

**PROVINCIAL ECONOMIC GROWTH IN SOUTH AFRICA SINCE
1990 – AND THE WINNER IS...?¹**

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1. INTRODUCTION

During the last decade South Africa's regional development policy underwent a definite change in character. It evolved from being dominated by political criteria to one with greater emphasis on economic realities and constraints facing the country and subsequently the provinces as well. The provinces are engaged in a number of initiatives to promote economic development in their regions. The question that comes to mind is where the success stories are and what are the determining factors for it?

The aim of this paper is therefore to evaluate and compare the economic growth performance of the various provinces in South Africa during the last decade. This will be done at the backdrop of the national and provincial policies aiming to stimulate regional economic development in the country. The paper is deployed as follows. The analysis will consist of the necessary literature study to determine the theoretical underpinning of regional development policy and a historical overview of regional development policy in South Africa. This will be followed by the calculation of sectorial growth rates in the provinces for the period between 1991 and 2001. The findings will be further supplemented by the inclusion of rank correlation analysis in an attempt to identify determinants of economic growth. Possible explanations of the trends, relative successes and failures observed will be identified and presented.

2. THE THEORETICAL UNDERPINNING OF REGIONAL DEVELOPMENT POLICY

Regional planning, as it emerged in the 1950's, was rooted in the particular conception of development which emerged in the post war period (Bloch, 1990: 140). For a long period literature on economic development defined the term development as an increase in real per capita income, which occurred over some specified period of time. The widely accepted modern definition of development refers to development as a multidimensional process of growth plus change. There are essential qualitative dimensions in the development process that extend beyond the growth or expansion of an economy (Meier, 1989: 6).

In the case of regional economic development, however, we are frequently inclined to regard development in terms of increases in aggregate income or increases in levels of population and employment. This is an acceptable view of regional development, particularly since changes in overall levels of economic activity within a region are frequently the focus of interest (Parr, 1970: 122). The term region is used to connote some sub-national area. Consideration of what constitute a region and how the national economy may be sub-divided into a system of regions would appear to be an essential prerequisite for the analysis of regional economic phenomena (Richardson, 1973).

The literature regards the process of regional development as the resultant of forces of demand and supply which both influence the regional economy over a given period of time (Parr, 1970: 133). The theories pertaining to the demand and supply side of regional economic development are highlighted in the following paragraphs.

2.1 The Demand Side of Regional Growth

2.1.1 The Export Base Theory

Perhaps the most common approach to the explanation of regional development on the demand side is the export base theory (Tiebout, 1963). This theory is based on the presumption that the economic activity of a region can be divided into the export and local sectors respectively. In its broadest sense the export sector can be defined as the part of the regional economy that brings income into the region. The local sector, on the other hand, exists to serve demands that originate within the sector itself. Forces external to the region determine the magnitude of the export sector, whereas forces originating within the regional economy influence the extent of the local sector. It is assumed that the supply of factors of production – the inputs needed to produce the exported goods and services – is infinitely elastic (Malecki, 1997: 17).

The export base theory postulates that the key determinant of regional growth is the ability of a region to expand its export base, i.e., the export of goods and services. The growth in the region is not limited to the export sector's growth. The local sector will also grow as a secondary effect. This is because the increase in income flowing into the region increases

the demand for goods and services produced within the region. This secondary growth is referred to as the regional multiplier effect (Parr, 1970: 123).

The essence of the export base theory is that although regional growth is possible through the growth of the local sector, the impetus for expansion comes with growth in the export sector. All other things being equal, growth of the local sector is conditional upon growth of the export sector (North, 1955).

2.1.2 The Role of Import Substitution

Beyond a certain point the export base theory loses some value as a conceptual model and needs to be supplemented with a theory that considers influences on growth originating within the region itself (Perloff, 1963). As the economy of a region expands, a point is reached at which the region is able to supply a good or service on its own behalf whereas formerly the good had to be imported; hence the term import substitution. Import substitution was accepted as standard policy for industrial development in the years before the Second World War (Vosloo, 1997: 7). The process of increased regional self-sufficiency can make an important contribution towards regional economic growth. As a region crosses successive demand thresholds it is able to engage in such a process at an increasing rate. In practice it means that beyond certain critical levels it is more profitable for a given good or service to be supplied from within rather than outside the region.

