



## **A REVIEW OF THE CHANGING COMPOSITION OF THE SOUTH AFRICAN ECONOMY**

**Report compiled by Trade and Industrial Policy Strategies**

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## INTRODUCTION

South Africa has experienced significant liberalisation during the 1990s on the political as well as economic front. Starting with the first democratic elections in 1994, the economy has undergone liberalisation of internal and external financial markets, labour markets and trade regime. Major changes have also taken place in terms of monetary and fiscal policy, where “discipline” and “sustainability” have become the guiding principles, while industrial policy saw a shift from demand-side to supply-side measures. Whether these policy choices have resulted in higher levels of efficiency and more importantly better economic performance and equity will remain the subject of economic research for years to come, notably because the structure of any economy does not change overnight. While some of the liberalisation efforts started before the 1990s, a number of them took place during the middle of the decade. Although perhaps still somewhat premature, an examination of the South African economy during both halves of the decade is perhaps a worthwhile exercise.

From a broad perspective, there have been noticeable structural changes in the reasonably diversified South African economy since the 1970s (Table 1). The share of the primary sector (*Agriculture and Mining*) in overall GDP has decreased over the past three decades, although the secondary (*Manufacturing, Construction, and Electricity, Gas and Water*) sector’s share of GDP has maintained a more or less constant trend between 1970-2001.

**Table 1: Components of GDP, 1971-2001 (1995 constant prices)**

	Ave share 1971-1980	Ave share 1981-1990	Ave share 1991-2001	Ave share 1991-1996	Ave share 1997-2001
Primary [1-2]	16.1%	13.3%	11.4%	12.1%	10.7%
Secondary [3-5]	29.5%	29.6%	27.6%	27.9%	27.1%
Tertiary [6-9]	54.3%	57.0%	61.0%	60.0%	62.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: TIPS South African Standardised Industry Database

Note: GDP is measured at factor cost

What is most striking though is that the tertiary sector (including services), which has traditionally had the largest GDP share, is increasingly growing, at the expense of the primary sector, which is in line with the trend towards less reliance on primary products and more on high value-added services (such as *Business Services, Transport and Communication* and *Wholesale and Retail Trade*, see Table 2).

This paper offers a snapshot of the South African industrial landscape between 1990-2001, at a relatively broad 9-sector level, making use of the TIPS South African Standardised Industry Database, which offers long-term trends covering the period 1970-2001 for about 46 industries, mainly in manufacturing, and a range of economic variables, such as value-added, exports, imports and employment. For our purposes, monetary values are recorded in constant 1995 prices, and growth rates calculated on a weighted average annual basis for two selected periods, the first half of the 1990s (a 6-year period spanning 1991-1996) and the second half of the 1990s (covering the last 5 years, 1997-2001).

# 1 VALUE-ADDED

The first column of Table 2 shows that with 6%, *Business Services* had the highest growth rate in value-added between 1997-2001, followed by *Transport and Communication* with 5.6% and *Wholesale and Retail Trade* (1.8%). This can be compared with an economy-wide average growth in value-added of 2.3%. The lowest growth in value-added was recorded by *Mining* with -1% and *Electricity, Gas and Water*, with -0.1% respectively. *Manufacturing* is ranked 4 from the top out of 9 sectors with a growth rate of 1.5%.

**Table 2: Growth in Value-Added, 1991 - 2001 (1995 constant prices)**

		Ave ann Δ 1997-2001	Ave ann Δ 1991-1996	1991-1996 Rank	Ave share 1997-2001	1997-2001 Rank	Ave share 1991-1996	Δ Rank 1991- 1996 to 1997- 2001
1	Buss serv	6.0%	2.9%	3	18.0%	3	15.7%	2
2	Transport	5.6%	5.2%	1	10.5%	5	8.5%	-1
3	Trade	1.8%	2.2%	4	13.5%	4	14.0%	1
4	Manufacturing	1.5%	1.6%	5	20.3%	1	21.2%	1
5	Agriculture	1.4%	-0.4%	8	4.5%	7	4.8%	3
6	Construction	1.3%	-0.7%	9	3.1%	9	3.3%	3
7	Comm'ty serv	0.1%	1.6%	6	20.3%	2	21.9%	-1
8	Electricity	-0.1%	4.5%	2	3.7%	8	3.5%	-6
9	Mining	-1.0%	-0.1%	7	6.2%	9	7.3%	-2
	All industries	2.3%	2.0%		100.0%		100.0%	

