A SHIFT-SHARE ANALYSIS OF JOB CREATION IN THE PLATINUM SDI DURING ITS FIRST DECADE (1996-2006)

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Abstract

This study evaluates the performance of the Platinum Spatial Development Initiative (SDI) development corridor in South Africa, which was initiated during 1996. Next to descriptive data, the study employed shift-share analysis to investigate the economic growth and job creation potential of the manufacturing industries in the SDI region. Analysis of the North West Province was also done to enable comparison with the Platinum SDI. The results revealed that development in the Platinum SDI since 1996 was slightly better than the rest of the province. Sectors with the highest potential were wood and paper products, food and beverages, electronics, furniture and metal products, which merit attention in future development initiatives. Economic growth in the Platinum SDI was, in most cases, better than the rest of the province, and the industrial mix and regional competitive share effects had strong effect on employment and growth in specific sectors.

Keywords

Economic development, economic geography, spatial development initiatives, SDI, industrial development, policy, shift-share analysis, North West Province, South Africa

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1. INTRODUCTION

The Platinum Spatial Development Initiative (SDI) in the North West Province was initiated during 1996, by the Department of Trade and Industry in collaboration with the Department of Transport (DOT, 1997 & DTI, 1998). The objective was to develop a strip of land about a hundred kilometres wide between Gauteng and Lobatsi in Botswana along the N4 highway. Possible mining, tourism, agricultural and industrial ventures were identified, following expensive research of high-quality and investors' conferences. The idea was to generate linkages with the rest of the province, gradually developing the whole province and eventually the country. This paper aims to evaluate development of the Platinum SDI with special focus on job creation, using shift-share analysis.

In volume 4 issue 1 of the *Journal of Economic and Financial Sciences* Drewes and Kleynhans (2011) published an evaluation of the achievements of the Platinum SDIs during its first decade of development. They also commented on the five-year evaluation published earlier in *Development Southern Africa* by Kleynhans, Naudé and Van der Merwe (2003). In 2003 it was concluded that the Platinum SDI lacked a well-defined, operating institutional and bureaucratic framework, and an integrated, well-researched planning process, as well as improved institutional arrangements to coordinate and promote the SDI. It attracted little investment and did not generate much economic growth or employment (Kleynhans et al., 2003:629). Five years on, Drewes and Kleynhans (2011:75) found that the Platinum SDI still did not promote development in the province significantly, and that it could not increase the level of human development of its residents. They concluded that the Platinum SDI was still little more than an "impossible dream". The objective of this paper is to test the validity of this hypothesis.

Drewes and Kleynhans (2011) presented little empirical evidence except for some figures from the Human Development Index (HDI) and value-added production. In the same issue of the *Journal of Economic and Financial Sciences* Kleynhans and Sekhobela (2011) promoted the use of shift-share analysis as an empirical tool for analysis. This study now intends to employ shift-share analysis to investigate employment growth in the SDI region and to compare it with the rest of the province.

Shift-share analysis gives insight into the shifts of employment among various regions over time and is easy for policymakers to understand. It shows growth potential and can differentiate between the national share effect of employment in the various sectors of manufacturing, as well as the regional industrial mix and the competitive share effects, providing comparison and much more insight into the various sectors of the region. The article by Kleynhans and Sekhobela (2011) provides a detailed exposition of the literature on shift-share analysis and the various ways it is implemented in practice, and will, therefore, not be repeated here (also see Kleynhans and Sekhobela (2008) for more applications and explanations).

In the articles mentioned above the hypothesis was that the authorities had not succeeded in their attempt to create economic growth and development, using the Platinum Spatial Development Initiative (SDI) as a developmental instrument.

It is the objective of this paper to test this hypothesis empirically. First, the basic methodology will be discussed and an easy way to apply shift-share analysis will be suggested. Then attention will be given to some basic indicators of economic development and finally, the results from the shift-share analysis will be reported on. Here special attention will be given to economic growth, job creation, the effect of national growth, as well as the effect of the particular industrial mix,

and the effect that the competitive advantage of the various regions have on their ability to create employment and growth.