In some cases the occurrence of import substitution involves the development of linkages to the export sector. Furthermore it is possible for the process of import substitution itself to induce industrial linkages. In such a case the original process of import substitution will stimulate backward linkages. This kind of development is conveniently called secondary import substitution (Parr, 1970: 127).

It is evident that the process of export growth and import substitution, and the establishment of linkages which develop in relation to each, are highly interdependent and that the process of regional growth takes place in a highly complex manner. Any approach to regional growth which place excessive emphasis on one or the other would seem to be unrealistic, particularly in the case of large and structurally complex regions.

2.1.3 The Stages Theory of Regional Growth

Apart from export base and import substitution theories, literature suggests an additional approach to regional development. The stages theory of regional growth holds that over a long-term period, regional growth will typically be associated with a sequential pattern of dominant specialization, i.e. export bases. This approach offers a description through time of the development process at regional level (Parr, 1970: 128).

The following five stages have been suggested: first the stage of self sufficient subsistence economy with no interregional trade; second the development of transport links with other regions, leading to the development of interregional trade and the emergence of regional specializations in primary activities such as resource exploitation, fishing and agriculture; thirdly, the development of secondary (manufacturing) production, mostly in the processing and refining ends of manufacturing; fourthly, growing emphasis on manufacturing sectors which use manufactured rather than raw material inputs and the development of inter industry linkages; fifthly, the final advanced stage, characterised by specialization in tertiary activities. This involves the export of capital, technical expertise and commercial services to other regions (Parr, 1970: 128).

This approach to regional development must not be viewed as an alternative to the export base theory. On the contrary, it presents a long-term view of the export base theory, explicitly highlighting temporal changes in the composition of the export base. Moreover, the stages theory is not in conflict with the notion of import substitution either. The process of import substitution is a precursor to the next stage of specialization in the region (Parr, 1970: 129).

Criticism against the stages theory is levelled at two fronts. It has been argued that whilst this theory holds some water in a European setting, it is not relevant for the “New Lands” such as North America where the subsistence stage was short lived or did not exist at all. A second point of critique concerns the normative implication stemming from the theory, namely, that a region must inevitably industrialize in order to achieve growth. Although it is clear that it would be a mistake to regard the stages theory as a rigid schedule for regional

development, this system of probabilities does seem to provide a reasonable explanation of long run regional development (Parr, 1970: 130).

An alternative approach for understanding productivity and growth comes from the Schumpeterian legacy. Schumpeter followed the publication of his Theory of Economic Development by work on the business cycle. His concept of 'creative destruction' – of change taking place in capitalism primarily through radical innovations or other breakthroughs that render established competence and equipment obsolete – has become the metaphor for technological change. Because of the dominance of new classical economics and the difficulty in modelling Schumpeterian concepts, evolutionary theory has not yet had a major impact on economic growth theory, despite the endogeneity of the technological process (Malecki, 1997: 45).

2.2 The Supply Side of Regional Economic Growth

It does not matter how valid any or all of the various approaches to regional growth may be, they are incomplete without reference to the supply factors that influence growth. Supply factors are well known in the analysis of industrial location. It includes aspects such as natural resource endowments and the availability of raw materials, manufactured inputs, capital, power supplies, labour and entrepreneurial talent (Alonso, 1964).

An equally important supply factor is the general location of the region, especially as it relates to the assembly of raw materials for production and access to external markets (Chinitz, 1961: 279 – 289).

Broadly speaking, it is possible to view supply factors as the ones that determine the nature and structure of a region export's base by granting to a region the possibility of fulfilling demands that exist in external markets. In addition supply factors are able to influence the direction and extent of regional import substitution. Moreover, they may partially explain the rate of transition through the various stages of export specialization and may draw attention to the difficulties involved in such a transition.