Source: TIPS South African Standardised Industry Database

The performance of the *Transport and Communications* sector in 1997-2001 vis-à-vis 1991-1996 can be attributed to the rollout of telecommunications services both by mobile service providers and the national fixed-line operator Telkom. *Manufacturing's* growth performance has not improved significantly in 1997-2001 as compared with the preceding period, and it is also below the economy-wide average. The low performance of *Community Services - including government services* can be explained to some degree, by the fiscal policies adopted during the middle of the 1990 and this has negatively affected the government services sector, which is part of *Community Services - including government services*.

In 1991-1996, *Transport and Communication* and *Electricity, Gas and Water* topped the table in terms of value-added growth, with 5%, with *Business services* coming third with 3%. At the bottom end of the scale, *Construction* had a value-added growth rate of -0.7%, followed by *Agriculture* with -0.4%, and *Mining* with -0.1%. Economy-wide value-added growth in 1991-1996 was just 2%.

Table 2 further reveals that for the *Agriculture, Mining* and *Construction* sectors, the situation has not changed much when comparing the both halves of the decade. Although *Agriculture* and *Construction* have seen positive growth compared to the first half of the 1990s, these sectors seem to be insulated from most of the shocks and economic policy action that have taken place during the middle of the decade, and remain perennial under-performers. The deterioration of the mining sector is linked to the decline in commodity prices, notably those of *Gold Mining, Coal Mining* and *Iron Ore*.

Regarding the shares in net output during the 1990s, Table 2 also indicates that *Manufacturing* and *Community Services - including government services* are the most important contributors to value-added by 9-sector aggregation, both capturing 20.3% of the total, followed by *Business Services* with 18%. The smallest sector in this configuration is *Construction* with 3.1% of value-added followed by *Electricity, Gas and Water* with 3.7%. This hierarchy is also evident for the 1991-1996 period, where *Community Services - including government services* accounted for 22% of value-added, *Manufacturing* 21% and *Business Services* 16%.

It seems that *Community Services - including government services* has lost some ground, presumably following the fiscal austerity measures introduced during the middle of the decade. *Business Services* and *Transport and Communication* have increased their share in GDP, while the contribution of *Agriculture, Mining* and *Construction* has declined. Finally, *Manufacturing's* share in GDP has remained constant at around 20%.

## 2 EXPORTS

If one of the objectives of the policies adopted during the middle of the 1990s was to re-orient resources towards the production of more tradable goods-producing industries, an analysis of the performance of South African industrial sectors during both halves of the decade is warranted. Table 3 shows that with 7.3%, *Business services* have shown the highest growth rate in exports between 1997-2001, followed by *Manufacturing* with 6.9% and *Community Services - including government services* with 6.9% respectively. This can be compared with an economy-wide average growth in exports of 3.7%. The lowest export growth was recorded by *Construction* with -7.6% and *Mining* with -3.6% respectively.

**Table 3: Growth in Exports, 1991 - 2001 (1995 constant prices)**

	Sector	Ave ann Δ 1997 - 2001	Ave ann Δ 1991 - 1996	1991 - 1996 Rank	Ave share 1997 - 2001	1997 - 2001 Rank	Ave share 1991 - 1996	1991 - 1996 Rank
1	Business serv	7.3%	10.3%	7	3.5%	6	2.5%	6
2	Manufacturing	6.9%	15.5%	1	53.3%	1	41.2%	2
3	Comm'ty serv	6.9%	5.3%	8	0.3%	7	0.3%	7
4	Transport	5.8%	11.7%	4	6.1%	3	5.2%	3
5	Agriculture	5.3%	13.6%	3	4.3%	5	3.9%	5
6	Trade	3.5%	10.6%	6	5.5%	4	4.5%	4
7	Electricity	-0.1%	14.3%	2	0.1%	8	0.1%	8
8	Mining	-3.6%	-3.7%	9	26.9%	2	42.3%	1
9	Construction	-7.6%	11.1%	5	0.0%	9	0.0%	9
	All industries	3.7%	6.4%		100.0%		100.0%	

Source: TIPS South African Standardised Industry Database

Overall export performance has been lower in the 1997-2001 period as compared to 1991-1996. This can perhaps be explained by the suggestion that the “apartheid dividend” had already been reaped by the mid-1990s. Another conclusion might be that the liberalisation policies in South Africa have not resulted in a more export-oriented economy. Also, we should not ignore the East Asian financial crisis that struck during this period, and dampened global economic growth.