The following section discusses the research methodology that was used and practical considerations.

2. THE BASIC METHODOLOGY

The empirical study was conducted on the various manufacturing industries of the Platinum SDI, as well as those in the rest of the North West Province of South Africa. The research methodology was based on shift-share analysis, which is ideal for studies in economic geography, as in this current study. This study employs a combination of approaches from Bendavid-Val (1993), Armstrong and Taylor (2003), Van der Merwe (2006) and Lann (2005).

The Rex-Database obtained from Global Insight (2012) was used because it provided the relevant data broken down to municipal and magisterial level. The database provides not only national data for indicators, like employment and gross value added, but also detail on provincial and town, including a breakdown of the various sub-divisions of manufacturing, for example, basic metals, food and beverages, and electrical machinery.

To obtain the specific data for the Platinum Spatial Development Initiative (SDI) and the North West Province excluding the SDI region, the data from the various municipalities (managerial districts) was summarised. Table 1 shows the division between the magisterial districts located within the Platinum SDI and those located in the rest of the North West Province, according to the 1996 boundaries. Strictly speaking Mmabatho is not part of the Platinum SDI any longer, but the N4 highway passes through part of the district and the border post Ramatlabama to Lobatsi in Botswana is located at the western border of Mmabatho. Excluding Mmabatho would also bias the study in favour of its hypothesis.

TABLE 1:   Magisterial districts of the Platinum SDI and the rest of North West Province (1996 boundaries)

	Rest of North West	*Platinum SDI*
	Huhudi	Mmabatho
	Kudumane	Madikwe
	Vryburg	Rustenburg
	Phokwani	Brits
	Lichtenburg	
	Delareyville	
	Schweizer-Renecke	
	Wolmaransstad	
	Christiana	
	Klerksdorp	
	Ventersdorp	
	Potchefstroom	
	Mankwe	
	Ga Rankuwa	
	Temba	

Source: *Global Insight, 2012 – Rex Database*

The research period from 1996 to 2006 reflects the development in the region during the first decade of initiation. To allow comparison of growth in this static model, the research period was divided into two periods: comparing the development of the period 1996 to 2001 with that of 2002 to 2006. This is actually eleven years but 1996 was not a full year because the Platinum SDI was established during 1996. The time period chosen also excluded the economic crisis of the later part of the decade, which could complicate matters.

Employment opportunities in the various sub-sectors of the manufacturing industry in the region were disaggregated into three components: the national share effect (N), industry mix effect (M) and the regional competitive share effect (S). The sum of these three components gives the total change in regional employment (R) (Mayor & López, 2008:125),

thus $R = N + M + S$ (1)

The total size of employment created or lost in the region, as a net effect of national growth, the industry mix and regional characteristics, is represented by the variable R. The potential growth of the region is represented by N, assuming that employment in the region is growing at the same rate as the national average, while M is the proportion of regional employment among faster and slower growing regional sectors relative to the national average growth rate, while S describes how sectors in the region perform relative to the national averages of the same sectors (Kleynhans & Sekhobela, 2008, 2011).

The change in *provincial* employment of North West Province is the difference:

$E(v) = E_{tf} - E_{to}$ (2)

where $E(v)$ is the change in employment, E_{tf} is the total gross value added in the final period and E_{to} is total employment in the initial period. The national average employment growth rate E (%) is defined as:

$E(\%) = [E_{tf} / E_{to} - 1] \times 100$ (3)

The total change in *regional* employment (R) is the difference in total employment in the final period and the initial period and is calculated as:

$R = e_{tf} - e_{to}$ (4)

where R is the total change in regional employment, e is the total employment in the region, "to" is the initial period, "tf" is the final period of analysis.

Total percentage change in regional employment R(%) is the total final regional employment divided by the total initial regional employment minus one, multiplied by 100, which implies a growth rate and is calculated as follows:

$R(\%) = [e_{tf} / e_{to} - 1] \times 100$ (5)

The National Share Effect (N) is an indicator of possible regional employment growth, if each of its sectors and, therefore, the regional total grew at the same rate, as the national employment growth average. The National Share Effect (N) is determined by:

$$N = \sum_{k=1}^{n} e_{tok}(E\%)$$ (6)

where N is the total national share of the manufacturing industry, e is the regional employment in sectors 1, 2 ... up to n in the initial period t_o and ε % is the national employment growth rate (see equation 3).