3. HISTORICAL OVERVIEW OF SOUTH AFRICAN REGIONAL DEVELOPMENT POLICY

3.1 The Policy of decentralisation 1960 - 1990

The earliest recollection of attempts to deal with the concept of regional development is the inception of the Social and Economic Planning Council in 1942. This was an example of minor attempts to locate industry in smaller centres during the war and immediate post-war years (Maasdorp, 1990: 127). The policy of decentralisation gathered real momentum through the report of the Tomlinson Commission in 1952. The principal accepted by the Tomlinson Commission was that a policy of decentralisation must draw industries to the reserves on a voluntarily basis (Dewar, Todes & Watson, 1984: 3). The Verwoerd-Government rejected this and accepted the border areas³ principle. As a result the Bantu Investment Corporation was founded in 1959 with the aim to provide employment for the black population in the reserves as well as to provide relief for over concentrated areas (Dewar et al, 1984: 4).

Regional Development policy in South Africa entered a new dimension in 1960. Officially it was now known as decentralisation policy. The policy was to a large extent based on the political foundation of separate development (Maasdorp, 1990: 127; Vosloo, 1998: 46; Nel, 1999: 35). In terms of economic principles it was argued that cities are becoming too big and industries should be enticed to relocate. Yet no significant effort was made to relocate existing industries and no real limitations were placed on expansion in urban areas (Dewar et al, 1984: 5).

1970 saw the advent of the Riekert-Commission as part of the Government's initiative to expose industrial development policy in South Africa to regular official investigation (Vosloo, 1997: 7). The aim of the commission was to achieve a more balanced pattern of development, enabling black people to live and work in their respective homelands. The conditions for this were three fold. Development in these areas should not impact negatively on the development of other areas; black people must engage in more schooled occupations and work reservation would only be done if the jobs of white people were in

³ A border area was defined as a centre situated within 30 miles of a Bantu Reserve.

jeopardy and the policy would also be applied to coloured people to control the migration to Cape Town. The Private sector was involved to determine the relevant incentives for possible relocation (Dewar et al, 1984: 9).

Mounting political pressure on the government to promote development was the main ideological factor responsible for the Growth Pole policy of the second half of the seventies. South Africa was divided into thirty-eight relative homogenic regions and two hundred growth poles were envisaged. A growth pole was defined as: “towns or complexes of towns which would, without much stimulus, command sufficient growth potential to develop and support a large population”. Growth centres were tied to optimism concerning the process of ‘trickle-down’ or ‘spread’ effects. Higher incomes and economic growth were envisioned to emanate outward from a growth centre over time, gradually affecting the entire hinterland of the centre (Malecki, 1997: 254). It was deemed that these poles should be far enough from existing metropolitan areas to develop into independent cities in the future (Dewar et al, 1984: 10).

Both decentralisation and regional development policies have been justified for political reasons even if the economic grounds on which such policies are based are questionable (Holden, P, 1990: 226). The extent of political backing in this policy is evident in the fact that in 1983 applications for assistance were approved in no less than 122 locations in the country (Republic of South Africa, 1983).

The results of this policy were mixed to say the least. The assumption that the geographical relocation of economic activity is plausible and without any negative externalities was never a realistic one (Lourens, 1990: 72). It is clear that the growth centre jobs did not provide a real alternative to metropolitan jobs or migration.

The White Paper on Regional Industrial Development Policy of 1982 brought a revision of the policy of the previous twenty years. For the first time the principle of interdependence between regions was accepted. Incentive measures were now concentrated on a limited number of areas. The thirty-eight regions defined by the previous policy were replaced with eight functional development regions. These were classified as metropolitan areas, deconcentration points and industrial development points (Republiek van Suid-Afrika,

1982).

The package of incentives for the eight regions was increased. These included wage subsidies; training allowances, transport discounts, housing subsidies and loans with favourable terms. Development in some regions were relatively successful – Butterworth in the Transkei, Isithebe in Kwazulu and Industriqwa in Qwaqwa being examples.

