
The business cycle resilience of the Western Cape
economy: a regional analysis of the 2009 recession and
subsequent recovery

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ABSTRACT

Business cycle research revived in the run-up to and in the aftermath of the Great Recession. This paper focuses on the concept of regional economic resilience as an applied field of business cycle research. The resilience of the Western Cape regional economy is analysed by assessing the impact of the 2009 recession. Being one of the leading provincial economies of South Africa, the question is asked to what extent the 2009 recession impacted the Western Cape's longer term economic growth path. The latest research techniques in assessing economic resilience are applied, albeit that the analysis is narrowed down to quantifying the region's resistance to and recoverability from the 2009 recession. While the national and provincial contexts receive attention, the focus is on the district economies of the Western Cape. The drivers of economic resilience are decomposed into two key forces, namely industry mix and regional competitiveness, using a shift-share analysis. Longer term structural change is also considered. The paper finds that the Eden and Overberg district economies' growth paths, and the way in which these regions absorbed the recession impact, may provide policy makers with pointers as how to revive the Western Cape's growth path, which took a knock with the 2009 recession.

Keywords: Business cycles, Size and spatial distributions of regional economic activity

JEL codes: E32, R12

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1. Introduction

The study of regional economic resilience has become a popular field of research following the world-wide impact and aftermath of the 2008-09 world-wide recession, or so-called Great Recession. The Great Recession effectively ended the era of the Great Moderation, described by Stock & Watson (2002; 2003) as the period since the early 1980s of increased economic stability and even the '*death of the business cycle*'². However, both in the run-up to and in the aftermath of the Great Recession, interest was re-awakened in studies of the business cycle (Martin *et al*, 2016: 563).

One important issue that came to the fore, is the concept of economic resilience in general and regional economic resilience in particular. The idea that economic swings may have permanent impacts and differ from region to region introduces the concept of economic resilience. The latter is best understood as the ability of a region to re-orientate itself in the event of a (recessionary) shock or disturbance, in order to return – and even improve upon – the pre-existing growth path (see Martin & Sunley, 2015; Boschma, 2015).

Whereas the concept of economic resilience is multi-faceted and broad, today we know that the long-run growth path of a regional economy both shapes and is shaped by the impact of economic recessions and recoveries. A recession may, for instance, cause an economy to veer off its long-run growth path. On the other hand, the long-run growth path of a region (in turn, influenced by the particular industry mix, institutional arrangements and other regional-specific factors) also determine the region's sensitivity to business cycle impacts. The study of the differential impact of recessions on various regions of a country can therefore be a revealing exercise.

In this paper, the economic resilience of the Western Cape economy is investigated in the context of the 2008-09 recession. The research was inspired by work that the author undertook over the period 2012 to 2015 in respect of the Western Cape regional and sub-regional economic trends (see Western Cape Government: *Municipal Economic Review & Outlook, 2012, 2013, 2014 & 2015*). The idea is to investigate the resilience of the Western Cape sub-regions, i.e. the City of Cape Town Metropolitan economy and the five non-metro districts, the Cape Winelands, West Coast, Overberg,

² Just-in-time production techniques, advanced logistics, the increased services orientation of economies, more efficient macro-management, etc. all contributed to the new-found economic stability and the effective flattening of the business cycle. For an account of the erroneous thinking regarding the '*plateau of prosperity*' foreseen by many supporters of the so-called '*New Economy*' boom during the late 1990s, see Achuthan & Banerji (2004: 39-51). It took the 2007-08 global financial crisis to finally break the idea of the Great Moderation. It also spurred the re-emergence of interest in business cycle research.

Eden and the Central Karoo. While the national context receives attention and it is appreciated that the Province is part of the wider national economy, which also influences its resilience, the focus in the current paper is on the Western Cape.

The objective is to assess the Western Cape economy's longer run growth path and to what extent the 2008-09 recession impacted this. *First and foremost*, the region and its constituent districts' economic resilience is mapped in order to identify the more resilient district economies. The analysis is narrowed down to an assessment of the regional *resistance to* and *recoverability from* the 2008-09 recession. Furthermore, the sources of the regions' economic resilience are assessed, also in the context of the longer run structural change of the regional economies. This is hoped will shed some light on the Western Cape's longer term growth path. The analysis is of a descriptive nature.

The conceptual and methodological issues regarding economic resilience and its measurement are unpacked in section 2. Some background is provided by a discussion of the sectoral and spatial dynamics of the Western Cape economy, including the impact of the 2008-09 recession (section 3). The paper proceeds with an analysis of the Western Cape economy's resilience during the 2008-09 recession (section 4). The question is approached from a national, provincial and municipal perspective. *First*, the economic resilience of the region and sub-regions are quantified and mapped (section 4.1). *Secondly*, the forces driving economic resilience are assessed, narrowing them down to the relative roles of *industry structure* and *region-specific competitive factors* (section 4.2). *Thirdly*, some consideration is given to longer term structural change (section 4.3). Concluding remarks follow in the fifth section, spelling out the key implications drawn from the analysis.

2. Methodology

Economic resilience encompasses a range of issues determining the extent to which a region can withstand and recover from a recession impact in order to return to (or improve upon) the growth path preceding the recession. Two issues need to be dealt with before proceeding with the analysis. *Firstly*, the term '*economic resilience*' need to be considered at a conceptual level and, *secondly*, methodological issues related to quantifying and measuring it at the regional level.

2.1. Conceptual issues

The study of regional economic resilience links directly with the study of regional business cycles. Typical themes considered in this regard are the synchronicity of regional business cycles, the sources of variation in regional sensitivities to business cycle developments, long-run changes in these, etc. An economy expands along a certain growth path over the long term, which is interrupted from time to time due to the impact of business cycle swings. These cyclical impacts can

be of a transitory or more permanent nature, depending on the nature of the impact and the region's economic resilience. The question is: *how is the concept of economic resilience defined?*

No single analytical framework has been advanced to interpret regional cyclical sensitivities, but instead various theoretical approaches have been adopted in addressing the topic. Martin *et al* (2016: 562-564) briefly considers some of these. He commences with references to the first systematic analyses of regional business cycles (by Vining & Neff in the 1940s and Borts, Brechling, Harris & Thirlwall and Van Duijn in the 1960s and 1970s). He then outlines the subsequent loss of academic interest in the topic (from the early 1980s to the 2000s during the years of the so-called Great Moderation in the USA) and, finally, refers to the revival of interest witnessed in recent years preceding the Great Recession and during its aftermath (e.g. Krugman; Frankel & Rose; Barrios & Lucio; Carlino & Sill; Artis; Clark & Shin; Harding & Pagan; Zarnowitz & Ozyildirim).

Martin *et al* (2016: 564) suggests that the concept of resilience may be a useful way of studying business cycle impacts on regional economies. While the concept of resilience has its origins in the physical sciences, with some application in the fields of ecology and psychology, interest has only recently arose in the economics field.