While the export performance of some of the more traditional non-tradable industries, such as *Construction, Electricity, Gas and Water, Community Services - including government services* and *Wholesale and Retail Trade* are less relevant, it can be noted that *Manufacturing's* export performance, although in positive territory, has lost ground relative to *Business Services*. *Mining's* export performance suggests that the global financial crises during the latter part of the decade could have had a considerable negative impact on South Africa's overall export performance.

*Manufacturing* captures 53.3% of the absolute total of exports, followed by *Mining* with 26.9% and *Transport and Communication* with 6.1%. The smallest sector in this configuration is *Construction* with no exports, followed by *Electricity, Gas and Water* with 0.1%.

Evidently the large weight of *Mining* combined with its poor showing has dragged the total export performance of the South African economy down. Whether this is a blessing in disguise for the other industries' export behaviour remains to be seen. After all, the mild Dutch disease characteristics of the South African economy prior to the 1990s due to the resource-based nature of its export basket may have created an anti-export bias, which perhaps started to disappear already during the 1990s. On the other hand, however, as will be seen below, the mining sector is also a large employer and only if the state provides sufficient resources to allow labour to shift to newly exporting industries can the benefits be truly realised.

While export growth rates and shares tell one part of the story, it is also important to examine the extent to which an industry exports its output, so as to ascertain whether these have been growing faster than total sales. Export-output ratios point to whether an industry has become more export oriented over time (Table 4).

**Table 4: Export-Output Ratios, 1991 - 2001(1995 constant prices)**

	Sector	Ave ann Δ 1997-2001	Ave ann Δ 1991-1996	1991-1996 Rank	Change 1st - 2nd	Change in ratio Rank
1	Mining	66.3%	75.8%	1	-9.5%	9
2	Manufacturing	22.2%	14.6%	2	7.6%	1
3	Agriculture	16.1%	12.6%	3	3.5%	2
4	Transport	9.6%	8.8%	4	0.8%	5
5	Trade	6.3%	4.4%	5	1.9%	3
6	Business serv	3.3%	2.4%	6	0.9%	4
7	Electricity	0.6%	0.6%	7	0.0%	6
8	Comm'ty serv	0.3%	0.3%	8	0.0%	7
9	Construction	0.0%	0.1%	9	0.0%	8
	Total	13.9%	12.1%		1.8%	

Source: TIPS South African Standardised Industry Database

Table 4 shows that with the exception of *Mining*, all the other sectors of the economy have increased the proportion of output that is sold at world markets. *Manufacturing's* exports as a proportion of total output has increased from 13% in 1991-1996 to 21% in the 1997-2001 period, while *Agriculture's* proportion has increased from 13% to 18%, suggesting that the most important tradable sectors have

indeed seen an outward oriented shift. The decline in the export orientation of mining may have been the result of downstream beneficiation.

### 3 IMPORTS

While greater export orientation is one side of the trade liberalisation coin, higher import penetration may be the other side. Increases in imports follow trade liberalisation as tariffs are lowered, with several possible effects. Lower tariffs can make export oriented industries more competitive in terms of imported intermediate inputs, although local suppliers may be pushed out of the market, resulting in job losses. Consumer, however, reap the benefits of lower relative prices of final goods such as clothing, electronics and some food products (although this phenomenon is not reported herein), as well as a range of other effects that may occur at the micro level.