On the whole however the success rate was just as bad as the previous twenty years (Standard Bank, 1992: 1). Between 1982 and 1990 only 450 000 job opportunities at an average cost of R18 000 (in 1990 prices) per job were created in the target areas. The total cost was an astronomical R8,1 billion (Standard Bank, 1992: 1). Other empirical estimates indicated that between 1982/83 and 1985/86, the direct costs of the decentralisation policy as a proportion of government expenditure increased 3,8 times. As a proportion of GDP it increased fivefold (Holden, MG, 1990: 221).

Towards the end of the period fifty-six industrial development centres were identified. Very few countries can theoretically support more than three. There was no economic foundation for self-sustaining growth in these areas. At the end of 1986 more than 74 per cent of the companies founded in terms of the program was struggling to survive (Standard Bank, 1992: 2).

At the end of the eighties it was clear that the thirty-year-old regional development policy of decentralisation and growth centres led to poor productivity and performance (Tomlinson, 1990: 157). Resources were misallocated in areas not suited from an economic point of view for the location of industries (Holden, P, 1990: 231). This contributed to an overall reduction in wealth. It is even possible that the policy resulted in an effective decrease in total employment (Standard Bank, 1992: 2). The new Regional Development policy of 1991 was an attempt to take the above into account and rectify the mistakes of the past.

3.2 The then new Regional Industrial Development Policy

The new policy differed in some important aspects from the old one. It was not influenced by political considerations to the same extent as before. It emphasized the development of

new production capacity outside South Africa's two main industrial centres (Pretoria-Witwatersrand-Vereeniging-complex and Durban/Pinetown) rather than subsidizing firms to relocate to certain designated areas. Subsidies would now be linked to profits of companies instead of cost in order to create competitiveness. There were special incentives for foreign investors. In essence the new scheme was aimed on regional economic development rather than the expansion of industries to the rural areas (Standard Bank, 1992: 1).

Emphasis on export promotion in the new policy coincided with the view that export base growth is an important component of sustainable long-term macro economic development. Performance based incentives was regarded as a much fairer dispensation than the very expensive subsidies of the General Export Incentive Scheme applicable at the time (Standard Bank, 1992: 3). The General Export Incentive Scheme in its entirety was heading for the guillotine towards the end of 1997. The annual cost of the above was measured at 0.5 per cent of Gross Domestic Product (Vosloo, 1997: 20).

3.3 Latest Developments

The world has experienced significant changes in the structure of the international economy in recent years. In this era of globalisation and the weakening of state control in many countries, individual localities are often pursuing locally determined and appropriate development strategies. The limited success achieved by state regional development policies in many countries has assisted in this trend (Nel, 1999: 3). In South Africa this trend is evident in the various provincial economic development initiatives. Two examples of these are presented briefly in the next two paragraphs.

In the Western Cape a well-endowed Western Cape future fund was visualized for creation in 2000. It will be financed from the provincial budget and possibly from proceeds of the commercial use of provincial government assets. Provincial government support will be directed at sectors with high growth potential such as tourism. Thereafter, focus will be given to niche sectors with significant potential, which the provincial government says includes the jewellery sector. Proposals include the establishment of a parastatal economic development agency, Cape Enterprise, to enhance the capacity, competitiveness and export potential of the

provincial economy; the setting up of an export development centre and manufacturing advisory centre; and the establishment of an electronic precinct for Cape Town's central business district. R500m in the 2000 provincial budget has been earmarked for programs linked to the promotion of economic growth and development (Wesgro, 2000: 6).

According to Joe Mathebula, chief executive of Trade and Investment Limpopo, the provincial government has a development intervention strategy to accelerate growth from the current six per cent to nine per cent in five years (Sunday Times, Business Times, August 3 2003: 14). The Limpopo Province established the Provincial Investment Promotion Agency (NPII) as part of this strategy. The NPII will assist the potential investor in realising the investment opportunities in the Northern Province. Through their activities the potential investor will have access to: a sector and project specific marketing strategy linked to his field of operations; an online database focusing on regulatory, commercial and operating environment affecting his company and links to local joint venture partners. Assistance with tailor made itineraries for inward investment missions will also be provided (NPII, 2003: 1). Mathebula further believes that the fast tracking of empowerment will enhance the key areas of trade development, including the exporting of goods and services to neighbouring states with specific reference to Botswana, Zimbabwe and Mozambique (Sunday Times, Business Times, August 3 2003: 14).