The industrial mix component gives an indication of how the region's industrial structure factors fit into its overall employment growth performance (Nazara & Hewings, 2004:476). When local employment is concentrated in the fast growing sectors, the rate of local employment growth would exceed the national average. If regional employment is concentrated in slow growing sectors, the growth rate of regional employment would be lower than the national economy-wide average. The change in employment due to the region's unique industry mix is therefore represented by the Industry Mix Effect (M), which is defined by the equation:

$$M = \sum_{k=1}^{n} MR_k \, (e_{tok}) \qquad\qquad (7)$$

where MR is the marginal rate of growth in sectors 1, 2, 3, ... up to n and e_{to} is region's sectoral employment in the initial year.

The Regional Competitive Share Effect (S) represents how sectors in the region performed relative to the national averages of the same sectors. From equation (1) the total change in regional gross value added is defined as:

$$S = R - N - M \qquad\qquad (8)$$

The next section will consider the basic development indicators, followed by the estimation of N, M, S and R using equations 1 to 8 above. **TABLE 3** gives an overview of the whole process for the Platinum SDI for the entire research period.

2. BASIC DEVELOPMENT INDICATORS

This section will consider the basic development indicators of the Platinum SDI in comparison with the section of the North West Province that is not located in the Platinum SDI. Attention will be given to the HDI, the Gini coefficient and the urbanisation rate.

2.1 Human Development Index (HDI)

The Human Development Index (HDI) of the Platinum SDI has increased marginally since 1996, from 0.51 to 0.56, where 1 represents total development. It also lies above the rest of the North West Province. The SDI was, however, higher from the start (Drewes & Kleynhans, 2011:74). Annual averages were calculated, grouping the magisterial districts between those located in the Platinum SDI and those located in the rest of the province's districts, excluding the SDI. During the ten years under investigation the HDI in the whole North West Province was between 0.37 and 0.62.

The HDI is a composite measure of development using health, education and income as components. South Africa had a HDI of 0.653 during 2004 and North West Province 0.54 (REX database). In the same year Norway was 0.965, USA 0.948, Angola 0.44 and Ethiopia 0.37 (UNDP, Human Development Report 2006:283-6).

Pearson coefficients of correlations were estimated to determine how much the data of the various regions varies over time (Keller, 2001:568). There is not enough data to conduct regression analysis, but it was not perceived to be necessary at this stage. When the coefficient of correlation was calculated for the Platinum SDI, it equalled 0.995, which implied that there was no significant difference between the development (HDI) of the Platinum SDI and the rest of the province. The correlation matrix indicated a correlation between these two regions, so close that these data series were virtually identical.

2.2   Measure of income distribution: The Gini coefficient

The Gini coefficient is a measurement of income distribution, where a Gini coefficient equal to zero indicates perfectly equality. It was found that income distribution in the Platinum SDI had improved and was much better than the rest of the province. **Figure 1** indicates that the rest of the province has actually deteriorated since 1999.
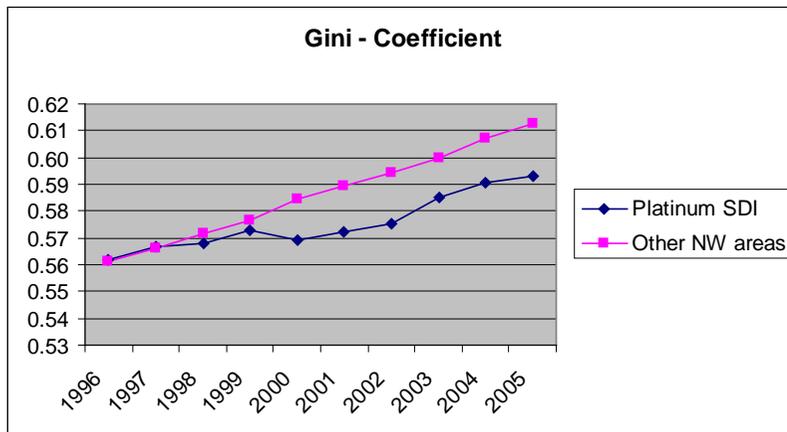

FIGURE 1:   Gini coefficient
Source: *Rex Database, 2012 – Authors' calculations*

The Pearson coefficient of 0.941 indicated a very close correlation and no significant difference.

