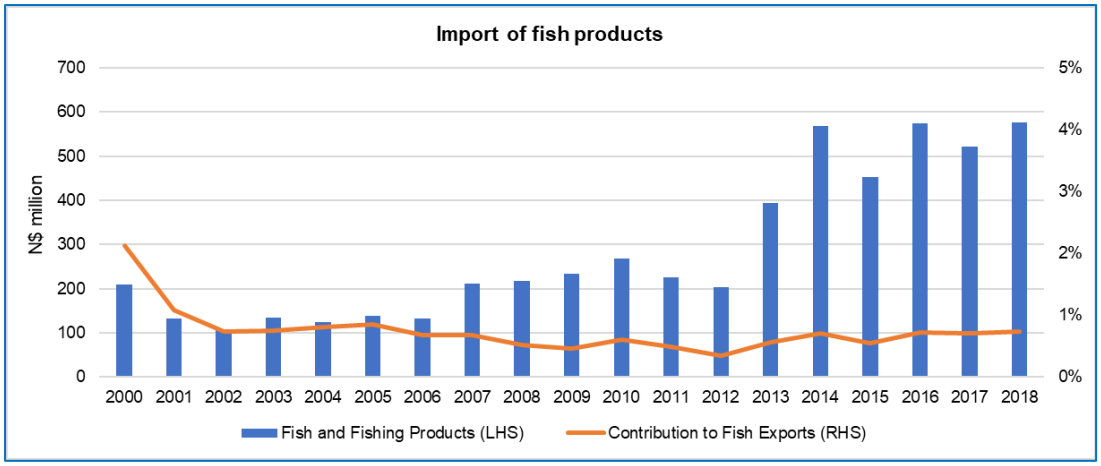


Source: NSA

7.3.2 Imports

According to the figure below, in 2000 the import of fishing products constituted 2.8% of the total imports which narrowed to 1% in 2018. Namibia is self-sufficient of fish production.

Figure 96: Fishing products imports



Sources: NSA

7.4 Fishing Sector Contribution to Employment

The fishing industry is a source of considerable employment for many Namibians. It is currently estimated that the total employment in the fishing industry is about 16,800. Total employment in the aquaculture sector is estimated at 200 people. According to Table 39, the share of employment of the Fishing sector was the highest in 1991 with a 5.3 percent and decrease of1.8 percent in 1997 to recent and currently standing at 2.3 percent. The decreased in the share can also be due to few numbers of fishing companies that have closed down and retrenchments that have been taking place over the years.

Table 36: Employment in the fishing sector

	1991	1997	2004	2018
Total Employment	137,000	401,410	385,329	725,742
Fishing Sector	7,244	7,269	13,305	16,800
Share	5.3%	1.8%	3.5%	2.3%

Sources: NSA, MFMR & FC Research

7.5 Fishing sector contribution to Fixed Capital Formation (Investment)

Investment in the fishing sector has been fluctuating. As per Table 40 below, the share of investment in fishing was 7 percent of total investment in 1991 and dropped to 1 percent in 2018. Though investments in the sector increased in 2018 to N$ 241 million, the share of investment is very small.

Table 37: Investments

	1991	1997	2004	2018
Total Investments (N$ Mil)	998	2,866	7,922	30,881
Fishing sector Investments (N$ Mil)	68	77	42	241
Share of Investments	7%	3%	1%	1%

Sources: NSA, BoN, MFMR & FC Research

7.6 Fishing Sector Productivity

Table 41 below, shows the growth of this sector in terms of output, employment as well as investment. The labour productivity of the fishing sector has significantly increased in 1997 from 1991 with a value of N$ 185 to N$ 293 million per employed person. Growth in labour productivity, is a result of growth in sectoral output overall. Employment figures have shown an increase from 1991 to 2018, which can explain the growing of productivity given that the output of the sector increasing alongside employment in the sector. On the other hand, low percentage can be noticed in the investment per employed person which remained at 1 percent from 1991 to 1997 and declined to 0 from 1997 to 2000. Investment per employed person is very low, which conclude that this sector is under invested.

Table 38: Labour Productivity

	1991	1997	2004	2018
Fishing Output (N$ Million)	1,338	2,128	2,831	2,957
Number of employed persons	7,244	7,269	13,305	16,800
Labour of productivity (N$ Thousand)	185	293	213	176
Fishing Investment (N$ million)	68	77	42	241
Investment per employed person (N$ thousan	1%	1%	0%	1%

Sources: NSA, BoN, MFMR & FC Research

7.7 Has the Fishing Sector Transformed

In a relatively short period of time since Independence, Namibia has achieved remarkable success in managing its fisheries. Namibia ceased further collapse of its fisheries (with the possible exception of pilchards) and vastly increased the economic contribution of fisheries to the Namibian economy, while avoiding the subsidisation of the industry seen in so many other countries. Further, Namibia's fishing sector is subdivided in two subsector the fisheries and the aquaculture. Compared to the fisheries subsector the aquaculture is relatively very small due its low production and underinvestment. Under the fisheries subsector the horse mackerel in comparison to the other two dominantly produced fish species the pilchard and hake. Namibia is a net exporter of fish, the NSA reported that in the third quarter fish was in the top 5 most exported commodities and being the only food product among mining sector minerals.

CHAPTER 8: MINING AND QUARRYING SECTOR TRANSFORMATION

The history of mining goes back to 1851 where explorers found Aawambo people smelting surface copper deposits in Otavi and the mining industry was officially established in 1855 in Walvis Bay. Historically, Namibia's economic landscape has been shaped by the mining industry, which has been dominated, primarily, by diamond, uranium and copper production. Namibia is richly endowed with a variety of mineral resources and at independence in 1990 the government realized that the mining industry had the potential to spur the country's industrialization and economic growth through forward and backward linkages. The mining sector makes a significant contribution to the economy, through foreign direct investment into the country, accounting for more than 14 percent of gross domestic product, a major earner of foreign exchange and a significant employer. In addition, mining is a major contributor to government tax revenue, accounting for more than 20% of government tax revenue in 2018. Namibia is amongst the world's top 10 diamond producers and is the fourth-largest exporter of non-fuel minerals in Africa. In Namibia all mineral rights are vested in the State and all mining related activities are regulated by the Minerals (Prospecting and Mining) Act of 1992.

In this Chapter we look at how mining sector has evolved and transformed over the past 30 years. Table 42 below presents a summary of key indicators of the mining industry in Namibia. The sector is estimated at N$ 16.6 billion in value addition and contribution to GDP was estimated at 9.3% in 2019. Namibia's riches in mining resources has made the mining sector a major source of FDI attracting major conglomerates with sufficient capital and capacity to explore the country's resources. With a capital infrastructure stock valued at N$40.2 billion the sector has a trend of attracting on average N$5.2 billion worth of investments per annum since 2016. The sector is estimated to be employing 12,087 individuals. Despite its direct contribution to the GDP, it has also massive contribution to the generation of foreign exchange earnings in the country. In 2018, precious minerals and base metal exports accounted for 61 percent of total merchandise exports representing a significant contribution to a stock of foreign exchange earnings.

Table 39: Mining sector at a glance

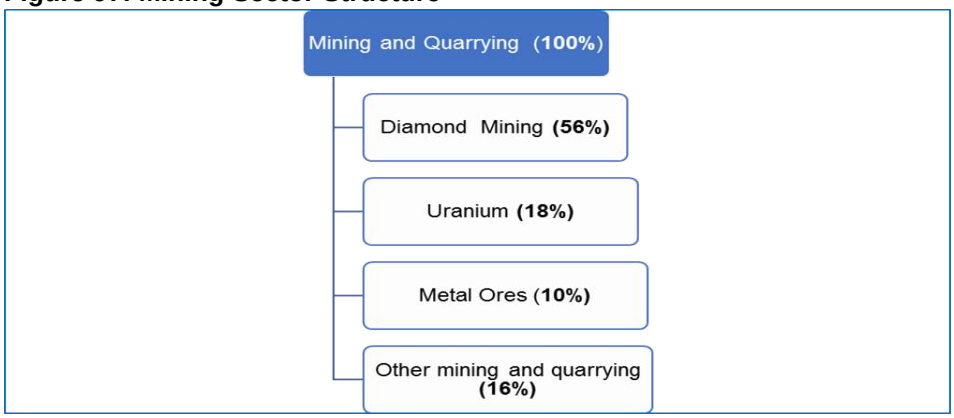
Mining Sector at glance		
Sectoral Contribution	Mining to GDP	N$ 16.6.0 billion or 9.3% of GDP
Subsectoral Contribution	Diamond Mining	N$ 7.0 billion (42% of Mining GDP)
	Uranium	N$ 2.5 billion (15% of Mining GDP)
	Metal Ores	N$ 4.6 billion (34% of Mining GDP)
	Other Mining and Quarrying	N$ 1.4 billion (8% of Mining GDP)
Average GDP Growth	Mining and Quarrying	5.0%
	Diamond Mining	6.6%
	Uranium	30.3%
	Metal Ores	6.3%
	Other Mining and Quarrying	8.1%
Mining Revenue	Revenue from Mining (2018/19)	N$ 2.0 billion (9% of total tax revenue)
	Diamond Mining	N$ 1.6 billion (80% of mining revenue)
	Other Mining	N$ 405 million (20% of mining revenue)
Mining Output	Diamond Production	2.1 million cts (worth N$ 2.8 billion)
	Uranium Production	17.4 million lbs (worth N$ 8.8 billion)
	Zinc Production	205 thousand mt (worth N$ 601 million)
Investment in Mining	Investments in 2018	N$ 5.8 billion (19% of total)
	Investment stock as of 2018	N$ 40.2 billion (12% of total)
Employment Creation	Total Employement	12,087 (1.7% of total employed)
	Formal Employement	10,057 (83% of total employment)
	Informal Employement	2,030 (17% of total employment)
Licensing	Licenses Issued in 2018	1,110 issued (3 minining licenses)
Exploration	Exploration Expenditure 2018	N$573.3 million (spent exploration companies)
Average wage	Mining and Quarrying	N$ 17,963 (N$ 7,935 National average)
Export	Ores and Minerals	N$ 25.8 billion (46% of total export of goods)
	Diamonds	N$ 11.0 billion (43% of Mining exports)
	Metal ores incl uranium ore	N$ 14.0 billion (54% of Mining exports)
	Other minerals	N$ 812 miillion (3% of Mining exports)
Export of Manufactured Goods	Total export of manufactured goods	N$ 25.7 billion (46% of total export of goods)
	Copper & Zinc refined	N$ 5.5 billion (21% of manufactured goods exports)
	Cut and polished diamonds	N$ 5.7 billion (22% of manufactured goods exports)
Government Expenditure	Overall Budget (2019/20)	N$ 229.2 million (0.4% of total budget)

Sources: NSA & MOF and FC Calculations

8.1 Structure of the mining sector

The mining sector is composed of four (4) main subsector as per NSA classification namely: Diamond mining, Uranium, Metal ores (major ones are Gold, Copper and Zinc) and Other mining and quarrying which mainly is composed of precious & dimension stones, salt, graphite, silica, limestone and mineral exploration activities. The sector is composed of world class natural resources such as diamonds, uranium, copper, gold, lead, tin, lithium, cadmium, zinc, salt and vanadium and many others. Dimension stone is the main focus of the quarrying industry in Namibia. Quarries are situated between Swakopmund and Karibib, wherein the majority of resources extracted are marble and granite. There are three main cutting and polishing plants in the country, the largest of which, the Namibian Stone Processing plant in the Omaruru area. Figure 97 below shows the structure within the mining and quarrying sector, as per the NSA classification. This shows that the major contributor to GDP within the mining sector is the diamond subsector.