The central government in South Africa is still an active role-player in the regional development field. The South African government has implemented a plethora of incentive programs aimed at accelerating and facilitating the transition to competitive and sustainable manufacturing industries. These programs are embodied in the introduction of supply-side measures and are geared to provide support for human resource development; support for technology development and diffusion; competitive input prices; and support for investment in competitive machinery and equipment (NPII, 2003:1). The Industrial Development Zone (IDZ) program is one of many of these incentives offered by the Department of Trade and industry to encourage the international competitiveness of the South African based manufacturing sector.

⁴ A Summary of some of the main programs in this regard can be found in Wesgro, 2000: 6

IDZs will be purpose-built industrial estates linked to an international port or airport in which quality infrastructure and expedited customs procedures are coupled with unique duty-free operating environments suited to export-oriented production.

The government has undertaken to license operators to develop and run the IDZs, provide enterprise support measures, minimise red tape and provide efficient services to enterprises within an IDZ (Department of Trade and Industry, 2003: 1).

Progress in the implementation of the Regional Spatial Development Initiative (SDI) Support Programme has been mixed, with a lot of good news — and some bad news — for the Southern African region (Zucula, 2003: 1).

Efforts are underway to re-engineer the Support Unit and the program with the aim of matching the challenges of the future: the growing demand for SDI support to governments in the Southern African Development Community (SADC) and beyond; the advent of implementation of the New Partnership for Africa’s Development (NEPAD); and the changing mood of investors worldwide (Zucula, 2003: 2). Against this background the following paragraphs provide an analysis of the provincial economic performance in South Africa.

4. PROVINCIAL ECONOMIC PERFORMANCE SINCE 1991

4.1 Trends in provincial production

Table 1 provides an exposition of the average annual economic growth rate of the nine provinces for the period 1991- 1996 as well as 1996 – 2001.

Table 1: Average annual economic growth rate

Average real annual economic growth rate	1991-1996	1996-2001
Western Cape	3.8	3.1
Eastern Cape	1.5	2.4
Northern Cape	2.8	-0.3

Free State	-0.5	2.0
KwaZulu-Natal	2.6	2.5
North West	-0.6	0.1
Gauteng	0.9	3.3
Mpumalanga	-0.6	2.5
Limpopo	4.2	3.8

Sources: Calculated from: Development Bank of Southern Africa, 2000: 126
 Statistics South Africa, 2002: 20

The statistics makes for interesting reading. The Limpopo Province achieved the highest annual economic growth rate of 6.4 per cent in 2001 despite being one of the poorest provinces in the country (Statistics South Africa, 2002: 20). This was no fluke either. The average annual economic growth rate indicated in table 1 for 1996 – 2001 was the highest of all the provinces as well. The same position on the podium was held for the period 1991 – 1996 with an even better figure of 4.2 per cent.

According to Statistics South Africa (2002: 29) mining and quarrying along with the general government was the main contributor to the value of 48.4 per cent towards the growth of Limpopo in 2001. The provincial government identified another key factor in explaining the province’s growth rate, namely the decision to change the name Northern Province to Limpopo Province. The name change has assisted the process of rebranding the province and resulted in large-scale investment in the mining, agribusiness and tourism sectors (Sunday Times, Business Times, August 3 2003: 14). This growth performance resulted in an increased share of Limpopo in the Gross Domestic Product (GDP) of South Africa. The biggest powerhouses in the South African economy remain Gauteng, KwaZulu-Natal and the Western Cape. In 2001 these three provinces were responsible for 63.2 per cent of South Africa’s economic growth rate of 2.8 per cent.

It is interesting to note that the Western Cape’s annual real economic growth rate of 2.6 per cent in 2001 was only good enough for a sixth position on the log. In 1996 the province achieved a fourth position with an annual real economic growth rate of 4.6 per cent. The shrinking contribution of the Western Cape in the GDP of South Africa confirms the message of a slowing economy in that province.