In essence, regional resilience refers to the ability of a region to return to its pre-shock state, or even to an alternative more favourable state. Boschma (2015: 2-5) introduces the *evolutionary conceptualisation of regional economic resilience*. According to him the issue of resilience should not be restricted to a region's sensitivity to business cycle impacts (or shocks), i.e. the region's ability to withstand and recover from a shock or fall in demand. What is at stake, is the region's ability to not only restore earlier performance, but to re-organise and reorient itself and embark on a new and improved growth path. Resistance and recoverability to business cycle swings may reflect successful *adaptation*; however, this often leads to an inclination to perpetuate existing structures, rather than *adaptability* to new structures and improved growth paths, which implies a broader conceptualisation of regional economic resilience (see Boschma, 2015: 2-19). Martin *et al* (2016: 564-565), emphasizing that regional economic resilience is a multifaceted process, attempt to clarify issues and they identify at least four elements³:

³ An implicit assumption here is that a trend – or long-term growth path – does not exist independently from the short-term cyclical shock. In reality the trend and cycle components of a region's growth path is inextricably interrelated. Long-term structural change may influence the cyclical behaviour of an economy just as a short-term cyclical shock can alter the long-term growth path of the economy (see Zarnowitz, 1992: 183-190).

- *First*, the risk or vulnerability and exposure of a region's firms, industries, workers and institutions to economic shocks;
- *Secondly*, the *resistance* of a region's firms, industries, workers and institutions to economic shocks, depending on the scale, nature and duration of the shock. Resistance will determine the depth of reaction to a shock impact.
- *Thirdly*, the extent and nature of adjustment to an economic shock, i.e. the extent to which a region's firms, industries, workers and institutions reorient themselves and adapt to restore earlier performance.
- *Finally*, the degree and nature of the region's *recoverability* from the shock. This also includes asking the question to what extent a region's economy has returned to (or improved upon) the growth path immediately preceding the economic shock.

The ability of a regional economy – its firms, industries, workers and institutions – to undergo positive reconfiguration in restoring core performances such as profitability, full employment and investment defines that region's *adaptive robustness, or economic resilience* (Martin et al, 2016: 564). The adaptability of the region may include structural change or improvement.

As noted, the main objective in the current paper is to investigate the economic resilience of the Western Cape economy. While questions regarding the structure of the Western Cape economy and its longer term growth path following the 2008-09 recession impact are at stake, this is regarded as of secondary importance in view of the exploratory nature of the analysis. The analysis rather aims to enlighten the issue by mapping the resilience of the constituent district economies of the Western Cape, both in a provincial and national context.

While the relevant issues in this field of research are broad, this paper narrows the focus down to two (measurable) issues, namely, the regions' *resistance* to the impact of the 2008-09 recession and its *recoverability* from that recession. Attention also focuses on the regions' *vulnerability* to recession in terms of the specific industry mix of the region and its competitiveness. To this end, some methodological issues regarding the measurement of economic resilience need to receive attention.

2.2. Measuring regional economic resilience

While the economic resilience of a region is a multi-faceted concept, it was noted that the current paper focuses on two specific aspects of regional economic resilience, namely *resistance to and recoverability from* an economic recession. Furthermore, while different methodologies are

followed in measuring the reaction of a region to the impact of an economic recession, the method followed by Martin *et al* (2016: 565-566) was applied in this paper.

2.2.1. *Measuring resistance to and recoverability from economic recession*

There are more ways than one to measure resistance to and recoverability from a recession. Section 3.2 describes the 2009 recession impact on the Western Cape economy across sectors and regions. The proportional rates of change in real value added already present a first take on economic resistance and recoverability⁴. A better way to express a region's resistance to (and recoverability from) an economic recession may be to calculate the difference between the region's actual response to a recession impact and that of an *expected* (or 'counter-factual') impact, where the expected impact is that of the national (or broader regional) economy. In this case, the decline and recovery of the national (or broader regional) economy is the expected 'drop' and 'rebound' for any of the sub-regions. Therefore the expected change in the output (Y) of region r to a recession (or recovery) commencing at time t, and with duration k periods, can be defined as:

$$(\Delta Y_r^{t+k})^e = \sum_i g_N^{t+k} Y_{ir}^t \quad [1]$$

Where g_N^{t+k} is the rate of contraction (in recession from peak-to-trough) or expansion (in recovery from trough-to-peak) of national output; and Y_{ir}^t is the output of industry i in region r at time t, i.e. the base year when the recession/ recovery commenced. Therefore measures of regional resistance and recoverability can respectively be defined as (see Martin *et al*, 2016: 566):

$$Resis_r = \frac{(\Delta Y_r^{contraction}) - (\Delta Y_r^{contraction})^{expected}}{|(\Delta Y_r^{contraction})^{expected}|} \quad [2]$$

$$Recov_r = \frac{(\Delta Y_r^{recovery}) - (\Delta Y_r^{recovery})^{expected}}{|(\Delta Y_r^{recovery})^{expected}|} \quad [3]$$

The expected regional contraction/ recovery in output is simply the contraction/ recovery in national output applied to the peak/ trough output level of the region under consideration; this calculation can be conducted at the regional level or summed across the i industries of region r.

The value for $Resis_r$ and $Recov_r$ will be centered on zero: a negative resistance value (i.e. $Resis_r < 0$) indicates the region is less resistant to recession compared to national; whereas a positive resistance value (i.e. $Resis_r > 0$) indicates the region being more resistant to recession compared to national.

⁴ Martin *et al* (2016: 566) argues that changes in employment serve as a better measure of resistance and recoverability as it is workers who usually bear the biggest brunt of a recession impact; employment also tends to be more cyclical compared to output for instance. Whilst this may be true, it was instead decided to work with output (or real value added) in this paper. It is a satisfactory broad measure of economic activity. Furthermore, South Africa's employment statistics are known to be unreliable.

The same applies in the case of recoverability. It is therefore possible to measure the resistance and recoverability of a region and plot it on a chart with four quadrants (see Section 4.1):

- <0 on the resistance axis and <0 on the recoverability axis: both weak resistance and recoverability, i.e. **least resilient**;
- >0 on the resistance axis and <0 on the recoverability axis: good resistance and weak recoverability, indicating a high degree of **stability**;
- <0 on the resistance axis and >0 on the recoverability axis: weak resistance and good recoverability, indicating some **flexibility**;
- >0 on the resistance axis and >0 on the recoverability axis: both good resistance and recoverability, i.e. **most resilient**;