Figure 97: Mining Sector Structure

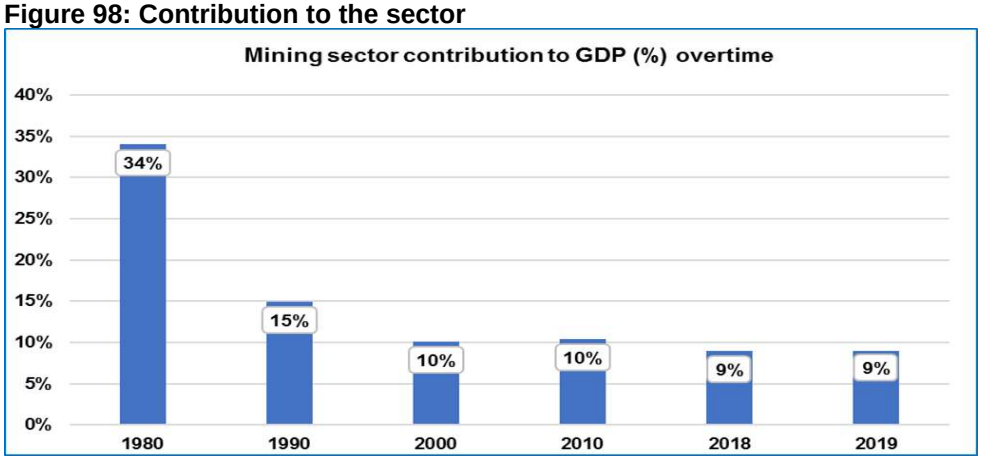


Source: NSA

8.1.1 Mining Sector Contribution to Gross Domestic Product (GDP)

Mining has played a critical role in shaping the politics and economic landscape of Namibia. In 1980, mining sector contributed 34% to the country's GDP but due to economic sanctions imposed on the country, the sector's contribution to GDP dropped to 15% in 1990 and falling again further to 10% by 2010. In 2018 mining's output size was estimated at N$16.6 billion, accounting for 9.3 percent of Namibia's GDP (figure 98) below. The sector remains crucial to the economic development of Namibia not only its contribution to GDP but also in terms infrastructure such roads, schools, hospitals, electricity and water supply. Figure 104 below, shows the contribution of the mining sector to GDP over the years in percentage. Albeit the figure depiction, of a decline in contribution to GDP from 1980 to 2018, it still remains one of the core contributors to GDP.

Figure 98: Contribution to the sector

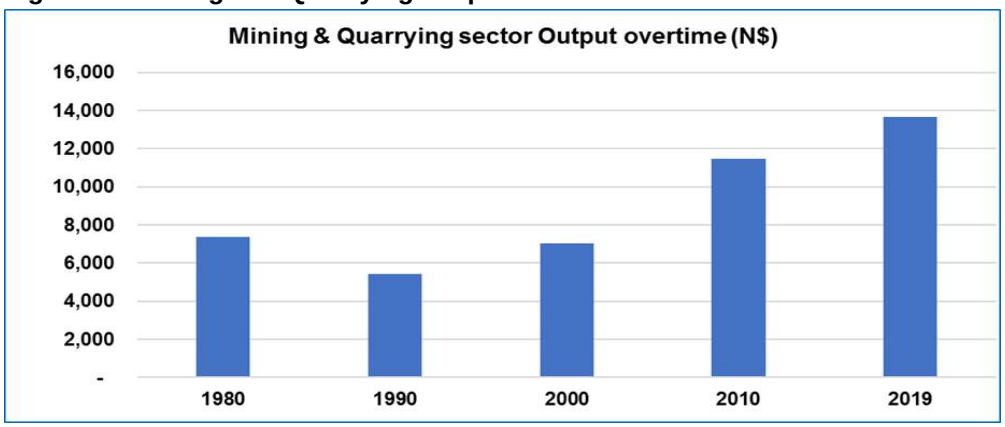


Sources: NSA

8.1.2 Mining Sector Output

Figure 99 below clearly shows the evolution of the mining and quarrying sector overtime. Overall, the total output of the mining sector rose from N$ 7.6 billion in1980 to more than N$ 13.0 billion in 2019. The mining and quarrying sector recorded a substantial growth between 1980 to 2018 of N$ 6.5 billion. The high output growth of the mining and quarrying sector recorded between 2000 and 2018 can be attributed by an increase in the number of new mining companies established throughout the country.

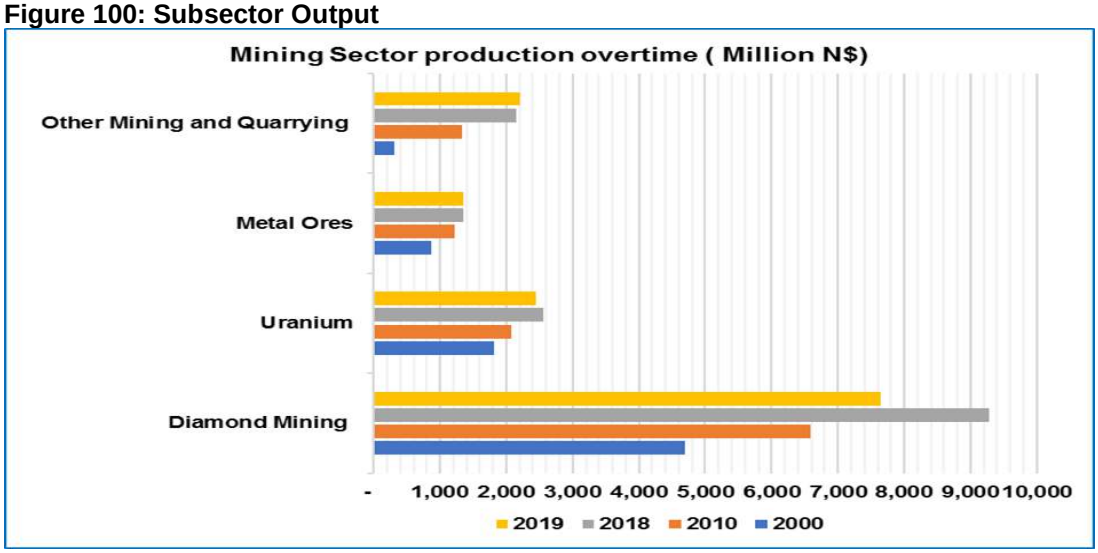
Figure 99: Mining and Quarrying Output



Sources: NSA

In figure 100 below, we can clearly see increase in production in each subsector over the year. Diamond mining remains the most dominant mining activity accounting for 55 percent of total mining output. Namibia produces approximately 2% of the world's gem quality diamonds. Second to diamond mining is Uranium mining which accounts for 5 percent of total mining output. The country remains one of the top uranium producers on the continent (second largest producer after Niger). While diamond output stood at N$3.4 billion in 2000, by 2018, the sector's output tripled to N$9.2 billion. Namibia is a second largest producer of uranium, and it's the second most contributing subsector to mining & quarrying sector (figure 100). Other mining and quarrying subsector grew strongly in 2018 by 13.4 percent. The metal ores subsector albeit the low contribution to the mining and quarrying, has increased production due to increase in number of mines that has been established such as the Dundee copper mine and B2Gold mine.

Figure 100: Subsector Output

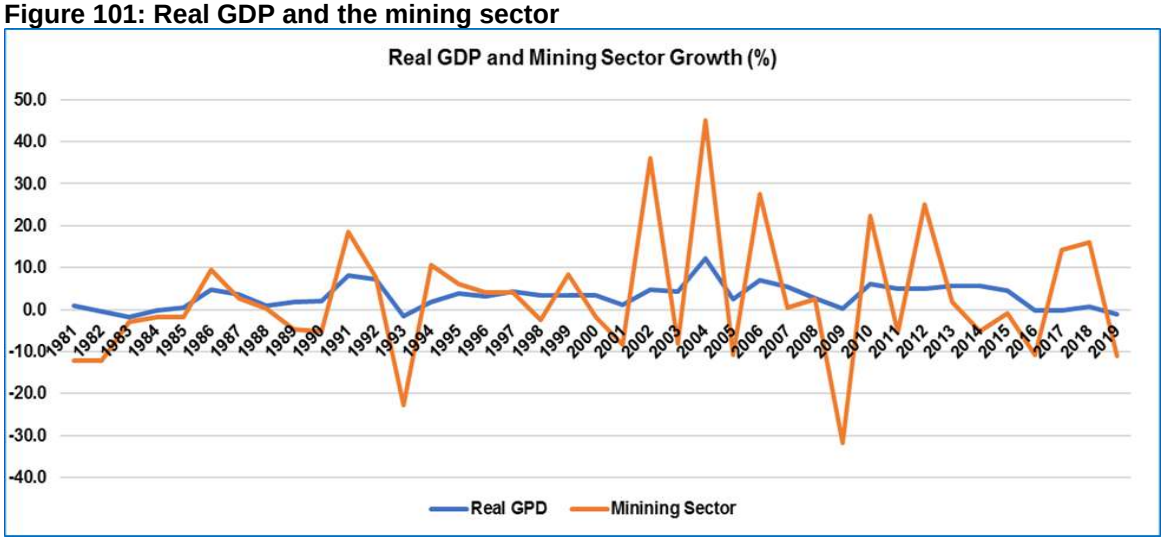


Sources: NSA

8.1.3 Mining Sector Output Volatility

Mining and quarrying sector is estimated to have recorded a growth of 16.0 percent in real value added during 2018, compared to 14.2 percent recorded in 2017. The performance in the sector is attributed to Diamond, Uranium and Other mining & quarrying subsectors that recorded strong and positive growths of 15.1 percent, 33.4 percent and 13.4 percent respectively. Overall, the growth of the mining and quarrying sector has been very volatile with a high standard deviation coefficient of 10.1 as compared to the growth in GDP which has been somewhat stable with a standard deviation coefficient of 6 over the years since 1981. The correlation coefficient of 0.6 has indicated that there is a strong positive correlation between the growth in mining & quarrying sector and overall GDP. This implies that for every increase in the mining & quarrying sector, the economy grows by 0.6. The mining & quarrying sector recorded contractions in 1993/94, 2009/2010 and slightly in 2014/15 period. In 2009/2010, the sector passed through a deep contraction above 30 percent which was attributed by the global financial that occurred in 2008.

Figure 101: Real GDP and the mining sector



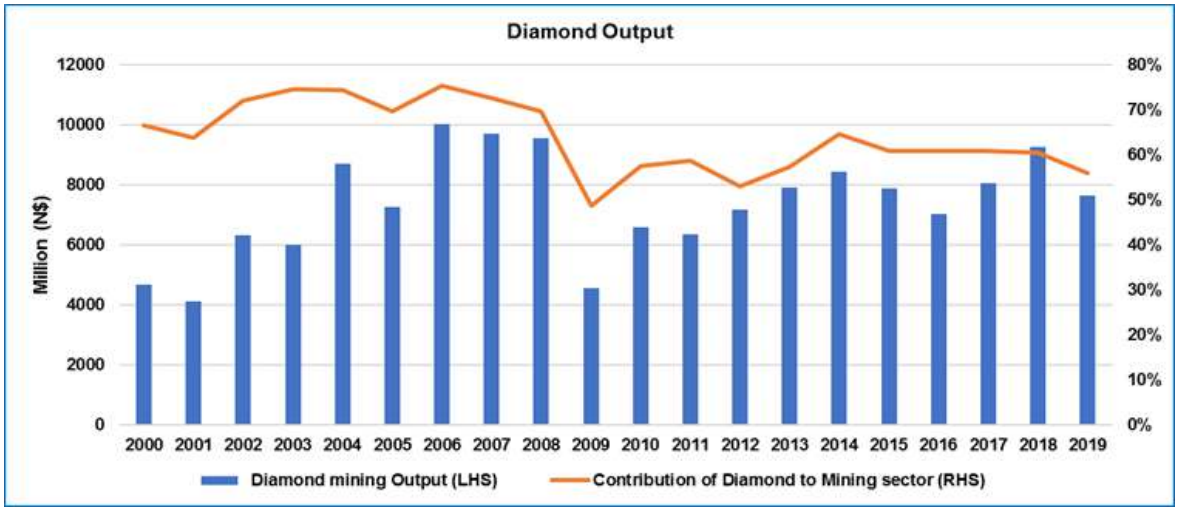
Sources: NSA

8.2 Mining Subsector Output Analysis

8.2.1 Diamond Mining

Namibia is amongst the world's top 10 diamond producers, with the Diamond Act of 1999 regulating the handling, transportation and refining of diamonds. The world's number one diamond producer, De Beers, entered in partnership with the Namibian government through Namdeb Holdings, which is producing some of the finest gem diamonds from land-based and offshore operation. According to figure 102 below, the diamond production has expanded since 2000 with an output value N$3.2 billion and by 2006, the value of diamond produced had reached N$7.1 billion. However, the global financial crisis dampened demand with value of diamond produced falling to N$3.2 billion in 2009 before rising N$9.0 billion in 2018. In terms of its contribution to the mining sector, diamond contributed around 70 percent in 2003, 2004 and 2006. The lowest contribution of diamond to the sector as illustrated in the graph was 49 percent in 2009. Overall diamond mining subsector has contributed significantly towards the growth of the economy.