2.3   Urbanisation rate

The urbanisation rate represents the percentage of people living in urban areas, where 100% implies that everybody in the region or district is located in the urban area. During 2004 South Africa had an urbanisation rate of 56.2% and North West Province 40.1% (REX database). In the same year Norway was 77.3% urbanised, USA 80.5%, Angola 52.7% and Ethiopia 15.7% (UNDP, Human Development Report, 2006:297-300). On average it seems as if the richer countries have higher urbanisation rates.

It was found that the districts lying along the Platinum SDI were far less urbanised than the rest of the province. This is due to the high level of development along the N12 route, as well as in Vryburg (90.5%) and Schweizer-Renecke (86.9%), which is not located in the SDI. The high urbanisation rates along the N12 highway are probably due to the amount of traffic between Johannesburg and the historically diamond-rich city of Kimberley.

Similar to the Human Development Indices, there were remarkable differences in urbanisation rates of those districts located along the Platinum DSI and those in the rest of the province. However, when correlations were determined, it was found that the correlation coefficients indicate such large correlations that the trends in the data series were virtually identical, and no significant differences existed. The coefficient of correlation between the Platinum SDI and magisterial districts in the rest of the province equals 0.915, indicating a very strong correlation (Rowntree, 1991:170).

The following section reports some of the findings of the shift-share analysis done on the Platinum SDI.

3. EMPIRICAL RESULTS

This section reports on the research results from the shift-share analysis.

3.1   Shift-Share results of the Platinum SDI

The results of the shift-share analysis done on the Platinum SDI for the period 1996 to 2006 are given in **TABLE 3**. **FIGURE 2** shows the growth in employment of the Platinum SDI's industries between 1996 and 2006. It can be seen that the sectors for metal products, wood and paper products, food and beverages created most jobs.
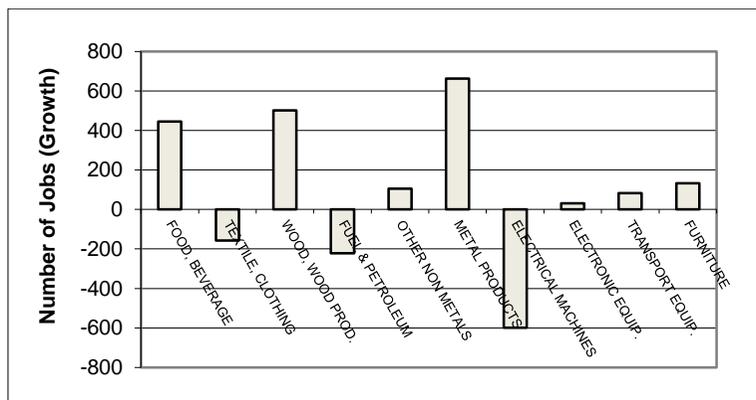

FIGURE 2:   Employment growth in the Platinum SDI
Source: *Rex Database, 2011 – Authors' analysis*