The two provinces that fared the worst in 2001 were the North West and Free State with

economies that respectively shrank with 1.6 and 0.6 per cent in real terms. Between 1996 and 2001 the Northern Cape Province received the wooden spoon for achieving the worst growth performance with an economy that decreased in real terms with 0.3 per cent over the entire period. Mpumalanga and the North West provinces, with a negative value of 0.6 per cent, shared the wooden spoon between 1991 and 1996.

Table 2 indicates the contribution of the three sectors to each province's Gross Value Added.

Table 2: Sectorial contribution to Gross Value Added per province.

		Primary	Secondary	Tertiary
Western Cape	1991	6.90	31.30	61.70
	1996	7.03	29.05	63.91
	2001	5.88	26.45	67.67
Eastern Cape	1991	6.60	30.50	63.10
	1996	2.68	26.15	71.17
	2001	2.81	24.02	73.17
Northern Cape	1991	36.80	11.30	52.00
	1996	27.24	10.88	61.88
	2001	28.06	9.78	62.16
Free State	1991	32.50	24.40	43.00
	1996	22.89	18.79	58.33
	2001	18.70	19.10	62.21
KwaZulu-Natal	1991	8.00	38.00	53.90
	1996	8.99	32.24	58.77
	2001	7.65	30.59	61.76
North West	1991	51.60	13.30	35.00
	1996	39.62	11.28	49.09
	2001	40.05	9.96	50
Gauteng	1991	6.10	34.60	59.30
	1996	1.97	29.78	68.24
	2001	1.69	26.31	72.00
Mpumalanga	1991	29.20	47.10	23.60
	1996	24.11	32.08	43.81
	2001	26.37	28.82	44.81
Limpopo	1991	31.80	19.50	48.80
	1996	19.22	13.03	67.75
	2001	27.01	9.56	63.43

Sources: Development Bank of Southern Africa, 2000

Statistics South Africa, 2002: 20

The main contributor, looking at the 1990 figures, differs from primary in North West (51.60% of GVA) to secondary in Mpumalanga (47.1% of GVA) to tertiary in the Eastern Cape (63.1% of GVA). During the ten years until 2001, however, the picture changed markedly. The tertiary sector gained ground in all the provinces, so much so that it is the main contributor to GVA in all of the nine provinces. In 2001 the primary and secondary sectors, percentage wise, contributed less to GVA in all of the nine provinces than in 1991. This declining trend seems to be reversed in two of the provinces. Both in Mpumalanga and Limpopo the primary sector lost ground from 1991 – 1996, but retained some between 1996 and 2001. As stated above the main driving force behind Limpopo’s growth has been the primary sector in terms of mining and quarrying.

In table 3 the focus shifts to the contribution of exports to provincial GGP.

Table 3: Exports as percentage of provincial GGP.

	1996	2001
Western Cape	10.2	15.3
Eastern Cape	9.9	27.1
Northern Cape	38.6	37.8
Free State	1.7	2.4
KwaZulu-Natal	29.5	29.9
North West	23.2	35.0
Gauteng	25.5	37.0
Mpumalanga	5.1	7.8
Limpopo	5.6	4.9

Source: Regional Focus, 2003

In 2001 exports contributed more to provincial GGP than in 1996 in all of the provinces except for Limpopo and the Northern Cape. However, at 37.8% in 2001, the Northern Cape exports a larger share of GGP than the other provinces.

Now that the picture of provincial economic performance is painted, the question arises whether (and in what way) the theories of economic development, stated earlier, can help to explain recent provincial economic growth in South Africa? The lack of data on provincial level hampers such analyses, but with the available data three main questions will be addressed. In what way do exports contribute to growth? Is higher growth rates linked with a movement from

primary to secondary and tertiary sectors of the economy? What role does supply factors such as labour and human development play?

4.2 Spearman rank correlation coefficients

With only nine provinces in a possible sample, regression analysis is virtually impossible. In order to find some indication of linkages between possible explanatory variables and economic growth in the provinces rank correlations were calculated. For this purpose ranks are assigned to data and the correlation calculated between the ranks of two data sets. To start with, provincial economic growth between 1991 and 2001 was ranked. Limpopo was placed first and North West ninth. The same ranking procedure was followed for all the possible explanatory variables and then the rank correlation coefficients were calculated. Table 4 reports on the results.