Figure 102: Diamond output

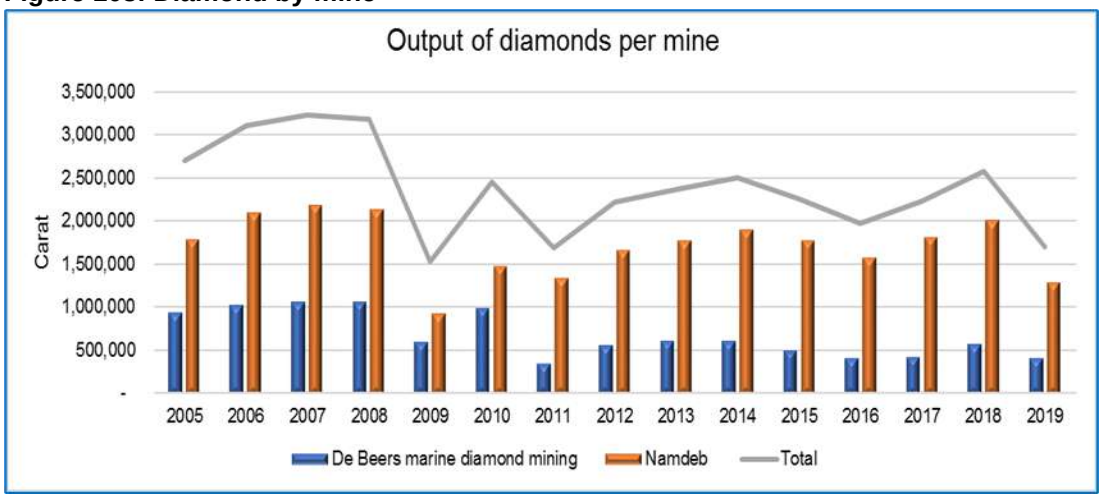


Source: NSA

8.2.1.1 Diamond output per mine

Namdeb dominated the production of diamond over the years. The highest production of diamonds at Namdeb was in 2006, 2007 and 2008 with 2.2, 2.4 and 2.3 million carats meanwhile lowest production was in 2009 with 990,000 carats. On the other hand, the offshore production of diamond was highest in 2006, 2007 and 2008 with 1, 1.1 and 1.2 million carats, though dropping significantly in 2009 but lowest in 2011 with a production of 300,000 carats (*figure 103).* In comparison, Namdeb overall produces more carats than De Beers.

Figure 103: Diamond by mine

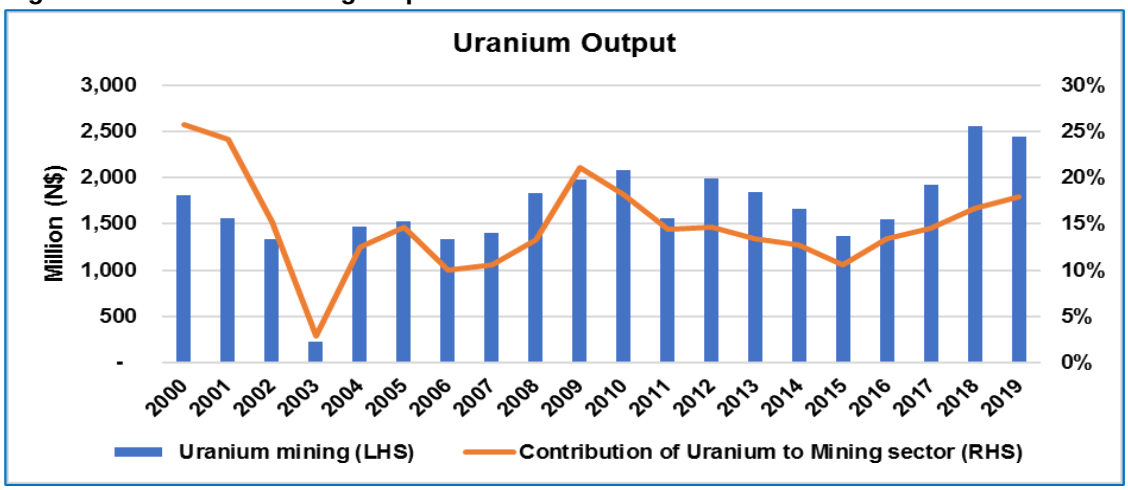


Sources: Chamber of Mines and Energy

8.2.2 Uranium

Uranium mining in Namibia started in the late 1970s, with Rossing Uranium dominating for over 30 years, the second uranium mine started operating at the beginning of 2007. In recent years however, the Ministry of Mines and Energy issued more than 40 Exclusive Prospecting Licences (EPLs) for exploration and prospective licences to (potential) investors. Three major uranium producing mines are the Rossing mine which started operation in 1976, the Langer Heinrich Uranium mine which started its operation in 2007 and finally the Husab mine which was recently established and started in 2016. According to figure 104, the production output of Uranium was lowest in 2003 with a value of N$ 300 million and high in 2018 with a value if N$ 2.6 billion. The contribution of uranium as a subsector of mining and quarrying sector was high in 2000 at 30 percent and lowest in 2003.

Figure 104: Uranium mining output

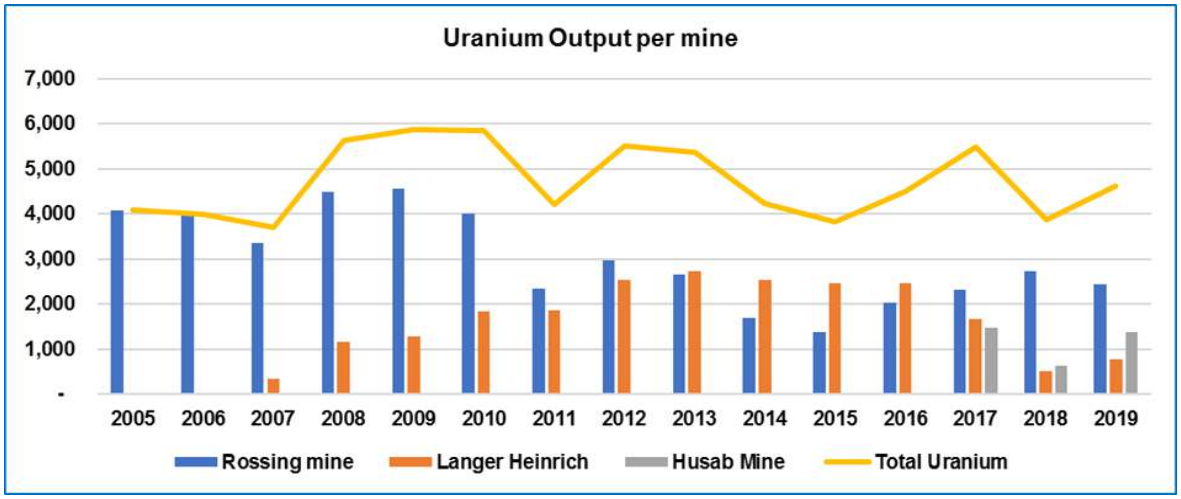


Source: NSA

8.2.2.1 Uranium output per mine

Namibia has two significant uranium mines, which together makes up an estimate of 5 percent of the world's uranium oxide mining output. In 2015, Rössing Uranium alone produced 1,245 tons of uranium oxide, producing 2 percent of the world's uranium. The Langer Heinrich Uranium and the Husab mine also made a significant contribution in terms of uranium oxide production. The highest production of uranium in Namibia is by the Rossing mine, which also had high production in 2008 and 2009 with 4,500 and 4,600 tonnes respectively. The Rossing mine had a low production of 1,400 tonnes in 2015. The Langer Heinrich Uranium is second highest in the production of uranium in the country and its highest production was in 2013 with 2,700 tonnes and lowest in 2007 with a production of 300 tonnes.

Figure 105: Uranium output by mine

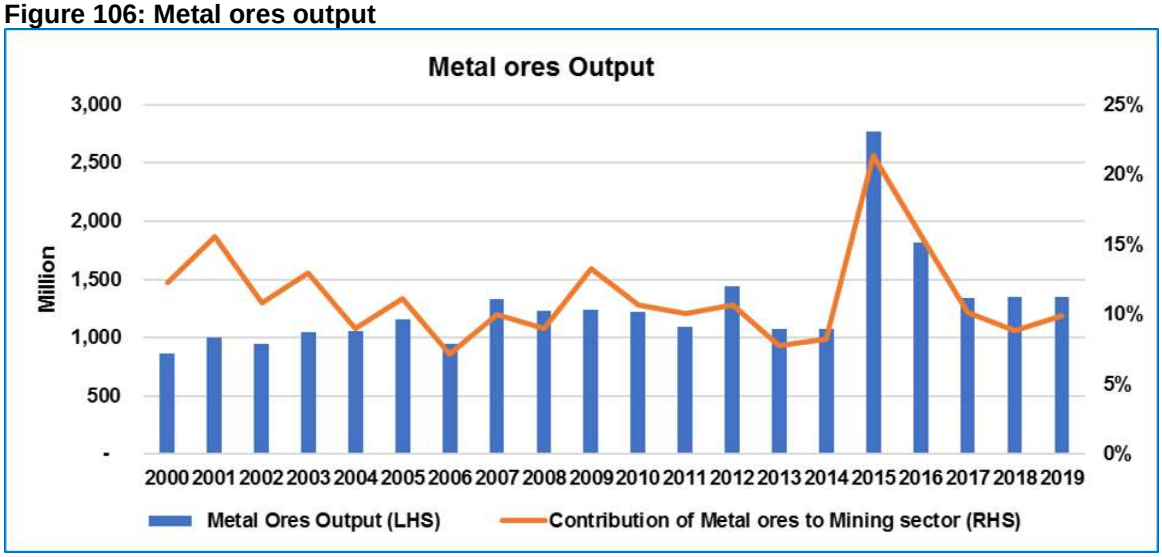


Sources: NSA

8.2.3 Metal Ores

Though uranium and diamonds continue to play a major role in the mining sector significant deposits of base metals or interchangeably metal ores have helped Namibia rank among the top five mining countries in Africa, both in terms of production and reserves. Metal subsector is composed of various commodities such as copper, zinc, gold, cobalt-nickel, iron, lead, manganese and many others. Figure 106, shows that the production of metal ores has been seen somewhat stable until a drastic sudden increase in 2015.The production of metal ores were highest in 2015 and lowest in 2006 with output worth N$ 2.7 billion and N$ 800 million respectively.