2.2.2. *The role of industry structure and regional competitiveness*

Apart from assessing resistance to and recoverability from cyclical economic impacts, it is also necessary to come to grips with the source(s) of economic resilience. What role does industry mix and regional competitiveness factors, for instance, play in the economic resilience of a region? Furthermore, how do we link industrial structure and regional competitiveness with resistance and recoverability? Martin *et al* (2016: 571-572) propose a shift-share approach decomposing the change in output (or employment) in a region over a recessionary or recovery period into three components, i.e. a national component, an industrial mix effect and the shift related to 'regional competitiveness'. For a region *r* experiencing a decline (increase) in output (*Y*) from the onset of recession (recovery), at time *t*, for *k* periods, the shift-share decomposition can be expressed as:

$$\Delta Y_r^{t+k} = \sum_i (g_N^{t+k} Y_{ir}^t) + \sum_i (g_{iN}^{t+k} - g_N^{t+k}) Y_{ir}^t + \sum_i (g_{ir}^{t+k} - g_{iN}^{t+k}) Y_{ir}^t \quad [4]$$

where g_N^{t+k} is the percentage rate of change in national GDP over the period of the recession (recovery); g_{iN}^{t+k} is the corresponding rate of change in respect of national sector *i*; and g_{ir}^{t+k} is the corresponding rate of change in respect of sector *i* in region *r*. Alternatively, the first component is none other than the expected contraction/ expansion of the regional GDP (using the change in national GDP as proxy – see above); the second component involves the share of the regional GDP change purely in terms of the industrial mix, i.e. a sector in the region of which its national counterpart contracts faster (recovers stronger) compared to national GDP will receive a larger weight in the overall change in the regional GDP; the third factor accounts for the remainder of the regional shift in GDP, i.e. the extent to which the sector in region *r* contracts (recovers) faster

compared to its national counterpart will determine the relative weight of a ‘regional competitiveness’ effect in the overall change in the region’s GDP.

Re-writing equation 4, it is possible to isolate the industry mix effect and the regional competitiveness effect (on the right-hand side of equation 5):

$$\Delta Y_r^{t+k} - \sum_i (g_N^{t+k} Y_{ir}^t) = \sum_i (g_{iN}^{t+k} - g_N^{t+k}) Y_{ir}^t + \sum_i (g_{ir}^{t+k} - g_{iN}^{t+k}) Y_{ir}^t \quad [5]$$

Therefore, both resistance and recoverability can be decomposed into two driving factors, namely resilience that originates from the particular industry mix in the region/ sub-region (alternatively, industry structure) and, *secondly*, resilience arising from regional-specific competitiveness factors. The latter may include a range of factors, e.g. institutional factors, governance factors, infrastructural factors, etc. Martin *et al* (2016: 573) finds that the regional competitiveness effect tends to outweigh the industry structure effect in determining resistance and recoverability. In section 4.2 the economic resilience of the Western Cape economy is decomposed between these two drivers in order to gain a better understanding of the region’s resilience.

2.2.3. *Measuring longer terms structural change*

While shorter term (cyclical) change and longer term trends are intertwined, it is necessary to differentiate between shorter term (cyclical) changes and longer term (structural) changes. The question is how longer term structural changes (in industry mix, for instance) may influence the shape of cyclical swings in economic activity; and, *secondly*, also in understanding how the latter may impact a region’s longer term growth path. The 2008-09 recession was one with potential longer term impacts. Various methodologies exist for investigating and measuring longer term structural change. A wide literature has also evolved on the topic. One way of measuring long-run changes in a region’s industrial structure, is to calculate so-called Krugman structural dissimilarity indices, as shown in the following equation:

$$D_r^t = \sum_i \left| \left(\frac{E_{ir}^t}{E_r^t} \right) - \left(\frac{E_{iN}^t}{E_N^t} \right) \right| \quad (6)$$

The index compares the regional output share of each industry (i) in the region at time t $\left(\frac{E_{ir}^t}{E_r^t} \right)$ to the share of the same industry in national output $\left(\frac{E_{iN}^t}{E_N^t} \right)$. The value of the index ranges between zero and two. The higher the value of the index, the more specialised the industry structure in the region compared to national, i.e. one or more industries dominating production in the relevant region. Therefore, a lower reading indicates no structural dissimilarity compared to national, while a higher

reading indicates greater structural dissimilarity compared to national. In applying this methodology, the share of each industry in the district (or sub-region of the Western Cape) was compared to the same industry's share in provincial output. The resultant indices track the longer term change in each district's industry structure (see section 4.3).

3. The Western Cape economy and the 2008-09 recession

The Western Cape is one of the leading economic regions in South Africa, hosting the second largest metropolitan economy, i.e. the City of Cape Town Metropolitan Municipality. The provincial economy accounts for 14% of national GDP and is known to differ in terms of industry structure from the mining provinces in the north of the country (e.g. Free State, Gauteng, North West, Mpumalanga and Limpopo). Nationally, the 2008-09 economic recession will be remembered for the fact that it embodied an abrupt end to the record economic expansion between the end of 1999 and the end of 2007. The recession was externally induced, being triggered by the 2007 global financial crisis, and impacted the Western Cape economy. It is instructive to briefly assess the spatial and sectoral dynamics of the Western Cape and how the 2008-09 recession impacted the region.

3.1. Western Cape spatial and sectoral dynamics

Two outstanding features of the Western Cape economy are, *firstly*, the fact that economic activity is concentrated geographically; and, *secondly*, dominated by services. Both these elements need to be qualified to the extent that the agricultural sector (and its associated processing activities) plays



a central role in the development of the region. Whereas the Western Cape economy accounts for 14% of national value added, the agriculture, forestry & fishing sector contributes 24% of its national counterpart, illustrating the comparative advantage of this sector in the Western Cape. On the other hand, the mining sector is largely absent in the Western Cape in stark contrast to the mining provinces in the north of the country.

There are two nodes of economic development in the Western Cape, i.e. the City of Cape Town Metropolitan Municipality (or Cape Metro) and what may be defined as a 'sub-node' at this stage, being Eden. Located in the south-western tip of the Province, economic development ripples outwards from the Cape Metro node into the interior. While agricultural activities (including forestry and fishing) have been dwarfed by the manufacturing and services activities in the Cape Metro, a consistent economic development theme in the outlying regions (i.e. the Cape Winelands – 11.3% of regional value added; West Coast – 4.3%; Overberg – 3%; Eden – 7.6%; and the Central Karoo, 0.6%) is the agricultural origins of these areas upon which much of the secondary and services activities in each area have been leveraged. On the other hand, the outlying municipal economies, integrated with the Cape Metro economy, benefit from their proximity to Cape Town and all its infrastructural and logistical attributes.

Regarding the **geographic concentration** of economic activities, not only do we find the bulk of economic activity in the Cape Metro (73%), but also amongst the non-metropolitan regions, economic activities are concentrated in one or two municipalities. The two largest municipalities in each of the Cape Winelands, West Coast and the Overberg account for 64%, 61% and 70% of their respective regional value added, being closely – or reasonably closely – integrated with the Cape Metro⁵. The Cape Metro node can for all intents and purposes be expanded to include the two leading Winelands municipalities of Stellenbosch and Drakenstein; the combined value added accounted for 80% of Western Cape value added in 2013.

The Eden 'sub-node' (or future metropolitan region) hosts the coastal municipal economies of George, Mossel Bay and Knysna, accounting for 70% of economic activity in the region. The Eden 'sub-node' has been the fastest growing region in the Province. Another region, which is rapidly expanding, is the Overberg. The third largest non-metropolitan region, i.e. the Saldanha Municipality in the West Coast, also represents a potential node of economic development; however, the growth of this region has been lagging.