Table 5 shows that with 16.2%, *Mining* sector imports have grown the highest in 1997-2001, followed in second place by *Transport and Communication* with -1.5% and *Manufacturing* with -1.7% respectively. This can be compared with an economy-wide average growth in imports of 0.1%. The lowest growth in imports was recorded by *Agriculture* with -8.4% and *Community Services - including government services* with -6.8% respectively. In stark contrast, during the 1991-1996 period *Electricity, Gas and Water* topped the import growth table, followed in second place by *Construction*, with 20.3% and *Agriculture* with 12.3%. The weakest performance in 1991-1996 was seen in *Community Services - including government services* (1.5%) and *Business Services* (2.7%).

**Table 5: Growth in Imports, 1991-2001 (1995 constant prices)**

	Sector	Ave ann Δ 1997 - 2001	Ave ann Δ 1991 - 1996	1991- 1996 Rank	Ave share 1997 - 2001	1997 - 2001 Rank	Ave share 1991 - 1996	1991 - 1996 Rank
1	Mining	16.2%	11.7%	5	12.7%	2	9.3%	2
2	Transport	-1.5%	5.7%	6	4.0%	3	5.3%	3
3	Manufacturing	-1.7%	12.8%	3	77.8%	1	77.1%	1
4	Electricity	-4.1%	22.0%	1	0.0%	9	0.0%	9
5	Business serv	-5.8%	2.7%	8	1.4%	5	2.2%	5
6	Trade	-6.2%	4.3%	7	1.1%	7	1.6%	7
7	Construction	-6.2%	20.3%	2	0.1%	8	0.1%	8
8	Comm'ty serv	-6.8%	1.5%	9	1.1%	6	2.1%	6
9	Agriculture	-8.4%	12.3%	4	1.7%	4	2.3%	4
	All industries	0.1%	11.7%		100.0%		100.0%	

Source: TIPS South African Standardised Industry Database

The global economic slowdown during the late 1990s, combined with low domestic economic growth may be responsible for the reduced demand for imported goods and services, the significant lowering of tariffs notwithstanding. In terms of absolute share of total imports, in the period 1997-2001, the table further shows that the lion's share of imports were by products of the *Manufacturing* sector, with an average of 77.8% of imports between 1997-2001, with *Mining* coming a distant second with 9.3%, and *Transport and Communication* 5.3%. The lowest share of imports was seen in the *Electricity, Gas and Water* sector (0%), followed by *Construction* (0.1%)

and both *Wholesale and Retail Trade* and *Community Services - including government services* 1.1%. This hierarchy was also evident in the 1991-1996 period.

#### 4 IMPORT PENETRATION RATIOS

As with the trends in exports, consideration of import penetration ratios is a worthy exercise as it compares imports with the size of the domestic market. Import penetration ratios are derived by dividing imports by the sum of total output and imports less exports. The results shown in Table 6 are rather deceptive with regard to *Mining*, due to the high level of exports. However, the increase in the import penetration ratio of *Manufacturing* can be explained by the trade liberalisation undertaken after 1995.

**Table 6: Import Penetration Ratios, 1991-2001 (1995 constant prices)**

	Sector	Period Ave 1997-2001	Period Ave 1991-1996	Ave Ann Rank	$\Delta$ in ratio 1st-2nd half	$\Delta$ in ratio Rank
1	Mining	44.3%	37.3%	1	7.0%	1
2	Manufacturing	27.1%	21.7%	2	5.4%	2
3	Agriculture	6.4%	7.0%	4	-0.7%	8
4	Transport	5.8%	7.5%	3	-1.7%	9
5	Business serv	1.3%	1.8%	5	-0.5%	7
6	Trade	1.2%	1.3%	7	-0.1%	5
7	Comm'ty serv	1.0%	1.3%	6	-0.3%	6
8	Construction	0.3%	0.2%	8	0.1%	3
9	Electricity	0.0%	0.0%	9	0.0%	4
	Total	12.6%	10.6%		2.0%	

Source: TIPS South African Standardised Industry Database

Note: import penetration ratio is defined as the ratio of imports and the sum of total output and imports less exports.

Looking at the change in import penetration between the two time periods, it is clear that in both *Mining* and *Manufacturing*, this has been positive, and for all other sectors negative or insignificant, once again mirroring the global economic slowdown and generally low economic growth in South Africa.