Figure 106: Metal ores output

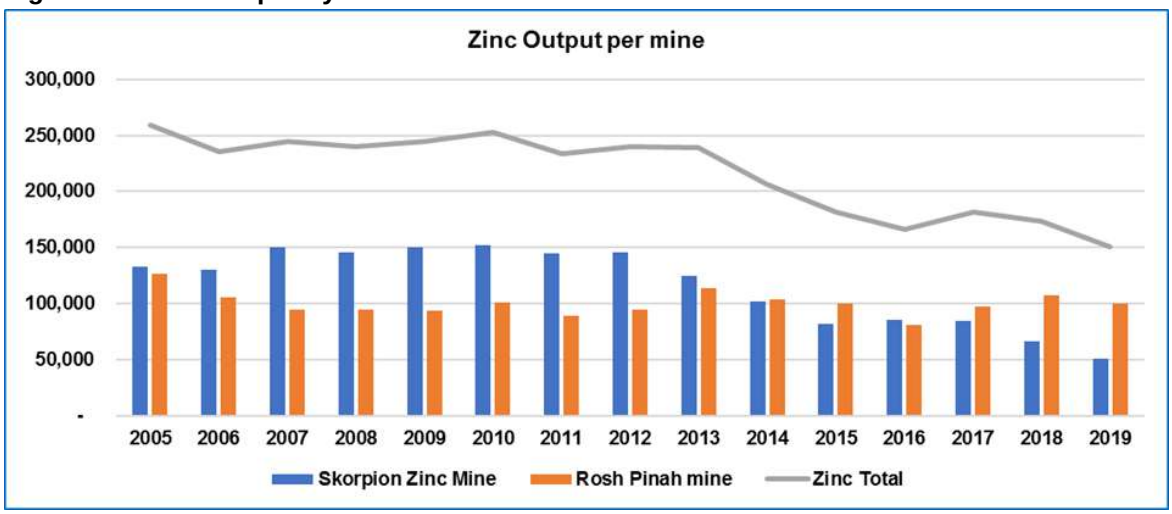


Sources: NSA

8.2.3.1 Zinc Output Per Mine

Both the Skorpion Zinc and Rosh Pinah mine are the largest producers of zinc in Namibia. Skorpion Zinc Mine started its production in 2004. Both lead zinc concentrate are sold to the international market. Skorpion Zinc Mine has the highest production of zinc in comparison to Rosh Pinah. The highest production of zinc was recored in 2007,2009 and 2010 all with 150,000 tonnes of zinc and low in 2018 at 55,000 tonnes of zinc at the Skorpion Zinc Mine. On the other hand, production of zinc at Rosh Pinah mine was high in 2005 at 160,000 tonnes and lowest in both 2007 and 2008 with 180,000 of zinc produced (*figure 107*).

Figure 107: Zinc output by mine

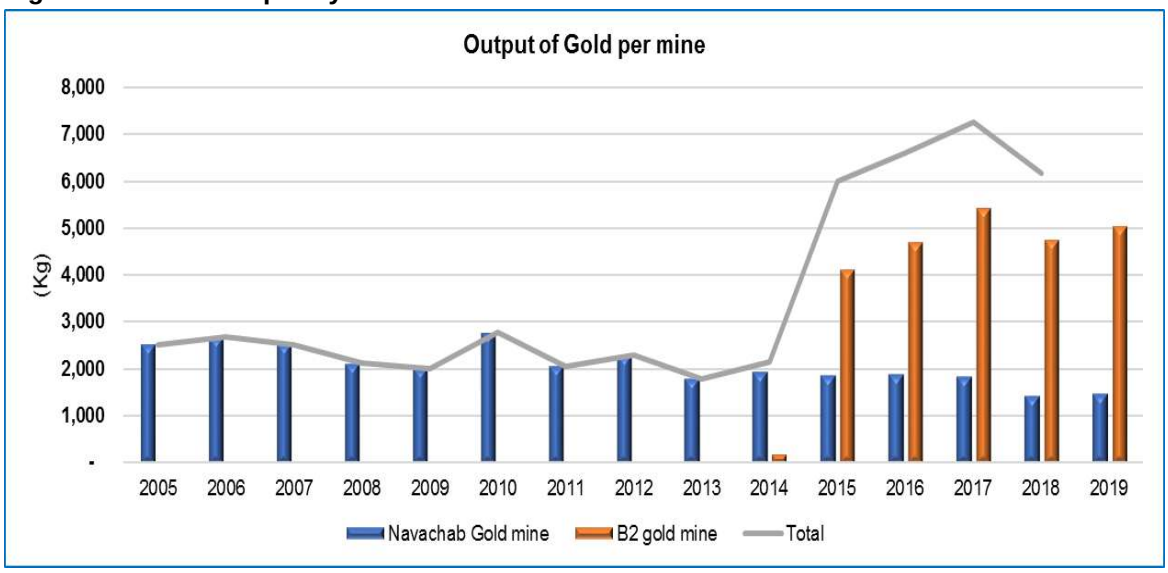


Sources: Chamber of Mines and energy

8.2.3.2 Gold output per mine

Biggest gold producers are the Navachab Gold mine and Otjikoto gold mine. The Navachab Mine was discovered on farm Navachab, 6 km south of the main Okahandja-Swakopmund road, its construction work and operation began in 1988. Namibia's second gold mine, the B2Gold mine, lies between Otavi and Otjiwarongo. The mine came into production in 2014. The highest production of gold at Navachab was in 2010 with a production 2,800 kg of gold, and lowest was recorded in 2013 with 1,800kg of gold according to figure 117. Though Otjkoto gold mine existed in a short period of time it had of 5,400 kg of gold in 2017 (figure 108). the highest output of gold produced in Namibia, with an ultimate of high of 5,600 kg of gold produced.

Figure 108: Gold output by mine

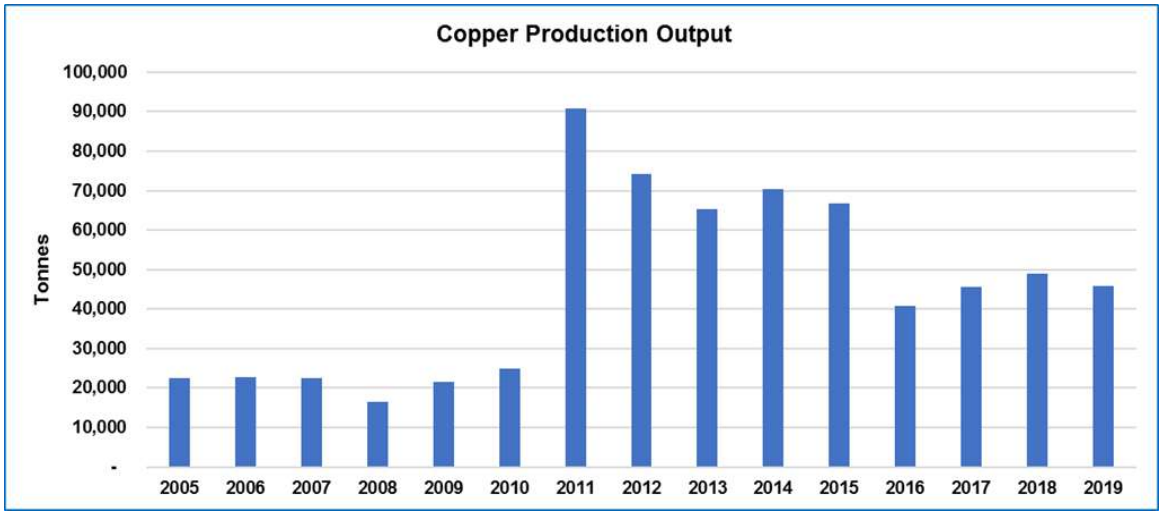


Sources: Chamber of Mines and Energy

8.2.3.3 Copper output (Dundee Precious Mine)

Dundee Precious Metals located in Tsumeb approximately 430 km from Windhoek, produces blister copper from imported copper concentrates and its production started in 1963. It is Namibia's only copper producer currently. Figure 109 shows production of copper at Dundee precious metals mine, from start the production copper was low but rapidly increased in 2011. The production of copper was recorded highest in 2011 with 90,000 tonnes of copper blister produced, and lowest in 2008 with 17,000 tonnes of blisters produced.

Figure 109: Copper output

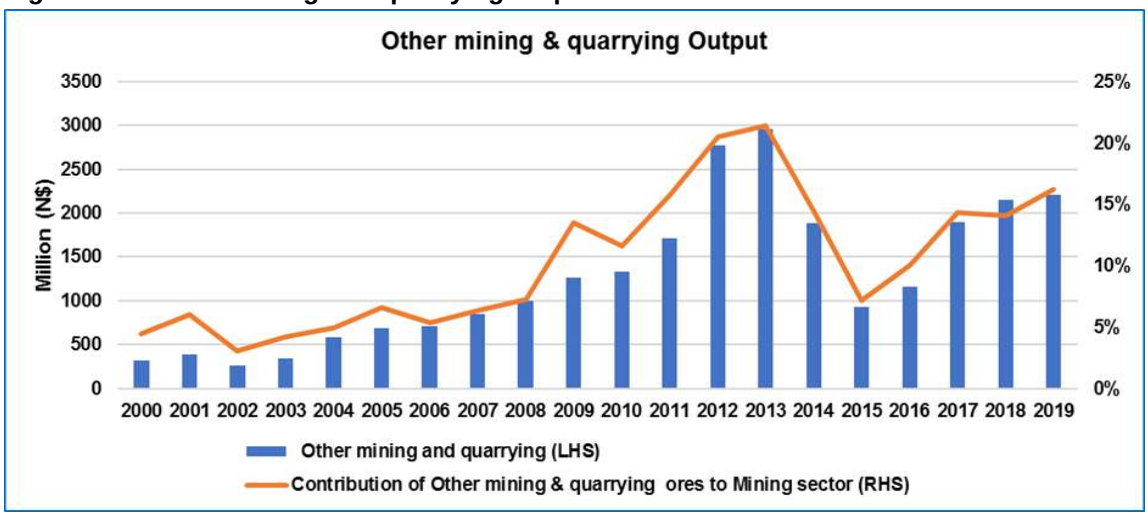


Sources: Chamber of Mines and Energy

8.2.3.4 Other Mining and Quarrying Output

Other mining subsector is mainly a representative of dimension & precious stones and mineral quarrying activities. Other mining and quarrying subsector registered a strong growth of 13.4 percent compared to a strong growth of 63.7 percent registered in 2017. The performance of the subsector is attributed to increase activities in mineral exploration and the production of marble & salt during the period of 2018. The subsector began its increase in production form 2008/09, and it recorded a high output in 2013 of N$ 3 billion and lowest production worth N$ 200 million in 2001. In terms of contribution to the mining sector, Other mining and quarrying subsector made its highest contribution to the sector in 2013 with a 20 percent contribution.

Figure 110: Other mining and quarrying output

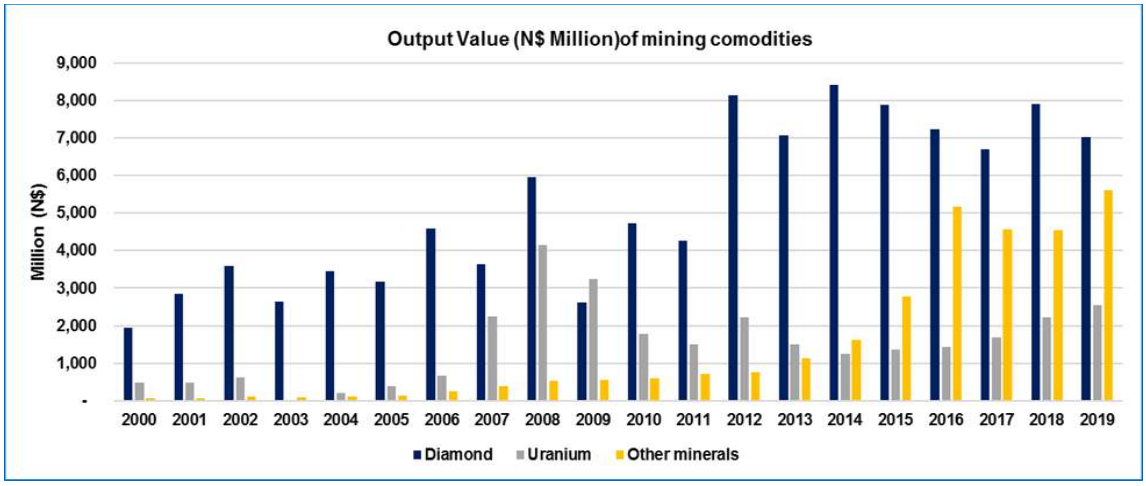


Sources: NSA

8.4.3.5 Comparison of Mining commodities Output overtime

Overtime the value of diamond compared to uranium and other minerals such as lead, iron, gold, zinc, and others have been extensively high. In 2014 the value of diamond recorded the highest at N$ 8.4 billion, with uranium and other minerals standing at N$ 1.7 and N$ 1.2 billion, respectively. In 2019 the value of diamond, uranium and other minerals were recorded N$ 7, N$ 5.8 and N$ 2.7 billion.