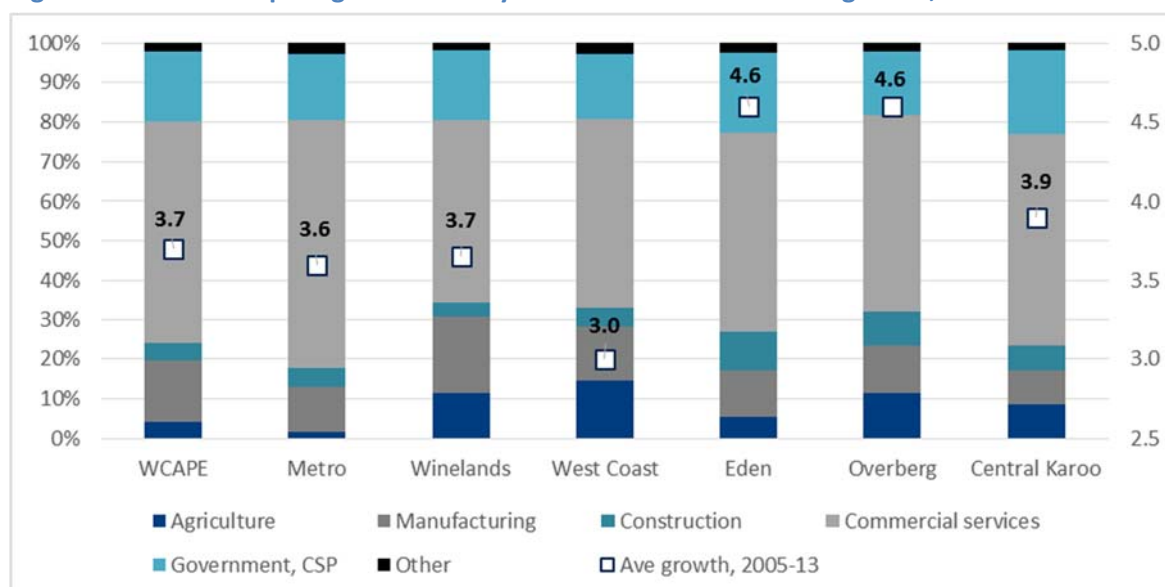
Regarding **industry structure**, the services orientation of the Western Cape economy is a well-documented fact – see *Figure 1*⁶. The complete tertiary sector (i.e. commercial and CSP services)

⁵ The stark reality is that the Cape Metro and the top ten non-metropolitan municipalities (out of a total of 24) accounted for 92% of Western Cape value added in 2013. This contrasts with the 4% of value added generated in the smallest ten municipal economies of the Western Cape. The concentration of economic activity is actually worsening, albeit not dramatically (MERO, 2015).

⁶ The analysis is at a relatively high level of aggregation, with manufacturing and commercial services shown as one sector respectively. Commercial services are distinguished from the other two main tertiary sectors, i.e. the general government and community, social & personal services (CSP). It consists of a diverse range of tertiary economic activities, namely wholesale, retail, catering & accommodation services; transport and

accounts for close to three quarters of aggregate value added, grew the most rapid over the 2000s and, in terms of employment, more than compensated for the steep job losses in the agricultural, manufacturing and construction sectors. The commercial services sector dominates economic activity (56%) in all six Western Cape districts (accounting for no less than 63% of the Cape Metro's value added in 2013). The government and CSP services sector (18%) and manufacturing (consisting of food & beverage processing industries, clothing and textile companies, wood products & furniture, to metals and machinery, petro-chemicals and automotive) are the other two main sectors. Manufacturing's contribution has declined over the past 20 years and was measured at 15.5% in 2013. Across the district regions, the largest manufacturing sector (in relative terms within the district) is found in the Cape Winelands, accounting for 19% of that region's value added in 2013.

Figure 1: Western Cape regions: Industry structure & real economic growth, 2013



Source: Quantec Research; own calculations

Table 1: Western Cape regions: Revealed industry comparative advantage, 2013

	Cape Metro	Winelands	West Coast	Eden	Overberg	Central Karoo
Agriculture	0.37	2.82	3.51	1.30	2.76	2.14
Manufacturing	1.02	1.44	1.05	1.09	0.97	0.69
...Food & beverages	0.62	3.56	1.97	1.13	1.26	0.90
Construction	0.93	0.84	1.02	2.07	1.82	1.36
Commercial services	1.11	0.80	0.86	0.88	0.90	0.96
...Catering & accom	0.85	1.09	0.72	1.79	1.13	1.19
Government; CSP	0.84	0.93	0.84	1.02	0.82	1.12
Other	0.69	0.49	0.71	0.69	0.54	0.47
Total	1.00	1.00	1.00	1.00	1.00	1.00

Source: Quantec Research; own calculations. CSP – Community, Social & Personal services.

communication and the finance, insurance, real estate & business services sector. The personal services sector also contains some important commercial services; however, the data availability did not allow disaggregation.

The construction industry contributes 4.3% of Western Cape value added, with the sector's presence above-average in the fast-growing Eden and Overberg regional economies, accounting for 9-10% of value added in 2013. The agricultural sector has a similar contribution to provincial value added; however, it varies significantly across the districts, with the contribution measuring 14½% in the West Coast and 11-12% in the Cape Winelands and the Overberg. The Central Karoo and – to lesser extent – Eden's agricultural contributions are also above average. The 'other' industries shown in Figure 1 comprise electricity & water and mining, with the combined share of these industries not exceeding 3% in any of the districts.

While the relative size of the industries, already provides a hint of the **regional competitive edges**, it is interesting to consider the results of a simple location quotient analysis – see *Table 1*⁷. The comparative advantage of the agricultural sector is immediately evident, with all the non-metro districts registering high location ratios in 2013. Furthermore, the forwardly linked food & beverage processing industry reveals comparative advantage in all the non-metro districts, except the Central Karoo. Interesting linkages are also developing with tourism activity. The growth of the catering & accommodation sector (and retailing in Eden) is symptomatic of the vibrancy of tourism in most districts, notably the Winelands, Eden and the Overberg. The agricultural sector remains a cornerstone of the Province and, linked with tourism, has come to the fore as a key contemporary source of economic expansion.

The whole range of commercial services is important for the growth and development of the Province. The City's comparative advantage in commercial services resides in financial & business and transport & communication services. The City also possesses a competitive manufacturing sector. As noted, the growth of some of the manufacturing industries has dwindled in recent years. Apart from international trade, the City presumably has important forward linkages with the outlying regions, where manufacturing activity has also grown (Winelands, Eden and the West Coast). The petro-chemical industry of Eden are known, as well as wood products & furniture manufacturing in Eden and the Overberg and wine making in the Cape Winelands.

Finally, the relatively robust growth of the Eden and Overberg districts is creating demand for construction activity, a sector with a competitive edge in the West Coast and Karoo as well and forward linkages with non-metal minerals manufacturing in all the non-metro districts.

⁷ The relative share of a particular industry in the sub-region is weighted with that of the same industry in the wider region (provincially or nationally). Table 1 shows the results, i.e. sectors with a comparative advantage being those sectors in respect of which the location ratio > 1 (and shaded in red).