Table 4: Rank correlation coefficients between growth and other variables.

Variable	Correlation coefficient
1. Exports' contribution to GGP	-0.150
2. Change in % contribution of Exports to GGP	-0.300
3. % Change in Exports' contribution to GGP	-0.350
4. Primary sector contribution to GGP	-0.400
5. Secondary sector contribution to GGP	0.100
6. Tertiary sector contribution to GGP	0.520
7. Change in Primary sector's % contribution to GGP	0.600
8. Change in Secondary sector's % contribution to GGP	-0.317
9. Change in Tertiary sector's % contribution to GGP	-0.667
10. HDI	-0.083
11. Literacy	0.250
12. Urbanisation	-0.283

- These coefficients are statistically different from 0 if higher than $|0.693|$ for 5% level of significance, higher than $|0.58|$ for 10% level of significance and higher than $|0.509|$ for 15% level of significance (Koutsoyiannis, 1977: 96).

The first three correlations, reported in table 4, focus on exports. The rank correlation between growth and the percentage contribution of exports to GGP (in 2001) is -0.15 . This means that the provinces exporting larger shares of production are not necessarily the ones recording the highest growth rates. The second correlation is between growth and the difference in the percentage contribution of exports in 1991 and 2001. The third correlation involves the growth

in the percentage contribution of exports. All three these rank correlations are low in absolute terms and negative - implying that the growing provincial economies are not those exporting the largest share of GGP, neither those experiencing the higher growth in exports' contribution. Thus, neither the level of exports nor the growth in exports is positively correlated with provincial economic growth.

The next three correlations considered the rank of the different sectors' contribution to GGP. The fourth correlation indicates that a more important primary sector is negatively correlated with growth – although not statistically significant. Correlation 6 suggests that growth increases with a larger relative tertiary sector (statistically significant at a level between 10 and 15%). These correlations, however, are too low to be considered significant.

In an attempt to consider not only the level of each sectors' contribution to GGP, but also the change, correlations 7 – 9 are calculated between the growth rate and changes in each sector's percentage contribution for the period 1991 – 2001. Correlation 7 indicates that a higher growth rate correlates with a larger decline in the relative importance of the primary sector (statistically significant at a level between 5 and 10%). Surprisingly the ninth correlation indicates a strong negative correlation between growth and the percentage increase in the relative importance of the tertiary sector; in other words it is not the provinces where the tertiary sector gained more ground that attained the higher growth rates. The Northern Cape and Free State are examples of this.

Only a few variables measuring supply side factors are available at provincial level. Two of them, specifically focusing on the education and level of development of the population, are reported on in table 4. Although growth is positively correlated with higher literacy levels, this is not statistically significant. Human development correlates weakly negative, but it is nowhere near a significant relationship. Correlation 12 indicates that, if anything, the provinces with relative higher levels of urbanisation fared worse in terms of growth than those with lower levels of urbanisation. This however is also not a statistical significant correlation.

5. CONCLUSIONS

The results of the preceding analysis can be summarised as follows. Neither the level of exports nor the growth in exports is positively correlated with provincial growth. Thus, the growing provincial economies are not those exporting the largest share of GGP, neither those experiencing the higher growth in exports' contribution. This can be an indication that the export base theory does not provide an explanation of provincial economic growth in South Africa. There are, however, some indications that the stages theory does apply. The correlations indicate that a higher growth rate correlates with a larger relative tertiary sector and larger decline in the relative importance of the primary sector. None of the proxies included for supply side factors was significantly correlated with growth. It would be premature to deduce from this that supply side factors have no role to play in promoting provincial economic growth. A further analysis of the characteristics of the employed portion of the labour force in each province will in all probability not be conclusive but still useful in this regard.

It must be stressed that even the statistically significant correlations cannot be interpreted *prima facie* as proof of causality. Hopefully as time goes by, and more data become available on provincial level, more conclusive analytical proof can be gained.

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