Figure 111: Commodities Output Overtime



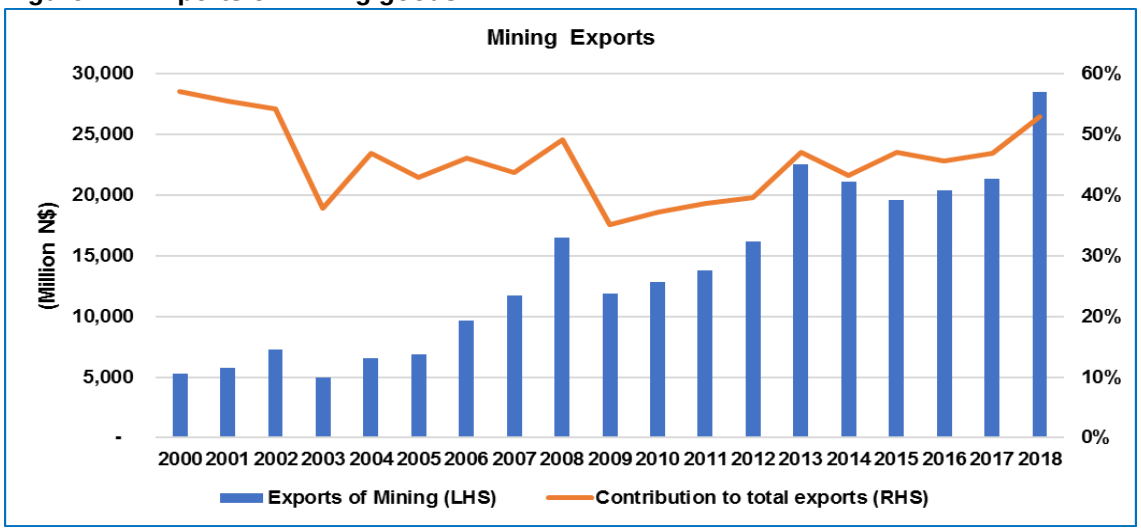
Sources: Chambers of Mines and Energy

8.4 Mining Sector Contribution to Trade (Exports and Imports)

8.4.1 Mining Exports

Figure 112 below shows overall mining & quarrying sector exports as well as the composition to total exports. Mining & quarrying goods takes up an average of 46 percent of total exports. Export of mining & quarrying has seemingly been increasing significantly over the years as shown below. In monetary value, the industry export was valued at more than N$ 28 billion in 2018. Overall, Namibia remains a net exporter of mining & quarrying goods.

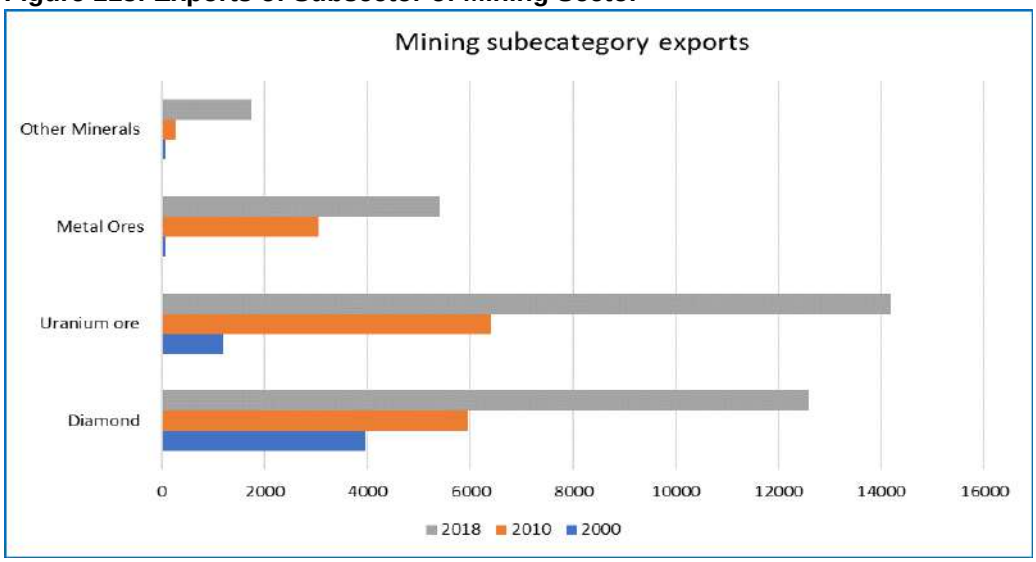
Figure 112 Exports of mining goods



Sources: NSA

Figure 113 indicates the composition of mining & quarrying exports between 2000 and 2018. It is evident that in the mining & quarrying export basket, diamond products take up the largest share which is justifiable because its Namibia's biggest mining & quarrying subsector, and Namibia is part of top 10 in the world for diamond production. The second most composition of mining exports are from the uranium subsector; Namibia produces 2 percent of the worlds uranium and have one of the biggest uranium mine, the Rossing mine. Other subsector such as metal ores and other mining and quarrying remain significant towards contribution to the country's GDP. In 2018 the composition of uranium exports was the most, followed by diamond mining, metal ores and other minerals under mining and quarrying subsector with a monetary value of N$ 14, N$12.3, N$ 5.6 and N$1.8 billion respectively.

Figure 113: Exports of Subsector of Mining Sector

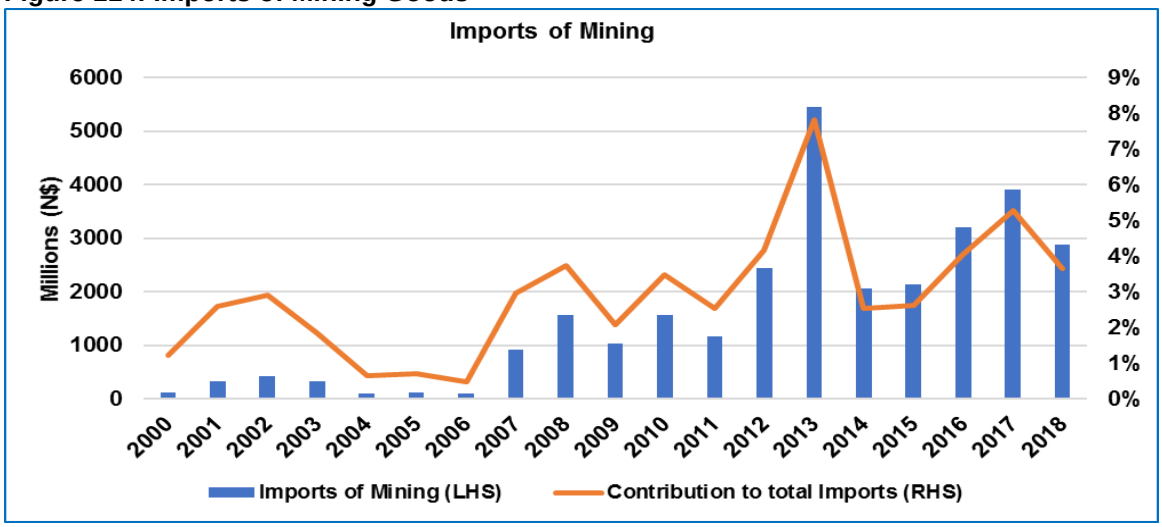


Sources: NSA

8.4.2 Mining Imports

Figure 114 below shows overall imports of mining and quarrying goods from 2000 to 2018. Overall, an average of 3 percent of imported goods are from the mining and quarrying goods sector. This evident in that Namibia is a net exporter of mining and quarrying goods, we export more than we import this good especially, diamonds, uranium, zinc and gold. In monetary value, the import industry for this sector was valued at more than N$ 1.9 billion in 2018, which a decrease from 2017 which stood at a value of N$ 3.9 billion. There is a notable trend over the years that as the exports of mining and quarrying goods are increasing, the imports are decreasing.

Figure 114: Imports of Mining Goods



Sources: NSA

8.5 Mining Sector Contribution to Employment

The mining industry is a significant employer, but as it must remain internationally competitive, so it is becoming more advanced and automated each year. It's part of the top 10 most employing industry in the country. According to Table 43, the share of employment of the mining and quarrying sector was the highest and decreased to 2 percent since 1997 to recent. The decrease in the share of employment in the sector does not mean a slow growth in the sector, this can be attributed to high advance technology systems operations in the sector and also the expanding of other economic sectors. The decrease in the number of employed persons is noticed, nevertheless the structure of the sector did not change much.

Table 40: share of employment in the mining sector

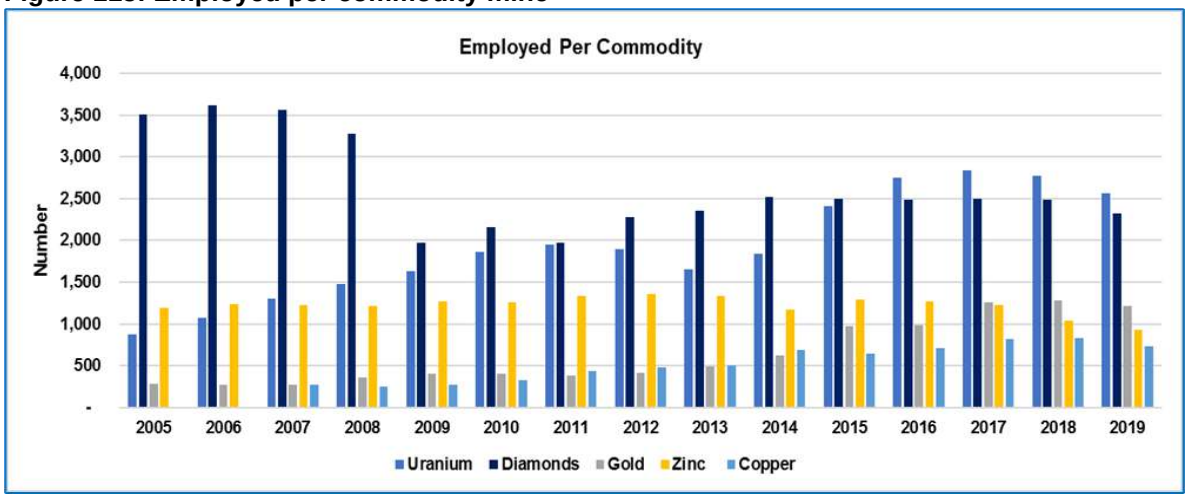
	1991	1997	2004	2018
Total Employment	137,000	401,410	385,329	725,742
Mining Sector	12,265	7,960	7,563	12,087
Share	9.0%	2.0%	2.0%	1.7%

Sources: NSA, Chamber of Mines & Energy and FC Research

8.5.1 Employment by commodity

Figure 115 below shows that the diamond industry overall has the highest number of employed followed by the uranium, zinc, gold and copper respectively over the years. In 2018 Uranium industry or subsector employed the most followed by uranium, gold, zinc and copper with 2,600, 2,400, 1,400, 1,100 and 200 number of employed respectively.

Figure 115: Employed per commodity mine



Sources: Chamber of Mines and Energy

8.6 Mining Sector Share of Fixed Capital Formation (Investment)

Investment in the mining and quarrying sector has been growing substantially in monetary value. As per Table 44, below, the share of investment in manufacturing was 22 percent of total investment in 1991 and dropped slightly to 16 percent in 2018. The growth in total investment is also notable. This indicates efforts put in to sustain the industry as its one of the most important sectors, serving as a determinant factor in the economic growth of Namibian as a whole.