3.2. The 2008-09 recession impact and subsequent recovery

While the SA economy was exposed to the Great Recession, the domestic impact was countered by strong anti-cyclical fiscal policy. *Real gross domestic expenditure contracted by 3% (peak-to-trough) and real GDP by 2.5%, which was relatively mild by historical standards.*⁸ The adverse impact on employment was substantially worse – *the contraction in employment (7½%) effectively reversed close to half of the net jobs created over the five calendar years preceding the recession.* The employment outcome is explained by the impact on the employment intensive tradable goods sectors, i.e. mining and manufacturing. By the end of 2013, i.e. four years into the economic recovery, neither the level of real goods and non-factor services exports, nor manufacturing and mining real value added had recovered to their pre-recession levels.

SA's economic growth slowed substantially after 2009. After rebounding, with real economic growth averaging 3.2% per annum (2010-11), it tapered off to 2.3% per annum (2012-13) and 1.4% per annum (2014-15). This compares to 5.2% real growth per annum over the period 2004-07 preceding the recession. In fact, the economy entered a downturn from the end of 2013, implying that the economic upswing lasted slightly more than four years (September 2009 to November 2013).

The Western Cape region expanded the fastest in the country over the 2004-07 period (by close to 6% per annum), however, the margin of outperformance shrunk during the post-2009 period due to the slower growth of the financial services (and other commercial services) sectors. Regional growth tapered down to 3.2% per annum, 2010-11; and further to 2.4% per annum, 2012-13. During calendar 2009 real value added contracted by 1.2% (compared to 1.5% nationally)⁹. The Western Cape regional and the sectoral recession impact and recovery are shown in Table 2 and Table 3 respectively.

Table 2: Western Cape: 2008-09 recession impact & recovery at the regional level, 2008-13

	Gross value added (2010 prices; % growth pa)				Employment (number change pa)		
	% share 2013	Trend 2005-13	Recession 2008-09	Recovery 2010-13	Trend 2005-13	Recession 2008-09	Recovery 2010-13
Cape Metro	73.1	3.6	1.5	2.7	5700	-1000	-200
West Coast	4.3	3.0	1.4	2.8	-1600	-3300	100
Cape Winelands	11.4	3.5	1.8	2.7	-1500	-1900	-1400
Overberg	3.0	4.6	4.2	3.4	-600	-1000	-300
Eden	7.6	4.6	3.0	3.8	1000	1300	-600
Central Karoo	0.6	3.9	3.4	2.6	-100	-	-200
Western Cape	100.0	3.7	1.7	2.8	2800	-5900	-2600

Source: Quantec Research; own calculations

⁸ The average contraction of SA's real GDP during post-1974 recessions was 4.1%.

⁹ While quarterly national statistics are not available at the regional level, a rough estimate of the Western Cape's GDP contraction from peak-to-trough is 2.2% (compared to 2.5% nationally).

Table 3: Western Cape: 2008-09 recession impact & recovery at the sectoral level, 2008-13

	Gross value added (2010 prices; % growth pa)				Employment (number change pa)		
	% share 2013	Trend 2005-13	Recession 2008-09	Recovery 2010-13	Trend 2005-13	Recession 2008-09	Recovery 2010-13
Agriculture	4.0	2.3	8.2	0.6	-9300	-12100	-3400
Mining	0.3	-0.7	-7.4	2.1	200	100	-
Manufacturing	12.5	2.3	-3.3	2.7	-5300	-12100	-2400
Electricity & water	2.3	1.2	-1.6	1.0	100	-1000	100
Construction	5.0	6.2	5.5	1.7	-3200	-3900	-7400
Internal trade	19.0	3.7	-0.6	3.7	8000	2900	1400
Tpt & communication	9.0	3.7	2.0	2.3	1800	4000	2200
Finance & buss services	30.6	4.8	3.9	3.2	3000	-1800	6300
CSP services	5.2	2.6	1.4	1.7	3700	12300	-1600
Government	12.1	3.5	4.3	3.2	3700	5700	2200
Western Cape	100.0	3.7	1.7	2.8	2800	-5900	-2600

Source: Quantec Research; own calculations

The average annual growth rates in real gross value added and the annual changes in the level of employment are shown in the respective tables. Overall, the Western Cape economy experienced a notable slowdown during the recession years of 2008-09, i.e. from a trend growth rate of 3.7% (and 6% in the four calendar years preceding the recession) to 1.7% per annum. The trend rate of employment creation reversed from 2800 employment opportunities per annum to net retrenchments averaging close to 6000 employment opportunities during 2008-09.

The real economic growth rate accelerated to 2.8% during the ensuing recovery phase of the business cycle; however, this rate of expansion was less than half compared to that during the years preceding the recession. Furthermore, the net retrenchments continued at an average rate of 2600 per annum, 2010-13.

While the national dimensions of the 2008-09 recession were not serious by historical standards, the impact on the tradable goods sectors and employment was. Both nationally and in the Western Cape, the manufacturing sector did not show much resistance. Mining has an insignificant presence in the Western Cape, but even here, the impact was sharp (mainly in the West Coast). There appears to have been some resistance in sub-regions, e.g. Eden, Overberg and the Central Karoo; however, in terms of employment, it was only Eden. The economic recovery of the Western Cape mirrored that of national, being relatively weak, particularly in terms of employment creation. In fact, the recessionary net job losses continued well beyond the end of the recession. The Western Cape's margin of national economic outperformance also narrowed. As the financial services sector is well-represented in the Western Cape, the slowdown of this sector impacted the Western Cape regional economy disproportionately during the post-financial crisis period. This theme is elaborated further in the final section.

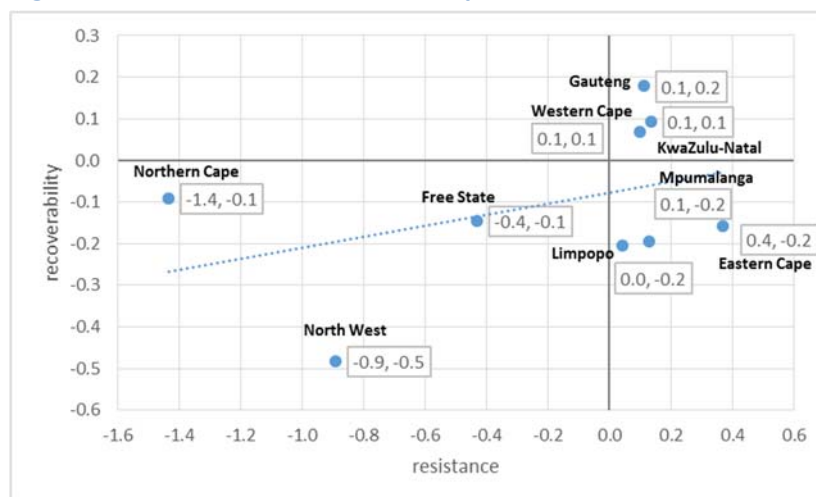
4. The resilience of the Western Cape economy during the 2008-09 recession

The objective of the current paper is to analyse the resilience of the Western Cape regional economy during the so-called Great Recession. As discussed, it would appear as if the 2008-09 recession had a path-breaking impact. The question is whether some sense can be made in this regard by investigating and mapping the region's economic resilience.