If the Platinum SDI region had grown at the same rate as the country, all the sectors would be worse off, due to the national share effect – see **FIGURE 3**.
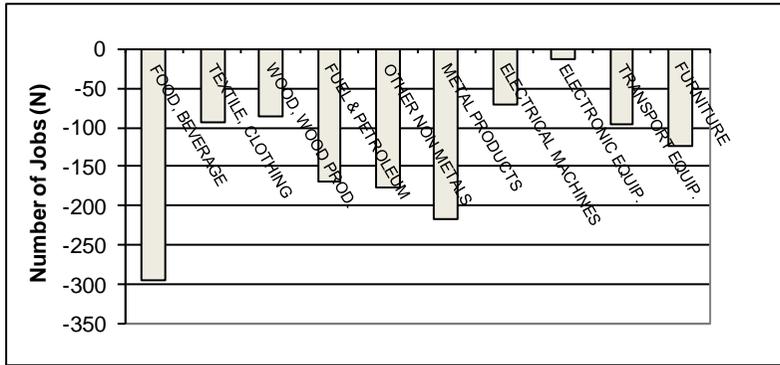
FIGURE 3: Platinum SDI: National Share Effect (N)
Source: *Rex Database, 2011 – Authors' analysis*

Considering the job creation due to the industrial mix in the Platinum SDI region, **FIGURE 4** indicates that the region gained some jobs due to the region's particular industrial mix. Metal products, wood and paper products, transport equipment and the furniture sectors gained many employment opportunities, but the rest all lost employment due to the industrial mix effect. Only the four growing sectors mentioned experienced employment growth higher than the provincial average.
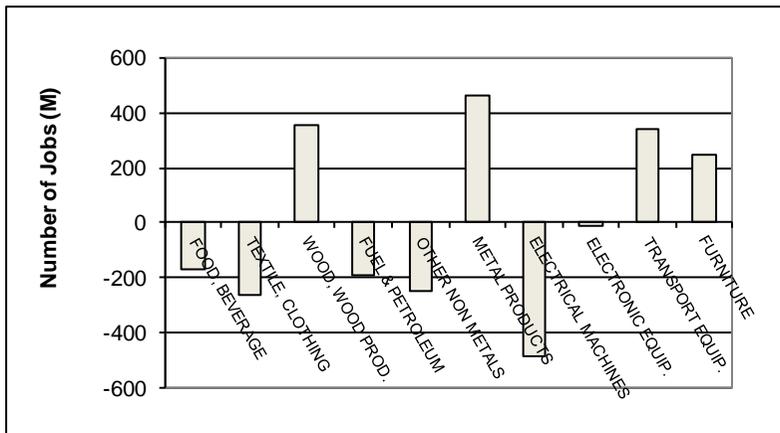
FIGURE 4: Platinum SDI: The Industrial Mix Effect (M)
Source: *Rex Database, 2011 – Authors' analysis*

According to **FIGURE 5** there was a very large shift in employment opportunities towards the Platinum SDI region due to the region's excellent regional competitive share effect. The employment gain due to this effect was 11.4%. **FIGURE 5** indicates that the sectors that gained most in this regard were the sectors for food and beverages, metal products and other non-metal mineral products.
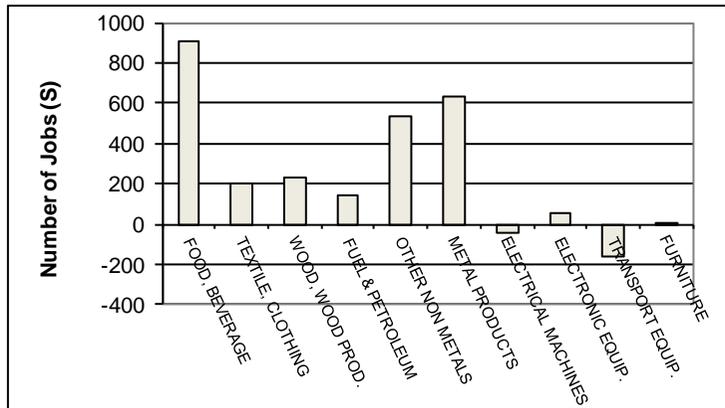
FIGURE 5:   Platinum SDI: Regional Competitive Share Effect (S)
Source: *Rex Database, 2011 – Authors' analysis*

Considering the Platinum SDI in total, the results revealed that development in the Platinum SDI since 1996 was excellent and had created many employment opportunities. Sectors with the highest potential were wood and paper products, food and beverages, electronics, furniture and metal products, and they merit attention in future development initiatives. The following section considers the shift-share effects and growth rates of the Platinum SDI in comparison with the rest of the North West Province.