Table 41: Investments

	1991	1997	2004	2018
Total Investments (Million (N$))	998	2,866	7,922	30,881
Mining and Quarrying Investments (Million (N$))	217	381	1,738	4,798
Mininin and Quarrying sector share (%)	22%	13%	22%	16%

Source: BoN, NSA and FC Research

8.7 Mining Sector Productivity

Data from Table 45 below, shows the growth of this sector in terms of output, employment as well as investment. However, the labour productivity of the mining and quarrying sector has been significantly increasing in 2018 reaching N$ 1.024 million per employed person. Growth in labour productivity, is a result of growth in sectoral output overall. Employment figures have shown a slight decrease 1991 between 2004 and increase between 2004 to 2018, which can explain the growing of productivity given that the output of the sector increasing alongside employment in the sector. On the other hand, major improvements can be noticed in the investment per employed person which grew significantly from a 2 percent in 1991 to a 40 percent in 2018.

Table 42: Productivity

	1991	1997	2004	2018
Manufacturing Output (N$ Million)	4,816	5,090	8,774	12,383
Number of employed persons	12,265	7,960	7,563	12,087
Labour of productivity (N$Thousand)	393	639	1,160	1,024
Manufacturing Investment (N$ million)	217	381	1,738	4,798
Investment per employed person (N$ thousand)	2	5	23	40

Source: BoN, NSA and FC Research

CHAPTER 9 SECTORAL LINKAGES AND SOURCES OF GDP GROWTH

In Chapter Two we discussed and presented the performance and structure of the Namibian economy and based on the data from 1990 to 2020, it appears that the structure of Namibian economy remains unchanged. It also appears that GPD growth and changes is heavily dependent on the primary sector (mining, fishing and agriculture) and to a certain extent on tertiary sector (government and construction). A glance at the data also shows that there has been very weak link between different sectors of the economy for example one would have expected that in periods of high mining growth, others sectors of the economy will respond positively to reinforce strong and sustainable GDP growth. To avoid speculation and help policy makers base their decisions on strong evidence, in this chapter we perform some statistical analysis and quantify data to establish and test relationships and links between sectors and GDP and among sectors themselves, for example, how does manufacturing respond to high or low output (growth) of the agricultural or mining sector. We also seek to find answers to a question of which sectors are the key drivers to the Namibian economy (key drivers of GDP growth) and how closely linked are these sectors to each other?. We want to establish how the growth of one sector influences or well explains the growth in the other sector. We believe that a proper understanding of sectoral linkages is key and necessary for designing appropriate policies and long-run strategies to achieve a higher and sustainable GDP growth.

To accomplish this task, we made use of SPSS to perform some simple linear regression analysis to test the correlation and strength of the assumed relationship. We firstly regress all the economic variables or sectors on GDP of the Namibian economy. Later on we regress various sectors on other sectors to estimate the strength of the sectoral linkages of the Namibian economy. The regression analysis tests to examine the growth linkages between key sectors namely agriculture, service, manufacturing, mining, manufacturing and service sectors was applied. The data source was both the old data set of National Planning Commission (NPC) and the Namibia Statistics Agency (NSA)'s National Accounts data for 1980 to 2018 before the rebasing of national accounts data using the 2015 prices. The researchers further estimated the simple OLS regression equations to find the long-run linkages between sectoral growths. Using the regression analysis Test, we present the interdependence of sectors. This test seeks to present the coefficients or outputs that estimate the impact of changes on the independent variables on the dependent variable meaning that how well does one sector explains the growth in another sector. This analysis will produce an equation that will predict a dependent variable using one or more independent variables. This equation has the form: $Y = A + b1X1 + b2X2$ where Y is the dependent variable you are trying to predict, $X1$, $X2$ and so on are the independent variables you are using to predict it, $b1$, $b2$ and so on are the coefficients or multipliers that describe the size of the effect the independent variables are having on your dependent variable Y, and A is the value Y is predicted to have when all the independent variables are equal to zero.

The focus is on the five sectors of the economy namely Agriculture, Fishing, Mining, Manufacturing and the Service Sector (we divided the service sector into two: Service sector 1 and Service sector 2). Service sector 1 includes sub-sectors such as hotels & restaurants; wholesale & retail trade, repairs; as well as the transport & communication sector. On the other hand, the Service sector 2 includes sub-sectors such as financial intermediation, Real estate & business services as well as the Community, social & personal services sector.

9.1 GDP growth & Volatility analysis

An outstanding feature of Namibia's recent economic performance over the past thirty years is the volatility of its GDP growth. The country's economic growth has exhibited higher volatility and has made economic policy making and response quiet challenging. The sources of this volatility have been exogenous, mainly to a large extent through the trade channel or global commodity prices and domestic factors such as drought. As a very small open economy, a fall in demand of Namibia's exports, is quickly transmitted to almost all sectors of the economy. Despite the volatility in GDP growth, Namibia has since 1990 maintained macroeconomic stability underpinned by low inflation, low interest rates and debt to GDP that averaged at 30% over the past thirty years, although debt to GDP has risen to 50% of GDP by the end of 2019. Table 46 below shows the contribution of each sector to the economy and the level of volatility or standard deviation (S.D). The highest standard deviation (volatility) in the economy is observed in sectors such as agriculture, mining, fishing and construction. The construction sector which was the most volatile throughout the period registered an average standard deviation of 21.1 over the past thirty years. This implies that the construction sector's GDP growth is highly uncertain compared to other sectors. The fishing sector was very volatile between 1980 to 2009 with standard deviation of 20.6, 22.4 and 15.1 for the 10-years ending 1989, 1999 and 2009 respectively. Overall, the fishing sector recorded the second highest standard deviation of 18.5 after construction sector. Over the years, the financial services and hospitality, wholesale & retail trade sectors were the least volatile with standard deviations of 3.5 and 5.2 respectively.

Table 43: GDP growth rates

INDUSTRY	ECONOMIC SECTOR	1990-1999			2000-2009			2010-2018			1990-2018		
		Contribution	Growth	S.D	Contribution	Growth	S.D	Contribution	Growth	S.D	Contribution	Growth	S.D
Primary	Agriculture	**5.5**	2.5	12.5	5.4	1.8	12.7	4.2	1.6	10.4	5.0	**2.0**	**12.0**
	Fishing	**3.4**	17.4	22.4	4.2	2.5	15.1	2.9	0.2	4.7	3.5	**6.9**	**17.8**
	Mining	**9.9**	2.9	10.6	11.7	5.1	22.6	11.9	7.2	12.6	11.2	**5.0**	**16.3**
Secondary	Manufacturing & Utility Services	**11.6**	2.3	10.0	13.5	4.3	4.1	13.2	2.0	3.4	12.8	**2.9**	**6.7**
	Construction	**2.3**	5.2	15.0	3.0	10.7	24.9	3.7	6.2	23.3	3.0	**7.4**	**21.6**
Tertiary	Hospitality, Wholesale & Retail trade	**8.8**	5.0	4.4	12.6	6.2	3.4	13.2	4.6	7.2	11.5	**5.3**	**5.2**
	Transport & Communication	**5.7**	5.5	6.6	4.9	11.6	7.5	4.7	4.0	4.8	5.1	**7.0**	**7.0**
	Financial, Real Estate & Business Services	**11.2**	4.1	3.5	13.2	6.9	3.4	13.9	4.7	2.6	12.8	**5.2**	**3.5**
	Government Services	**30.5**	3.1	7.7	20.8	4.5	8.0	23.1	4.8	3.9	24.8	**4.1**	**6.9**
Overall GDP			3.6	2.6		4.4	3.1		3.8	2.7		**3.9**	**2.9**

Source: National Accounts (CBS) & First capital research

9.2 Correlations between Sectors and the Economy (Key sectors driving GDP growth)

To establish the relationship between the performance or growth rate of various sectors of the economy and the economy-wide GDP growth, the correlation analysis and regression analysis are used to show how the country's economy resembles that of other sectors suggesting the possibility of its impact on the economy. Correlation is a term that refers to the strength of a relationship between two variables where a strong, or high, correlation means that two or more variables have a strong relationship with each other while a weak or low correlation means that the variables are hardly related.

The correlation analysis results in table 47 below shows that the economy wide GDP growth is positively corelated with Mining (0.55), Tradable services (0.48), GRN (0.47), Utilities (0.37) and construction sectors (0.30). Furthermore, no correlation exists between the country's GDP growth with that of the agriculture (-0.06) and manufacturing sectors (- 0.12). A negative correlation is a relationship between two variables that move in opposite directions. This does not mean agriculture and manufacturing sectors are not important in the Namibian economy, but that many times, Namibia's GDP will register high growth driven by sectors such as mining, construction or government expenditure, while at the same time agriculture or manufacturing sector is contracting and moving in the opposite direction. This result has policy implication but is not surprising as observed in many economic cycles of Namibia over the years that the Namibian economy responded positively to expansionary government expenditure and high growth in mining and construction sectors.

Table 44: Correlation output

Sector	*Correlation coefficient*
Agriculture	-0.06
Mining	0.55
Manufacturing	-0.12
Utilities	0.37
Construction	0.30
Tradable services	0.48
GRN	0.47

Source: National Accounts (CBS) & First capital research

9.3 Regression Analysis between Sectors & the Economy (Testing for Relationship Strength)

In this study we use regression analysis to infer causal relationships between the independent (sectors) and dependent variables (GDP). Using regression analysis, we tested to examine the causation and growth linkages between key sectors namely Agriculture, Mining, Manufacturing, Utilities, Construction, tradable services and Government services. The analysis of the main divers of the economy will follow the following model to determine which sector best explains the growth in the real GDP. According to the regression results, tradable service sectors, GRN and mining sector has highest coefficients of 0.42; 0.29 and 0.1 respectively indicating that their multiplier effect to the overall economy GDP leads that of other sectors. The growth of 1 percent in tradable services sectors is associated with 0.42 increase in overall GDP while a unit percentage point increase in GRN services leads to 0.29 percent increase in the country's GDP. On the other hand, the Agriculture and manufacturing sectors displays very low multiplier effects on the country's GDP. The message for policy makers here is that, in periods when the economy is a recession, the best sector to help pull the economy out of a recession are government spending and export sector.

Table 45: Sectoral Regression Analysis

Regression Statistics	
Multiple R	0.969
R Square	0.939
Adjusted R Square	0.918
Standard Error	0.855
Observations	28

	Coefficients	Standard Error	t Stat	P-value
Intercept	-0.37	0.38	-0.98	0.34
Agric	0.03	0.02	1.65	0.11
mining	0.10	0.01	8.83	0.00
Manufacturing	0.06	0.03	2.18	0.04
Utilities	0.05	0.01	4.57	0.00
Construction	0.02	0.01	1.80	0.09
Tradable services	0.42	0.05	7.69	0.00
GRN	0.29	0.03	9.01	0.00

Source: FC Research

9.3.1 Linear Regression on demand side variables of GDP

Regression analysis was done on the relationship between GDP and various variables on expenditure side of the economy. On the demand side, the economy is largely driven by government consumption which is indicative of government spending. All the components of demand such as private consumption, gross fixed capital formation and exports are significant and have a strong impact on the economy, and this means, a negative effect on one of these components have the potential to slow down the economy. Government consumption has the highest impact. Increasing Government spending by a percent will lead to the economy-wide GDP rising by 1.23 percent. Equally other variables namely: private consumption, net investments, Net Exports and changes in inventories have fairly significant multiplier effects on the overall economy GDP ranging from 0.89 to 0.99.