4.1. Quantifying and mapping regional and sub-regional resilience¹⁰

Before the resilience of the Western Cape district economies is investigated, it is useful to consider the Western Cape economy's resilience in a national context. As noted, the Western Cape has a well-established track record of growing faster compared to its national counterparts. A key competitive edge of the Western Cape economy resides in the fact that the Province hosts a large share of the fastest growing services industries in the country, financial and business services in particular. In fact, in view of the post-2009 global financial crisis conditions, this is a key reason why the national outperformance of the Western Cape came under pressure in the aftermath of the 2008-09 recession (MERO, 2015: 15). This section explores the economic resilience of the Western Cape economy, commencing with a consideration of the national picture and, thereafter, with a consideration of the provincial picture (at the district level).

Figure 2: Economic resilience of SA's provinces: the 2008-09 recession



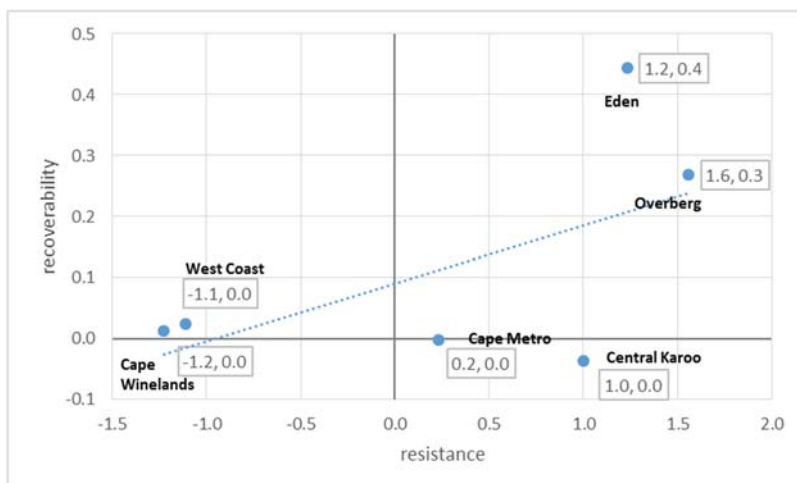
Source: Statistics SA; own calculations

¹⁰ Economic resilience is not something which is fixed for any region. It can change over time as the forces determining risk, resistance, adaptation and recoverability themselves may undergo change. The focus in this paper is on the 2009 recession and not an attempt to investigate resilience over time during successive business cycles. The resilience of SA's provinces (and the Western Cape in particular) was calculated in respect of the first post-apartheid recession, i.e. 1997-99; however, this is not being published. The results were broadly in line with that of 2009 even though the two economic downturns differed; the former was a *growth recession* and the latter a *classical recession*, including a notable contraction in GDP.

Figure 2 maps the economic resilience of South Africa’s provinces, calculated from equations 2 and 3. A number of observations can be made. *Firstly*, a positive correlation between recoverability and resistance is evident, i.e. the more resistant a region, the more recoverable that region tends to be; this is what one would expect (see Martin *et al*, 2016: 568). *Secondly*, the only three provinces with recoveries (up to the end of 2013) above that of the national average included Gauteng (the most resilient), Western Cape and KwaZulu-Natal, i.e. the three largest provinces in terms of economic contribution. It should be noted that while these three provinces are entered in the ‘*most-resilient*’ quadrant of the chart, the degree of economic resistance and recoverability outperformance is marginal, i.e. ranging between 10% and 20% better compared to national. Given the size of these provinces, the small margin of outperformance above national can be explained.

Thirdly, it is clear that all the other provinces lagged the general economic recovery, particularly North West Province, also suffering a serious recession impact. Once more, relative underperformance in recoverability is marginal in a national context, with it ranging between 10% and 20% below national in respect of the Eastern Cape, Mpumalanga, Limpopo, the Free State and Northern Cape. In fact, the Eastern Cape turns out being the most resistant to the impact of the 2008-09 recession and Mpumalanga and Limpopo on a par with the three large provinces, i.e. Gauteng, Western Cape and KwaZulu-Natal. The three least resistant provinces (also lagging in the general recovery) were the Free State, Northern Cape and North West. These three provinces are located in the ‘*least resilient*’ quadrant of the chart.

Figure 3: Resilience of the Western Cape economy during the 2008-09 recession

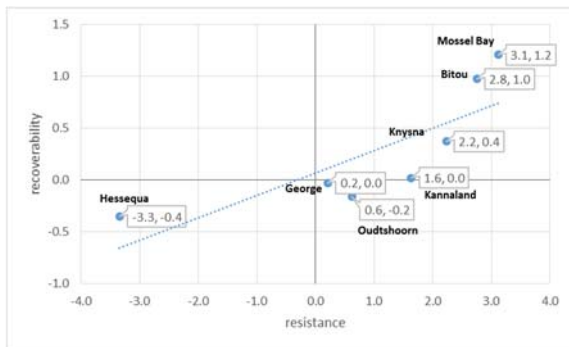


Source: Quantec Research; own calculations

While the national configuration of the SA economy’s regional resilience is interesting, it is also possible to dig a little deeper and measure economic resilience at the provincial and sub-regional (or district) levels.

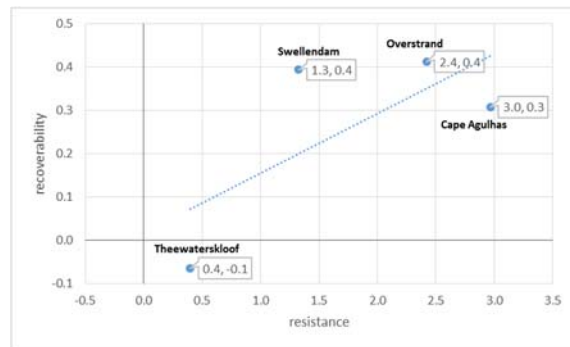
Calculations below are first made in respect of the Province, mapping the resistance (x-axis) and recoverability (y-axis) of the six district economies to the 2008-09 recession – see Figure 3. Following the provincial analysis, the same calculations were made in respect of each individual non-metro district, where the resistance (x-axis) and recoverability (y-axis) of the constituent municipal economies to the 2008-09 recession were mapped – see Figure 4 to Figure 8¹¹.