3.2   Growth in employment

Comparing average growth rates of the various regions (see **TABLE 2**) for the whole period under investigation (1996-2006), the Platinum SDI grew 5%, while the North West Province declined by 7% and the province excluding the Platinum SDI (called "the Rest" from here on) declined by negative 14%. Employment grew strongly in the SDI, 19% better than the rest of the province and 12% better than the provincial average.

In the initial six years (1996-2001) employment opportunities declined by 5%, while the provincial average dropped by 16% and the rest of the province diminished by a staggering 22%. This implies a decline in employment, but not as bad as the regions outside of the Platinum SDI. The province lost 11% more jobs than the SDI, while those areas outside the SDI lost 17% more. It seems as if the Platinum SDI has done much better than the rest.

During the period 2002 till 2006 many job opportunities were gained. The average employment in the North West Province grew by 8%, the rest of the province by 9% and the Platinum SDI by only 6%. Employment in the SDI grew well, but provincial growth was 2% better and those areas outside the SDI surpassed it by 3%. In this period there was economic prosperity in the whole of South Africa and also in North West Province.

TABLE 2:   Comparison of growth rates

GrowthRates SECTOR	'96-06 NW	96-06 SDI	'96-06 Rest	96-01 NW	96-01 SDI	96-01 Rest	02-06 NW	02-06 SDI	02-06 Rest
FOOD, BEVERAGE	-11	11	-25	-10	11	-24	-1	-2	0
TEXTILE, CLOTHING	-27	-12	-31	-17	1	-22	-14	-16	-13
WOOD, WOOD PROD.	22	41	11	10	27	0	8	6	9
FUEL & PETROLEUM	-15	-9	-20	-6	0	-11	-12	-13	-12
OTHER NON METALS	-17	4	-29	-40	-25	-48	38	37	38
METAL PRODUCTS	8	21	-1	-18	-8	-24	26	24	27
ELECTRICAL MACHINES	-55	-59	-49	-23	-31	-11	-42	-42	-43
ELECTRONIC EQUIP.	-16	18	-31	-15	18	-30	4	3	5
TRANSPORT EQUIP.	18	6	28	-19	-27	-12	45	45	46
FURNITURE	7	7	6	-13	-13	-14	13	11	15

Source: *Global Insight, 2012 – Rex Database – Authors' calculations*

The idea that the government supported the SDIs well during the initial period but lost interest along the way seems to be substantiated. It is, however, difficult to isolate the results of the SDI initiatives from other factors.

Comparing the two research periods revealed that the Platinum SDI has grown by 10%, while jobs in the North West Province as a whole grew by 24% and the change in the rest of the province, excluding the SDI, grew by 31%, from negative 22 to positive 7. This again implies that the SDI actually grew less than the rest of the province.

3.3   The National Share Effect (N)

The national share effect indicates how much regional employment would have grown, had each of its sectors and, therefore, the total region, grown at the same rate as the national average employment growth. **TABLE 3** presents the results for the Platinum SDI between 1996 and 2006.

During the period 1996 to 2001 employment growth was even worse, causing a decline of 17% in the Platinum SDI and a decline of 21% in the rest of the province. There was positive growth in the next five years though, where jobs in the SDI grew by 8% and the rest of the province by 7%. In this period (2001-2006) the effect of the Competitive Share and Industrial Mix turned negative in the SDI, though the Competitive Share became very strong in the rest of the province, outside the SDI.