#### 5 GDFI AND CAPITAL STOCK

Most of the macroeconomic policies adopted in South Africa during the mid-1990s were aimed at boosting the levels and rates of investment. In an attempt to evaluate the success or failure of these policies, and to identify which industries have had robust growth in capital stock, Table 7 details the growth in Gross Domestic Fixed Investment (GDFI) and capital stock. This subsection tries to find out whether these policies have had any success and which industries have robust growth in their capital stock.



**Table 7: Growth in GDFI and Capital Stock, 1991 - 2001 (1995 constant prices)**

		GDFI Ave ann Δ 1997 - 2001	GDFI Ave ann Δ 1991-1996	GDFI 1997 - 2001 Rank		Sector	Cap Stock Ave ann Δ 1997-2001	Cap Stock Ave ann Δ 1991-1996	Cap Stock 1991-1996 Rank
1	Transport	9.2%	7.6%	2	1	Transport	3.1%	0.7%	5
2	Trade	4.9%	2.6%	6	2	Trade	2.4%	1.1%	3
3	Mining	4.8%	-6.6%	9	3	Manufacturing	2.2%	3.0%	1
4	Manufacturing	0.4%	6.5%	3	4	Business serv	1.7%	1.0%	4
5	Comm'ty serv	0.4%	0.1%	7	5	Comm'ty serv	1.3%	1.2%	2
6	Construction	0.0%	-5.3%	8	6	Mining	0.6%	-0.8%	6
7	Business serv	-1.1%	4.0%	5	7	Construction	0.4%	-2.1%	8
8	Agriculture	-9.6%	8.0%	1	8	Agriculture	-0.8%	-1.1%	7
9	Electricity	-19.1%	5.1%	4	9	Electricity	-2.6%	-2.6%	9
	All industries	0.2%	3.2%			All industries	1.5%	0.7%	

Source: TIPS South African Standardised Industry Data Base

Negative GDFI in *Electricity, Gas and Water* can be explained by the nature of the investment process in the sector – the last major investments in generating capacity were undertaken during the 1980s. *Manufacturing* investment has started to lag all the other industries in the South African economy except for *Agriculture, Construction* and *Electricity, Gas and Water*. A similar pattern appears with regard to growth in capital stock shown here on the right hand side of Table 7, except that now due to its initial size (owing to large investments undertaken in earlier periods), the growth rate of *Mining's* capital stock is much lower than for example that of *Manufacturing* or *Business Services*. Similar to GDFI, the growth rates in capital stock are low but they are slightly up during the latter part of the decade, with the exception of *Manufacturing* and *Community Services - including government services*.

## 6 INVESTMENT RATES

The investment rate is defined as GDFI divided by value-added of an industry. The results, shown in Table 8, indicate that in 1997-2001, both *Mining* and *Transport and Communication* sectors had the highest average investment rate (27%) followed by *Electricity, Gas and Water* with 24.3%. At the bottom end of the scale were *Construction, Wholesale and Retail Trade* and both *Agriculture* and *Community Services - including government services*, with 5.9%, 9% and 12.4% respectively. During 1991-1996, in contrast, *Electricity, Gas and Water* claimed the highest investment rate (37.1%), followed in second position by *Mining* (22%) and *Transport and Communication* (20.8%). The lowest investment rates were seen in *Construction* (6%), *Wholesale and Retail Trade* (7.7%) and *Community Services - including government services* (7%).

In terms of change in investment rate between both periods under review, the highest increase in investment rate was recorded for *Transport and Communication* (6.2%), followed by *Mining* (5%), and in third position *Manufacturing* (3.2%)

**Table 8: Investment Rates, 1991-2001 (1995 constant prices)**

	Sector	Period ave 1997-2001	Period ave 1991-1996	1991-1996 Rank	$\Delta$ in ratio 1st - 2 <sup>nd</sup> half	$\Delta$ in ratio Rank
1	Mining	27.0%	22.0%	3	5.0%	2
2	Transport	27.0%	20.8%	4	6.2%	1
3	Electricity	24.3%	37.1%	1	-12.8%	9
4	Business serv	23.2%	24.7%	2	-1.5%	8
5	Manufacturing	21.6%	18.4%	5	3.2%	3
6	Comm'ty serv	12.4%	11.2%	7	1.2%	5
7	Agriculture	12.4%	13.1%	6	-0.8%	7
8	Trade	9.0%	7.7%	8	1.4%	4
9	Construction	5.9%	6.0%	9	-0.1%	6
	Total	18.4%	16.8%		1.6%	

Source: TIPS South African Standardised Industry Database

Note: the investment rate .is defined as gross domestic investment divided by value-added

Shifting trends in the growth of capital stock and investment, which Fedderke *et al.* (2000) also observed, suggest that the trend towards re-allocating capital from highly capital-intensive state-owned enterprises in the 1970s and 1980s, towards a set of smaller industries in the aftermath of capital market liberalisation in the 1990s, may have continued only to a certain degree in recent times.