Figure 4: Resilience of Eden District



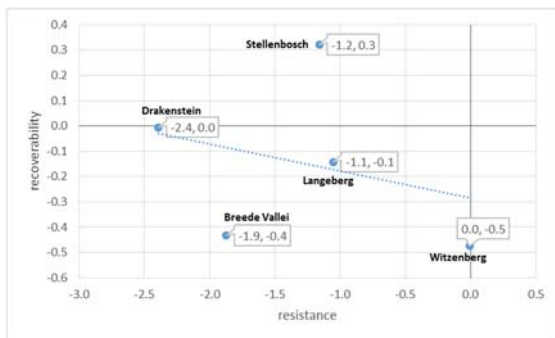
Source: Quantec Research; own calculations

Figure 5: Resilience of Overberg District



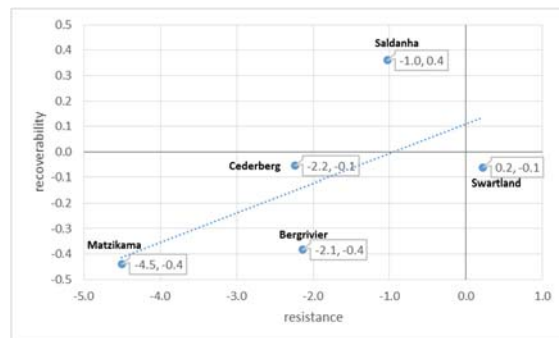
Source: Quantec Research; own calculations

Figure 6: Resilience of Winelands District



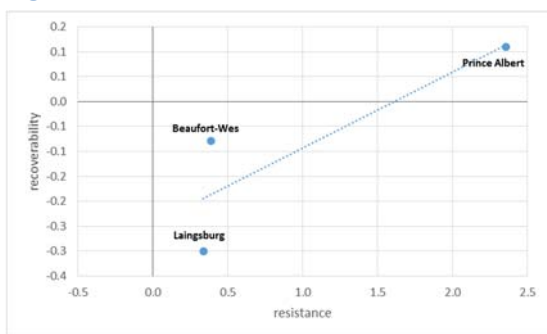
Source: Quantec Research; own calculations

Figure 7: Resilience of West Coast District



Source: Quantec Research; own calculations

Figure 8: Resilience of Central Karoo District



Source: Quantec Research; own calculations

As noted, the province consists of one metropolitan and five non-metropolitan districts, i.e. the Cape Metro, the Cape Winelands; the West Coast; Eden; Overberg and the Central Karoo. Figure 3

¹¹ Regional economic resilience was measured as the weighted contraction in regional real value added (during the 2008-09 recession) and its expansion (during the 2010-13 economic recovery), applied to and summed across 23 subsectors of each sub-regional (district) economy.

illustrates the regional resilience of the six Western Cape districts during the 2008-09 recession. It is clear that Eden and Overberg are the most resilient regions and the Cape Winelands and West Coast regions the least resilient, with the latter two regions scoring particularly low on resistance.

Considering the picture in Figure 3, it is clear that there has been some variance in the levels of resistance to the 2008-09 recession, with the Overberg economy being the most resistant and the Cape Winelands economy the least resistant. Recoverability, on the other hand, has been generally weak, with district readings varying between zero and 0.4. The general poor recoverability from the 2008-09 recession has been a country-wide (and even global) phenomenon. Recoverability was strongest in Eden and weakest in the Central Karoo. It should be noted at this point that, when the resilience of the Eden municipalities are investigated (Figure 4), some municipalities show stronger recoverability from the 2008-09 recession, e.g. Mossel Bay and Bitou (these are the fastest growing sub-regions in the Eden District).

It is important to note the positive relationship between resistance and recoverability, which implies that recoverability tends to be stronger, the stronger the region's resistance to economic recession. This is corroborated by the general tendency in the sub-regions (or respective district economies); only the Cape Winelands region shows an inverse relationship between resistance and recoverability. In this district of the Western Cape, almost all the municipalities are located in the '*least resilient*' quadrant of the spectrum of possibilities – only the Stellenbosch municipality scores positively on recoverability. The weak resilience of the Cape Winelands may be related to the openness of the regional economy and the fact that the 2008-09 recession was externally induced; the region's agri-processing exports (including the wine industry) account for a comparatively large share of GDP.

The overall higher resilience of the Eden district stands out, with five out of its seven municipalities scoring in the '*most resilient*' quadrant of the spectrum of possibilities. Three of the four Overberg municipalities also score in this quadrant. As noted, these two sub-regions of the Western Cape have been the fastest growing areas. There appears to be a link between the rate of growth and the resilience of the respective municipal economies.

While the regional and sub-regional patterns of economic resilience of the Western Cape economy is interesting and revealing, what remains is to generate a deeper understanding of what may explain this resilience.

4.2. Decomposing regional economic resilience

From the previous discussion, it follows that a complex range of factors determine a region's economic resilience and that none of these factors are necessarily constant over time – economic resilience may change from the one recession to the next. Institutional elements are, for instance, important in any economy's long-run development, e.g. issues such as the labour market arrangements, the financial system and access to credit and governance systems. While it is clear to see how these institutional factors can play a role in a region's vulnerability, resistance, adaptability and recoverability to and from a recession impact, scholars tend to relate them rather to long-run development. The more relevant factor in the determination of economic resilience over the shorter term (and which is measurable due to data availability) is *industry structure*. To what extent is a region's industries specialised, i.e. concentrated in one of two dominant industries, or diversified. The question runs deeper. What drives industrial development? Is it specialisation or diversification? Answering this question falls outside the ambit of the current paper, except to note variances of opinion in this regard (see Martin *et al*, 2016: 570).

Nonetheless, it is generally accepted that a region's industry portfolio (i.e. its sectoral structure and inter linkages) play a determining role in the way it reacts to recessionary and other business fluctuations. Martin *et al* (2016: 570-571) notes a range of studies in this regard and conclude *that a general theme seems to be that the more diversified a regional economy, the more resilient that economy is likely to be*. As a general rule, economies with a large concentration of manufacturing and construction industries are likely to be less resilient to recession impacts¹², whilst regional economies that have diversified into services are likely to be more resilient. Services oriented economies/ sectors are known to be less cyclical compared to manufacturing and construction.

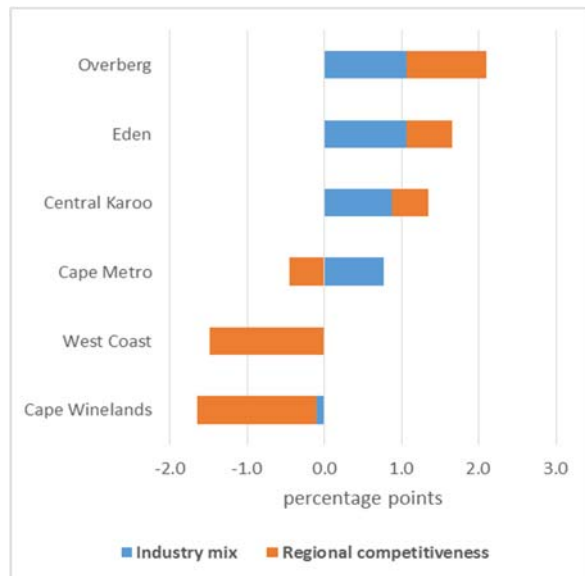
In section 2.2.2 a methodology for decomposing the forces driving economic resilience was explained. A basic shift-share analysis (see equations 4 and 5) explains how economic resilience can be decomposed into two main forces driving it, namely industry mix and regional competitiveness factors. These equations were applied and the results are displayed in Figure 9 to Figure 11.