TABLE 3: Shift-Share analysis of the Platinum SDI (1996-2006)

SECTOR	1996	2006	R	N	M	S
FOOD, BEVERAGE	4 238	4 683	445	−297	−170	912
TEXTILE, CLOTHING	1 325	1 167	−158	−93	−265	200
WOOD, WOOD PROD.	1 235	1 737	502	−86	358	230
FUEL & PETROLEUM	2 416	2 194	−222	−169	−193	140
OTHER NON METALS	2 510	2 615	105	−176	−251	532
METAL PRODUCTS	3 104	3 768	664	−435	466	633
ELECTRICAL MACHINES	1 015	416	−599	−71	−487	−41
ELECTRONIC EQUIP.	169	200	31	−12	−15	58
TRANSPORT EQUIP.	1 371	1 454	83	−96	343	−164
FURNITURE	1 785	1 918	133	−125	250	8
TOTAL	19 168	20 152	984	−1 342	36	2 290

Source: *Global Insight, 2012 – Rex Database – Authors' calculations*

3.4 The industrial mix effect (M)

The advantage that a region gains due to its particular mix of industries also has an influence on employment growth and this aided employment growth during the research periods. The industry mix component shows how the region's industrial structure factors affected its overall employment growth performance (Kleynhans & Sekhobela, 2011:20).

The rate of local employment growth would exceed the national average when local employment is concentrated in the fast growing sectors. On the other hand, the growth rate of regional employment would be lower than the national economy-wide average if the regional employment is concentrated in slow growing sectors. The industry mix effect is calculated as a product of the region's sectoral employment in the initial year and the marginal rate of growth. The marginal rate of growth (MR) is the difference between the national sectoral growth and the national average growth.

TABLE 4 shows the contribution that the industrial mix effect had, relative to the size of a sector in a specific region. It can be seen that the total effects were very limited, but the industrial mix effects were rather strong in specific sectors, like wood and paper products, metal products, and transport equipment. In the sectors for textiles, chemicals and petroleum, and electrical machinery, it was very negative. There was also not much difference between the industrial mix effects of the various sectors in the Platinum SDI and that of the rest of the province.

TABLE 4: **Industrial mix, percentage contribution**

(M%) SIC	SECTOR	*96-06* SDI	*'96-06* Rest	*96-01* SDI	*96-01* Rest	*02-06* SDI	*02-06* Rest
30	FOOD, BEVERAGE	−3.6	−5.4	5.4	7.4	−9.2	−9.0
31	TEXTILE, CLOTHING	−22.7	−28.9	−1.0	−0.7	−26.6	−25.7
32	WOOD, WOOD PROD.	20.6	26.1	20.5	26.0	−0.4	−0.4
33	FUEL & PETROLEUM	−8.8	−10.0	10.0	11.1	−23.3	−22.9
34	OTHER NON METALS	−9.6	−14.1	−32.2	−46.2	21.7	21.5
35	METAL PRODUCTS	12.4	15.1	−2.2	−3.0	14.5	14.2
36	ELECTRICAL MACHINES	−117.1	−94.1	−10.1	−7.8	−87.1	−87.7
37	ELECTRONIC EQUIP.	−7.5	−13.2	0.8	1.0	−4.3	−4.2
38	TRANSPORT EQUIP.	23.6	19.6	−4.1	−3.0	25.8	25.6
39	FURNITURE	13.0	13.2	3.4	2.9	4.3	4.1
Total	TOTAL	0.18	0.49	0.45	0.25	−0.29	−0.19

Source: *Global Insight, 2012 – Rex Database – Authors' calculations*

3.5 Regional competitive share effect (S)

The regional competitive share effect describes how sectors in a region perform relative to the national averages of the same sectors. This is calculated by multiplying the base year employment in each regional sector with the margin between the regional sector's growth rate and the national average growth rate of that sector (Kleynhans & Sekhobela, 2008:18). This is simply the difference between R, N and M. If the region increased its share of employment in that industry, the regional competitive share effect would be positive, while a negative competitive share component suggests that the region's employment share eroded during the period under investigation.

TABLE 5 compares the number of jobs that was created due to the specific region's regional competitive share effect (S). It can be seen that the SDI gained about as many jobs as those lost in the rest of the province, in each case. Percentage contribution relative to the size of the various sectors seems to be in favour of the SDI, which experienced overall growth of 11%, while the rest of the province lost 8% jobs due to their relative uncompetitiveness. It seems as if the initiatives of the Platinum SDI had some positive influence, but during the period 2002 to 2006, when the whole country enjoyed high positive economic growth, the Platinum SDI lost 231 jobs, while the rest of the province outside the Platinum SDI gained 300 jobs. This was, however, much smaller when expressed in percentages where the SDI lost only 1.2% compared with its 11% earlier growth, while the rest of the province only gained 1.05% employment.