## 7 EMPLOYMENT

The crisis in the employment creating capacity of the South African economy since the middle of the 1990s has been well documented elsewhere. This section merely highlights the industries that have been most responsible for the downward trend in the demand for labour that has characterised the latter part of the 1990s. At the 9-sector aggregation level, Table 9 depicts the trends in employment in the South African economy during the 1990s, and it is immediately apparent that with the exception of *Wholesale and Retail Trade*, all sectors of the economy have been shedding labour during this period.

**Table 9: Growth in Labour Demand, 1991-2001**

	Sector	Ave ann $\Delta$ 1997-2001	Ave ann $\Delta$ 1991-1996	Ave ann $\Delta$ Rank	Ave share 1997-2001	1997 - 2001 Rank	Ave share 91-96	1991-1996 Rank
1	Trade	1.7%	-1.2%	5	13.2%	3	12.2%	3
2	Electricity	-0.6%	-3.5%	8	1.0%	9	1.0%	9
3	Business services	-0.9%	1.8%	2	6.7%	5	6.0%	6
4	Community services	-1.0%	2.1%	1	37.6%	1	34.5%	1
5	Agriculture	-2.0%	-0.9%	4	10.6%	4	11.0%	4
6	Manufacturing	-2.4%	-0.9%	3	17.6%	2	18.6%	2
7	Transport	-5.5%	-4.1%	9	3.8%	7	4.7%	7
8	Mining	-6.6%	-1.6%	6	6.0%	6	7.6%	5
9	Construction	-8.9%	-3.0%	7	3.4%	8	4.6%	8
	All industries	-1.8%	-0.1%		100.0%		100.0%	

Source: TIPS South African Standardised Industry Database

Between 1997-2001, *Wholesale and Retail Trade* reported an average annual employment growth rate of 1.7%, followed by *Electricity, Gas and Water* (-0.6) and

*Business Services* (-0.9%). *Construction* had the poorest growth rate during this period (-8.9%), followed by *Mining* (-6.6%) and *Transport and Communication* (-5.5%). In the 1991-1996 period, employment in *Community Services - including government services*, grew by 2.1%, closely followed by *Business Services* with 1.8% and in third place, *Agriculture* (-0.9%).

In terms of absolute share of employment, *Community Services - including government services*, occupied first slot during 1997-2001 with 37.6%, followed by *Manufacturing* with 17.6% and in third place, *Wholesale and Retail Trade* (13.2%). The bottom rung was claimed by *Construction* (3.4%), followed by *Transport and Communication* (3.8%) and *Mining* (6%). This hierarchy was maintained in the preceding period, where *Community Services - including government services*, *Manufacturing* and *Wholesale and Retail Trade* respectively captured 34.5%, 18.6% and 12.2% of labour demand respectively, as did *Construction* and *Mining* with 4.6% and 4.7%.

## 8 EMPLOYMENT-OUTPUT RATIOS

Employment-output ratios measure the intensity of employment within an industry. Examining these ratios at the aggregate 9-sector level for the economy (Table 10) reveals that the ranking of these intensities has not changed much during both semesters of the decade under review.