Table 46: Demand side regression analysis

Regression Statistics	
Multiple R	0.998
R Square	0.997
Adjusted R Square	0.996
Standard Error	1556.542
Observations	39

	Coefficients	Standard Error	t Stat	P-value
Intercept	-3812.73	1142.59	-3.34	0.00
Private Consumption	0.93	0.08	11.69	0.00
GRN Consumption	1.23	0.23	5.46	0.00
GFCF	0.99	0.09	10.71	0.00
Changes in inventories	0.92	0.46	2.01	0.05
NX	0.89	0.08	11.58	0.00

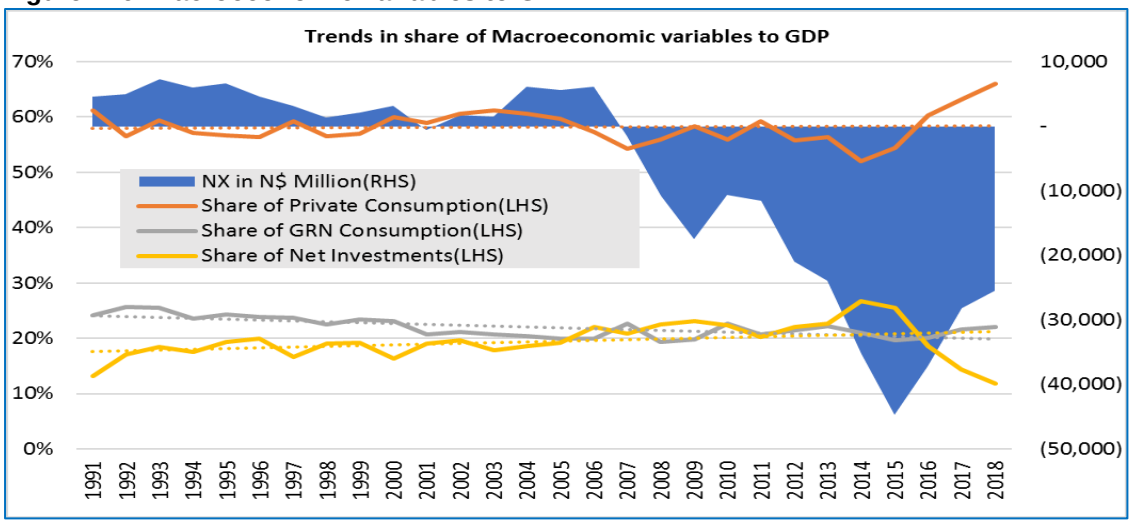
Source: FC Research

9.3.1.1 Share of demand variables to GDP

Over the years the share of both private and government consumption have been marginally declining until in 2015 when the trend of private consumption contribution changed and rose while that of government consumption maintained a declining trend. The trend of the share of Net investments(Gross Capital formation) to GDP has been rising as opposed to the declining trends of both private and government consumption until in 2015 when it declined steeply, the same period the share of consumption went up. From this, it is clear that investments continued to drive economic growth over the years hence this increasing trend of share to

GDP. However, the rising trend of private consumption after a decline in net investments in 2015 could mean the resources meant for investments were channeled for consumption.

Figure 116: Macroeconomic variables to GDP

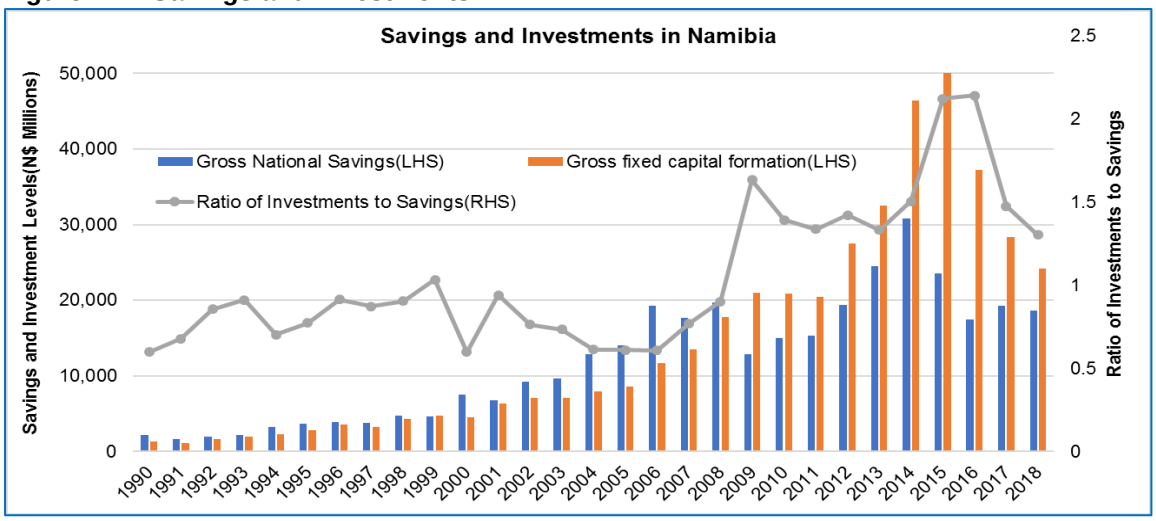


Source: MoF & FC research

9.4 Relationship between Gross national Savings and Investments

Since 1990, Gross National Savings have been higher than Net investments until in 2009 when savings declined by 23 percent and investments thereafter until present remained above the rate of savings despite being stagnant for three consecutive years between 2009 and 2011. After picking in 2014, Gross Saving have maintained to declining trend with that of investments starting to decline since 2015. Overall, the ratio of investments to savings have remained stable with a visibly sharp increase since 2006 indicating that after this period investments increased faster than savings. Since 2016, this ratio has sharply declined indicating that investments are falling even faster than savings.

Figure 117: Savings and investments



Sources: NSA & BoN

9.4.1 Regression & Correlation analysis of Investments and Savings

Regression and correlation analysis were done on the relationship between Gross National savings and Investments. According to the correlation results, the association is strong positive with a coefficient of 0.72. Furthermore, the regression results reveal that Gross Domestic savings have a higher multiplier effect on Investments. For every percentage increase in Gross domestic Savings we will likely see Investments rising by 1.53 percent.

9.4.2 Relationship between Disposable Incomes and Savings

Regression and correlation analysis were done on the relationship between Gross National Disposable Income and Gross National Savings. According to the correlation results, the association is strong positive with a coefficient of 0.723. the regression results indicate that for every N$100 increase in disposable income, savings will increase by N$11, which is the Marginal Propensity to Save. The MPS of 11 percent is also in line with the findings in most countries which ranges from 10 – 14 percent in countries like South Africa, China, Ghana and Kenya.

9.4.3 Relationship between GDP and Government expenditure

Table 50 below shows the correlation analysis between government expenditure categories (Operational and Development expenditure) and the country's GDP to indicate how government spending changes are associated or likely affect the country's GDP growth. The results show that Overall, there is a positive correlation with coefficient of 0.52 percent between total Government Spending and GDP growth, while by spending category, operational Spending maintains a positive correlation with GDP and Development Spending exhibiting a weak correlation with GDP.

Table 47: GDP and Expenditure

	Nominal GDP	Total Gov Expenditure
Nominal GDP	1.00	0.52
Total Gov Expenditure	0.52	1.00
Gov. Operational Budget	0.54	0.94
Gov. Development Budget	0.27	0.70

Source: MoF

9.4.4 Correlation analysis between Namibia GDP Growth and Other Countries

According to table 50 below Namibia's GDP growth cycles compares fairly better with that of Angola (r=0.42) followed by the Global GDP growth (r=0.29) and the USA(r=0.22). However, the domestic economy's correlation with South Africa is weakest with a coefficient correlation= 0.11.

Table 48: Correlation coefficients

CORRELATIONS COEFFICIENTS OF GROWTH(1990-2018)								
	Angola	Botswana	China	Namibia	South Africa	USA	EU	World
Angola	1.00	0.32	-0.03	0.42	0.63	0.03	0.30	0.46
Botswana	0.32	1.00	0.06	0.19	0.49	0.25	0.39	0.58
China	-0.03	0.06	1.00	0.14	0.25	0.10	0.00	0.13
Namibia	0.42	0.19	0.14	1.00	0.11	0.22	0.16	0.29
South Africa	0.63	0.49	0.25	0.11	1.00	0.34	0.53	0.78
USA	0.03	0.25	0.10	0.22	0.34	1.00	0.71	0.51
EU	0.30	0.39	0.00	0.16	0.53	0.71	1.00	0.71
World	0.46	0.58	0.13	0.29	0.78	0.51	0.71	1.00

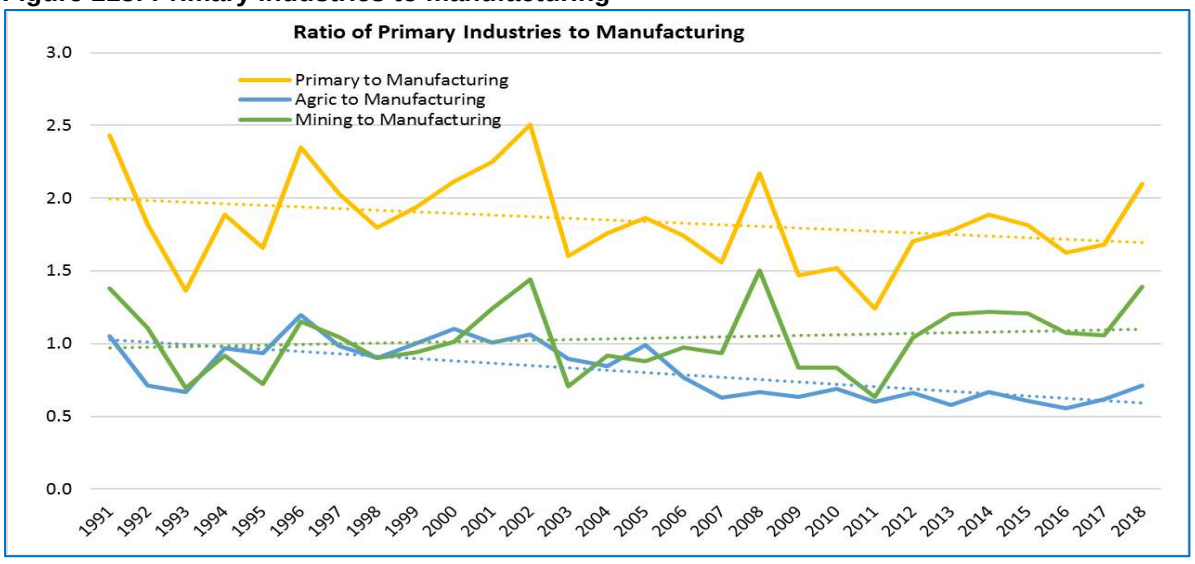
Sources: FC Research & various sources

9.5 Sectoral Linkages

9.5.1 Linkage between Primary industries GDP to Manufacturing GDP

To understand the response or interconnectedness of industries we apply the ratio analysis to show how the growth of one industry responds to the growth of another industry. Figure 118 below shows the ratio of primaries industries GDP to that of manufacturing sector. The ratio of mining sector GDP over time has been stable though precisely showing a slight positive trend over time indicating that growth of these industries have been interconnected meaning that growth in one industry has always responded to the growth of another sector. Supporting this finding is the fact that mineral processing which is part of manufacturing activity accounts for more than a third (36 percent) of the manufacturing GDP which entail its relevance to the growth of the manufacturing sector in relation to mining output. However, the ratio of the agriculture sector GDP to manufacturing GDP has been falling over indicating that the manufacturing industry was expanding faster than that of the agricultural sector representing weak interconnectedness of these industries. Overall, the ratio of the primary sector GDP to manufacturing GDP has been equally falling over time indicating that the manufacturing industry was expanding faster than that of the overall primary sector representing weak interconnectedness of these industries.