TABLE 5: **Regional competitive share effect (S)**

Jobs SECTOR	96–06 SDI	'96–06 Rest	96–01 SDI	96–01 Rest	02–06 SDI	02–06 Rest
FOOD, BEVERAGE	912	–946	896	–914	–55	55
TEXTILE, CLOTHING	200	–177	237	–232	–30	30
WOOD, WOOD PROD.	230	–234	212	–212	–30	29
FUEL & PETROLEUM	140	–159	147	–148	–17	17
OTHER NON METALS	532	–541	367	–366	–14	15
METAL PRODUCTS	633	–445	301	–308	–49	49
ELECTRICAL MACHINES	–41	40	–77	76	1	–1
ELECTRONIC EQUIP.	58	–59	56	–57	–1	3
TRANSPORT EQUIP.	–164	171	–116	120	–6	5
FURNITURE	8	–32	3	–11	–31	98
TOTAL	2290	–2383	2027	–2051	–231	300
Total Percentage Share %	11.36	–8.36	11.13	–7.95	–1.15	1.05

Source: *Global Insight, 2012 – Rex Database – Authors' calculations*

4. SUMMARY AND CONCLUSION

It was the objective of this study to assess the ability of the Platinum SDI to create employment and compare it with the rest of the North West Province during the period 1996 to 2006. The initial hypothesis was that the initiatives of the Platinum SDI did not make any difference to the province's ability to create employment, and neither did it advance any economic development. This study could not fully substantiate this hypothesis and had to reject it. The authors wished to show that the initiatives of the Platinum SDI had no positive results. The empirical results, however, revealed that there were significant positive outcomes and that growth and development in the Platinum SDI were in fact greater than the rest of the North West Province.

The objective of this article was to empirically test the results of a previous evaluation of the Platinum SDI, published during 2011 in the Journal of Economic and Financial Sciences. The article commenced with an explanation of an easy method to analyse employment growth on local municipal level using very little data, as this is usually an obstacle to these types of spatial research. Shift-share analysis was then applied to the region under investigation.

The study found that economic growth was, in most cases, better in the Platinum SDI region than in the rest of North West Province. The industrial mix had a strong effect in specific sectors, but then the difference between the SDI and the rest was not significant. Difference in other economic development indicators, like the Human Development Index (HDI), the Gini coefficient and urbanisation rate, was also not significant. The creation of employment due to the regional competitive share effects was also stronger in the SDI Region. The SDI experienced some negative growth in this regard during the last period, but compared with the previous years, it was insignificant. In total the results revealed that development in the Platinum SDI since 1996 has been slightly better than the rest of the province. Sectors with the highest potential were

wood and paper products, food and beverages, electronics, furniture and metal products, and they merit attention in future development initiatives.

The shift-share analysis methodology presents a unique opportunity to compare even small regions and analyse the various components of employment growth in detail, but the problem is still that the influence of initiatives of the Platinum SDI cannot be isolated from other influences. Mmabatho, Rustenburg and Brits were strong economic centres even before the instigation of the Platinum SDI. This was probably part of the motivation to locate the SDI there in the first place. The rest of the province experienced several goldmines closing down as they become redundant, while several new platinum mines are currently expanding near Rustenburg and Brits. Shift-share analysis is a good first step in analysing the research problem, but further research is still necessary.

This paper also did not give adequate attention to the results obtained from the shift-share analysis. The various sectors now have to be analysed individually to determine the kind of growth in each sector, especially in sectors where comparative advantage existed historically. The study should be extended to include mining and services because these are very important sectors in the province, with several goldmines closing down and large platinum reserves being recently discovered and numerous mining operations commencing. The results obtained in this study also indicate which sectors have the potential for further growth and job creation. The strong competitive share and growth potential of transport equipment, non-metal as well as metal products and furniture sectors were significant, and merit further attention in future.

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