**Table 10: Employment-Output Ratios, 1991 -2001 (1995 constant prices)**

	Sector	Ave ann 1997 - 2001	Ave ann 1991 - 1996	1991- 1996 Rank
1	Agriculture	19.3	24.3	1
2	Community services	18.4	18.5	2
3	Trade	7.4	8.1	4
4	Mining	7.2	9.1	3
5	Construction	4.6	6.8	5
6	Manufacturing	3.6	4.5	7
7	Business services	3.1	3.9	8
8	Transport	3.0	5.4	6
9	Electricity	2.3	2.9	9
	Total	6.8	8.2	

Source: TIPS South African Standardised Industry Database

In both periods *Agriculture* was the most labour-intensive sector of the economy, with employment-output ratios of 24.3% and 19.3% respectively. In second place lay *Community Services-including government services*, with a more or less constant ratio of 18.5% in both periods under review. The only noticeable change is that *Mining* and *Wholesale and Retail Trade* swapped positions in the latter part of the 1990s, and *Manufacturing* climbed up one position to 6, as did *Business Services*. *Manufacturing's* employment intensity, however, remains well below the economy-wide average.

## 9 SUMMARY AND CONCLUSIONS

It is clear from the preceding analysis that through the use of value-added as a barometer for the performance of the South African economy during the 1990s, then it can be seen that the importance of the services sector has increased dramatically throughout the last decade. This is borne by the performance of *Business Services* and *Transport and Communications*, both of which have shown both significant growth and proportion of GDP. Low value-added growth has been manifest in *Mining*, in the main as a result of deteriorating commodity prices, while that of *Community Services – including government services*, could be linked to austere fiscal and monetary policies presently being pursued. The contribution of *Agriculture* and *Construction* has also declined markedly during this period. Economy-wide value-added growth has been mediocre, averaging just 2% in this decade, and while growth in *Manufacturing* value-added remains below the economy's average, its share of total value-added still remains the highest, together with that of *Community Services – including government services*.

In the case of exports, it has been seen that exports of services, in particular *Business Services*, have also had the highest growth in the 1991-2001 period, especially in the latter half of the decade, although *Manufacturing* has not been far behind. However, negative export growth has been manifest in *Construction* and *Mining*. In general, overall export performance has been lower in the 1997-2001 period, as compared to the first half of the decade. More significantly, whereas, the export performance of some of the more traditional non-tradable industries, such as *Construction*, *Electricity, Gas and Water*, *Community Services - including government services* and *Wholesale and Retail Trade* are less relevant, it can be noted that *Manufacturing's* export performance, although in positive territory, has lost ground relative to *Business Services*. *Mining's* export performance suggests that the global financial crises during the latter part of the decade could have had a considerable negative impact on South Africa's overall export performance.

In terms of absolute shares of total exports, *Manufacturing* still remains pre-eminent, with 53.3% of the total, followed by *Mining* with 26.9% and *Transport and Communication* with 6.1%. The large weight attached to *Mining*, combined with its poor showing has undoubtedly pulled down the total export performance of the South African economy down. Export-output ratios point at whether an industry has become more export oriented over time, and it is significant to note that with the exception of *Mining*, there has been a marked increase in the proportion of output sold internationally. In particular, *Manufacturing's* exports as a proportion of total output has increased from 13% in 1991-1996 to 21% in the 1997-2001 period, while *Agriculture's* proportion has increased from 13% to 18%. This suggests that the most important tradable sectors have indeed seen an outward oriented shift.

Regarding imports, it has been shown that the global economic slowdown, especially after 1997, coupled with low domestic economic growth, have conspired to dampen the demand for imported goods and services, despite the significant lowering of tariffs that marked this decade. *Mining* sector imports have grown the highest in 1997-2001 (16.2%), followed by *Transport and Communication* with -1.5% and *Manufacturing* with -1.7% respectively. This can be compared with an economy-wide average growth in imports of 0.1%. The lowest growth in imports was recorded by *Agriculture* with -8.4% and *Community Services - including government services* with -6.8% respectively. During the 1991-1996 period *Electricity, Gas and Water* grew the highest, followed by *Construction*, with 20.3% and *Agriculture* with 12.3%,

with the weakest performance being posted by *Community Services - including government services* (1.5%) and *Business Services* (2.7%). It is also evident that import penetration has increased for all sectors of the economy, a fact that could be attributed to the declining tariffs that have accompanied the liberalisation episode that has South Africa has undergone, especially in the case of the *Manufacturing* sector. With the exception of *Mining* and *Manufacturing*, however, the change in import penetration ratios between both semesters of the decade has been negative, however, an indication of the global economic slowdown in the latter part of the 1990s.