Figure 118: Primary industries to manufacturing

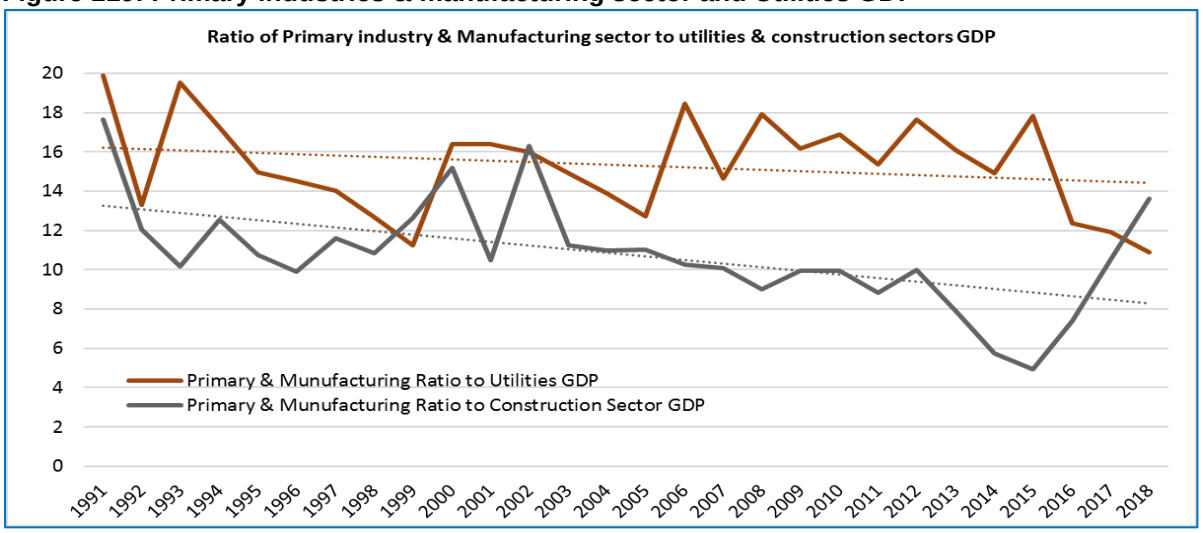


Sources: NSA & FC Research

9.5.2 Linkages between tradable sectors (Primary industries & manufacturing sector) and Utilities GDP

Utilities (water and electricity) provision is critical for economic activities mainly tradable sectors which is comprised of primary sector and the manufacturing sector. Figure 5 below shows the ratio of tradable sectors GDP (primary sector and manufacturing sector) with that of utilities which serve as a conduit to these tradable sectors. The graph shows a negative or declining trend of the ratio of both primary sector and the manufacturing sector GDP to utilities GDP. This means that utilities sector GDP growth has been slower than that of primary sector and manufacturing sector. Furthermore, the graph shows another negative or declining trend of the ratio of both primary sector and the manufacturing sector GDP to construction sector GDP indicating that the construction sector GDP growth has been slower than that of primary sector and manufacturing sector.

Figure 119: Primary industries & manufacturing sector and Utilities GDP

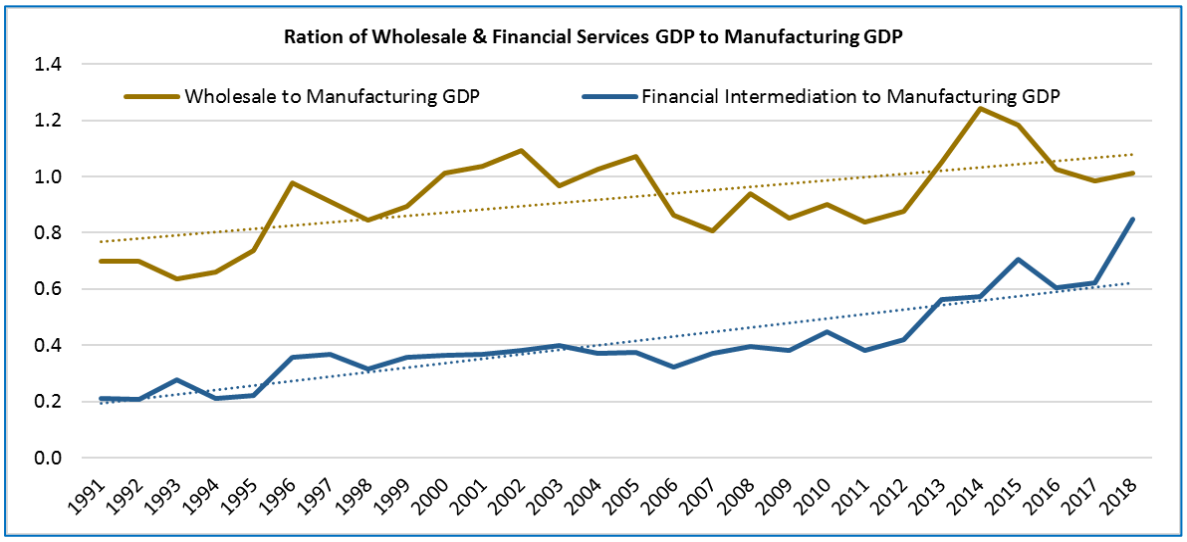


Sources: NSA & FC Research

9.5.3 Linkages between Wholesale and Financial Intermediation sector GDP to manufacturing sector GDP

Wholesale and financial intermediation services are useful for manufacturing sector economic activities as manufacturing business require funding for both start up and expansion while wholesale services provides a market for manufacturing products to find buyers or consumers. According to Figure 120 below the ratio of both the wholesale and financial intermediation sectors GDP shows a negative or declining trend indicating that these sectors (Wholesale and Financial intermediation) GDP growth have been slower than that of primary sector and manufacturing sector.

Figure 120: Wholesale and Financial Intermediation sector GDP to manufacturing sector GDP



Sources: NSA & FC Research

9.6 Employment Intensity of Economic Growth in Namibia

This section presents a summary of employment elasticities of growth for whole the economy and for various sectors. The employment elasticities represent the responsiveness of employment to the GDP growth. A negative elasticity implies that GDP growth sheds jobs whereas jobs are created due to GDP growth in the case of a positive elasticity. The higher the elasticity number the higher the multiplier effect. According to table 52 below, fishing sector has the highest elasticity implying that its growth is highly responsive in creating employment. The construction and Utilities sector and wholesale, retail and tourism sector has second and third highest employment elasticities of 1.82 and 1.79 respectively. Manufacturing sector has a growth employment elasticity of 0.73. However, Finance & Real estate sector has an inelastic growth employment elasticity.

Table 49: Employment elasticity

Employment Elasticity of Growth(1997-2018)	
Sector	**Elasticity**
Agriculture & Forestry	0.08
Fishing	3.80
Mining	0.58
Manufacturing	0.73
Construction and Utility (Elec&Water)	1.79
Wholesale, Retail and Tourism	1.82
Transport and Communication	0.45
Grn service (Public admin, health and education)	0.96
Finance and Real estate	-0.22
Other	-0.24
Total Economy	**0.24**

Source: FC Research

CHAPTER 10: RECOMMENDATIONS AND FINDINGS

The disappointing results of the economic and social reform agenda of the 1990s and 2000s and the recent poor performance of the Namibian economy (2016 to 2019), with the economy entering the longest recession since indepedence has raised many questions about the future of the Namibian economy. Economic growth over the past 30 years has been below the rate of more than 5% desired by government and more than fourty percent of the youth are unemployed while the national unememployt remained above 33% since independence. To compound the problem, the economy's capacity to generate tax revenue is challenged due slowing consumer buying power and loss of growth momentum by sectors such as mining, tourism, manufacturing and service sectors. Leaders in government and the pouplation at large are seeking to identify the specific policy interventions that are needed to move the Namibian economy to a higher and sustained growth trajectory. In search of a solution and as part of our contribution, this paper has carried an investigation on the structural changes that has taken place in the Namibian economy. we present our findings and recommendations below:

1. An outstanding feature of Namibia's economy over the past thirty years is the volatility of its GDP growth. The country's economic growth has exhibited higher volatility and has made economic policy making quiet challenging. The sources of this volatility have been exogenous, mainly to a large extent through the trade channel or global commodity prices and domestic factors such as drought. As a very small open economy, a fall in demand of Namibia's exports, is quickly transmitted to almost all sectors of the economy.

2. Namibia's economic structure remains relatively unchanged since independence despite deliberate policies, programs implemented by government to restructure and transform the economy. The share of primary industry (agriculture, mining and fishing) did not expand but declined from 23% in 1990 to 16% of GDP in 2019, while the secondary sector (manufacturing) registered a small increase from 14% of GDP in 1990 to 17% of GDP in 2019. The tertiary sector remained relatively unchanged registering a small increase from 53% of GDP in 1990 to 59% in 2019.

3. The failure to change the structure of the economy has been identified as one of the major binding constraints to more rapid economic growth and job creation and and calls for targeted policy interventions that could move the economy onto a higher growth and job creation path.

4. The tertiary (service) sector accounts for more than 55% of Namibia's GDP and may seem to be a breakthrough for the economy as manufacturing and services sectors are the two key sectors that can drive economic transformation. However, a deeper look indicates that the largest component of the tertiary/service sector is the non-tradable and non-productive sectors such as government.

5. The past 30 years was characterised by a stagnation of the secondary sector (manufacturing sector) at an average contribution of 11% to GDP. Ever since the Industrial Revolution, rapid economic growth has been associated with the growth and expansion of the manufacturing sector and then followed by growth in services sectors.

6. The high unemployment in Namibia could be attributed to unchanged economic structure (structural factors) than due to insufficient effective demand for goods and services in the economy (cyclical/frictional factors). Given the long duration of unemployment in Namibia and the high share of the unskilled and poorly educated in the pool of unemployed persons, the unemployment phenomenon in Namibia cannot be attributed to frictional or cyclical factors but more to weak economy due to structural factors that inhibits the economy from changing and moving to sectors with high elasticity for job creation. If unemployment is taken to be caused by insufficient effective demand for goods and services, the solution is seen to be an increase in aggregate demand induced by appropriate fiscal and monetary policies, such as an increase in government expenditures or a decrease in interest rates brought about by an expansionary policies. However, over the years, we have see accommodative and expansionary fiscal and monetary policies over a long period without more permanent jobs being created.

7. Gross Fixed Capital Formation (GFCFZ) or Fixed Investment is the fundamental driver of economic growth. Although Namibia received high fixed investment over the past 30 years, the main beneficiary of this investment has been the mining and services sectors. Sectors such as agriculture and manufacturing share of fixed investment inflows were very small and this may explain why these sectors economic structure did not change and recorded poor growth over the years.

8. The agriculture sector production structure remains relatively unchanged with livestock sector share of 57% in 2018 where it was in 1990. Namibia still imports 60% of its food needs by 2018, the same amount it imported in 1990.

9. Namibia's manufacturing sector has remained stagnant at around 10% of GDP over the past thirty years lower than the 20% to GDP targeted by government. In 1980 manufacturing shares of GDP was at 10% and by remains at 10% of GDP by 2018, the same level where it was in 1980. This stagnation is despite being the most favoured sector by government with all manufacturing incentives and favourable policy regime.

10. The service sector receives the biggest allocation of the country's total fixed investment estimated at 65% of total gross fixed capital formation including government fixed investment. Both non-tradable and tradable service sectors have experienced significant capital inflows since 1990 where investment in both sectors increased from N$2 billion in 1990 to more than N$20 billion in 2018.

Recommendation

Namibia has the capacity and the potential to change the structure of the economy. All it will take is design of appropriate policies and programs and a committed and visionary leadership that is prepared to go through a painful adjustment process. We believe agriculture and manufacture sectors holds the key to Namibia's future. According to Vision 2030 and Namibia's National Industrial Policy both manufacturing and services sectors constitute about 80% of the country's gross domestic product (GDP) by 2030. However, we take a different view and recommend that for Namibia to reach the goals of Vision 2030 and transform the economy priority be given to **agriculture and manufacturing**. We recommend that agricultural sector contribution to GDP be increased from the current 7% in 2019 to 15% by 2025 and to 25% by 2030, while manufacturing sector's contribution to GDP must increase to a minimum of 30% of GDP by 2030. Overall, we recommend that agriculture and manufacturing combined contribution to GDP increase to 50% of GDP by 2030, while mining

and fishing contributes 20% of GDP and the tertiary/service sector contributes 30% of GDP with tradable service sector accounting for close to 50% of the total service sector output. This is in line literature on economic development, when a country industrializes and reaches middle to high income status, manufacturing sector should be expanding and increasing its share to GDP to a range of 20% - 30% of GDP, while agriculture should be contracting from a high of 30% to around 15%.

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