In terms of investment behaviour, it is disconcerting to note that the *Manufacturing* sector has begun to lag all the other sectors of the economy (with the exception of *Agriculture*, *Construction* and *Electricity, Gas and Water*). A similar pattern is seen with regard to the growth of capital stock, only that the growth of capital stock in *Mining* is now much lower than that of *Manufacturing* and *Business Services*, a factor that could be attributed to the previous large investments undertaken in previous decades. In terms of investment rates, the highest increase in investment has been seen in *Transport and Communication* (6.2%), followed by *Mining* (5%), and in third position *Manufacturing* (3.2%).

With regard to employment behaviour, it has been seen that with the exception of *Wholesale and Retail Trade*, all sectors of the economy have been shedding labour during this period. Between 1997-2001, *Wholesale and Retail Trade* employment grew by 1.7%, followed by *Electricity, Gas and Water* (-0.6) and *Business Services* (-0.9%). The poorest growth rates were seen in *Construction* (-8.9%), followed by *Mining* (-6.6%) and *Transport and Communication* (-5.5%). In the 1991-1996 period, employment in *Community Services - including government services*, grew by 2.1%, closely followed by *Business Services* with 1.8% and in third place, *Agriculture* (-0.9%).

Looking at the absolute shares of total employment, it has been shown that *Community Services - including government services*, occupied first slot during 1997-2001 with 37.6%, followed by *Manufacturing* with 17.6% and in third place, *Wholesale and Retail Trade* (13.2%). This hierarchy was maintained in the preceding period, where *Community Services - including government services*, *Manufacturing* and *Wholesale and Retail Trade* respectively captured 34.5%, 18.6% and 12.2% of labour demand respectively, as did *Construction* and *Mining* with 4.6% and 4.7%.

In respect of the intensity of employment within a sector, there has not been much change in terms of these intensities throughout the decade. *Agriculture* remains most labour-intensive, followed by *Community Services - including government services*, although in the latter part of the decade, *Wholesale and Retail Trade* has become more labour intensive than *Mining*. The labour-intensity of *Manufacturing*, at 3.6%, remains way below the economy-wide average, however.

It would therefore appear that while the structure of the South African economy has adopted the global trends in the direction of the “New Economy” and has seen a shift in production towards tertiary industries, it now becomes clear that this alone is not able to address the employment crisis. At a more general level, a serious evaluation of the impact of government policy on different sectors of the economy requires scrutiny of a range of policies across various government departments, not just the

Department of Trade and Industry. The degrees to which they have stimulated or impeded the growth of the various sectors of the economy are important areas of future research.

*This Report was compiled by Donald Onyango.*

## **SELECTED REFERENCES**

- ABSA (2002). South African Sectoral Outlook 2001-2006. Johannesburg: ABSA Bank
- BELLI, P., FINGER, F. and BALLIVAN, A. (1993). *South Africa: A Review of Trade Policies*. World Bank Informal Discussion Papers on Aspects of the Economy of South Africa #4. Washington DC: The World Bank
- DEPARTMENT OF TRADE AND INDUSTRY (2002). *Accelerating Growth and Development: The Contribution of an Integrated Manufacturing Strategy*. Pretoria: Department of Trade and Industry
- FEDDERKE, J., HENDERSON, S., KAYEMBA, J., MARIOTTI, M. and VAZE, P. (2000). *Determinants of Investment in South Africa: A Sectoral Approach*. Johannesburg: Econometric Research South Africa
- HIRSCH, A. and HANIVAL, S. (1998). *Industrial Policy and Programmes In South Africa – Discussion Document*. Pretoria: Department of Trade and Industry.
- LEVY, B (1992). *How Can South African Manufacturing Efficiently Create Employment? An Analysis of the Impact of Trade and Industrial Policy*. World Bank Informal Discussion Papers on Aspects of the Economy of South Africa #1. Washington DC: The World Bank
- TSIKATA, Y. (1999). *Liberalisation and Trade in South Africa*. World Bank Informal Discussion Papers on Aspects of the South African Economy #13, Washington DC: The World Bank
- VAN SEVENTER, D.E.N. (2002). *The Changing Industry Composition of South Africa in the 1990s*. Mimeo