From Figure 9 it is shown that industry structure (as a factor determining resilience) played a strong role in the overall resistance of the Overberg, Eden, Central Karoo and Cape Metro districts. These

¹² *Coefficients of 'cyclical sensitivity'* were derived for the SA and Western Cape economies by running a regression of the annual change in GVA in a sector on the annual change in national/provincial GDP/R over the period 1996 to 2013. The results show that in both SA and the Western Cape, seven of a possible ten manufacturing industries exhibit an above average cyclical sensitivity, as well as construction and in services it is only finance & insurance. There is also a small negative correlation with the average annual growth rate over the 1996 to 2013 period, suggesting that industries exhibiting higher average growth are also less cyclically sensitive.

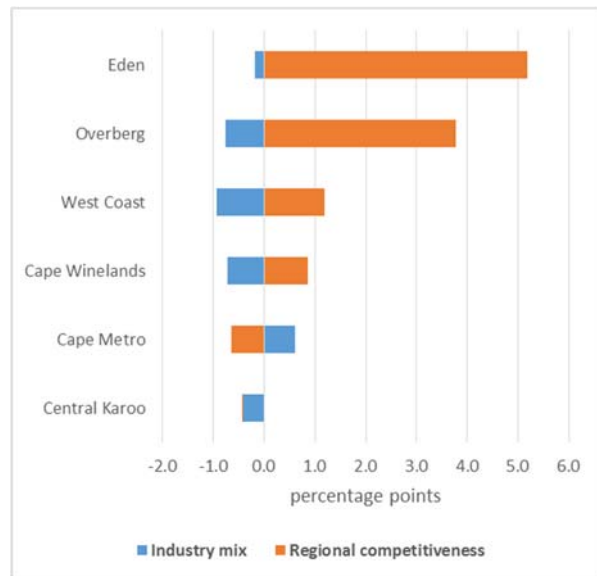
regional economies have a stronger services component compared to the West Coast and the Cape Winelands and contracted less (if at all) during the 2008-09 recession – see Figure 1¹³. Regional competitiveness factors also contributed to the resistance of the Overberg, Eden and Central Karoo. Regional factors contributed to the contraction of the Cape Winelands, West Coast and Cape Metro.

Figure 9: Decomposing regional resistance in the Western Cape: 2008-09 recession



Source: Quantec Research/ own calculations

Figure 10: Decomposing regional recoverability in the Western Cape: 2010-13 expansion



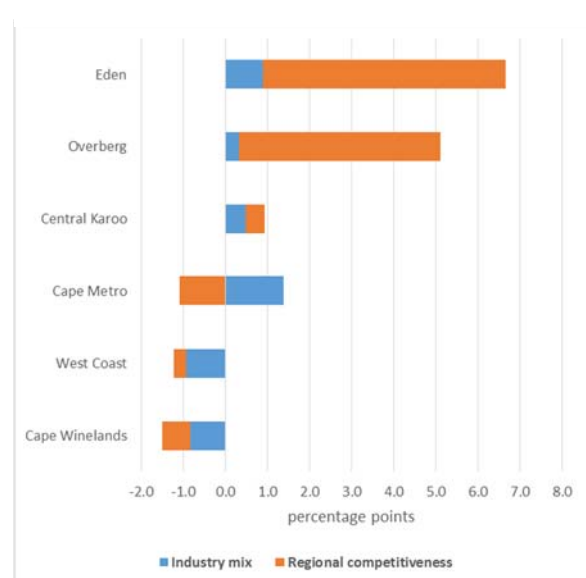
Source: Quantec Research/ own calculations

Regarding recoverability from the 2008-09 recession, regional shift factors also tended to play a positive and dominating role, particularly in the Eden and Overberg Districts and – to a lesser extent – in the Cape Winelands and the West Coast. However, accounting for both the industry mix and regional shift factors, recoverability of the Cape Metro, Cape Winelands and the West Coast was weak; for the Central Karoo industry mix gave it negative overall value in terms of recoverability.

When economic resilience is calculated, i.e. combining resistance and recoverability, the

results in Figure 3 are mirrored in Figure 11. From this chart it is clear the regional shift factors – or the regional competitiveness – in the main explain why Eden and Overberg are located in the upper

Figure 11: Decomposing economic resilience in the Western Cape: 2008-13 business cycle



¹³ The Cape Winelands real value added contracted by 3% and West Coast by 2.8%.

right quadrant of Figure 3. Whilst the industry mix also plays some positive role (both these regions have relatively well-balanced industry structures) it is outweighed by their regional competitiveness.

On the other hand, the poor resilience of the Cape Winelands and the West Coast regions is dominated by their respective industry structures, which make a negative contribution; adverse regional shift factors also explain part of the overall poor resilience and the fact that both these regions are located in the bottom-left quadrant of Figure 3. The remaining two regions, i.e. the Cape Metro and the small outlying Central Karoo region, reveal relative weak overall economic resilience, with adverse regional shift factors counter-balancing the positive contribution of industry mix factors.

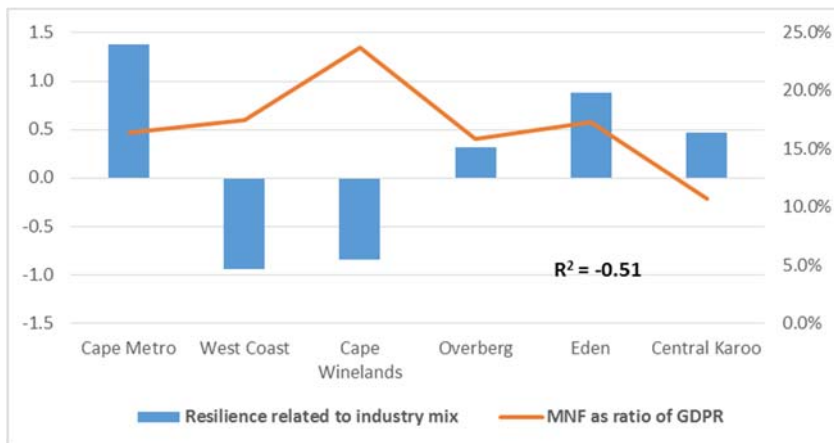
Services account for the bulk of the Cape Metro economy, suggesting this factor explains its resilience, which tends to be marginal regarding both resistance and recoverability (located in the lower-right quadrant of Figure 3). This implies the Cape Metro did not perform well in the recovery period, or during the aftermath of the 2008-09 period. The Central Karoo also lagged in the economic recovery. Both these regions' economic resilience is positive, albeit only marginally so.

4.3. Considering longer term structural change

The results thus far tend to agree with the findings in the literature. *Firstly*, regional competitiveness factors tend to outweigh industry mix as a factor determining economic resilience. This is particularly true in the case of the two most resilient regions, i.e. Eden and the Overberg. More research is required to understand what these 'regional competitiveness factors' entail exactly. *Secondly*, regions with a relatively larger manufacturing sector suffer a disadvantage in terms of economic resilience as these regions tend to be more sensitive to business cycle swings. This is particularly true in the case of the Cape Winelands and West Coast provinces where industry mix enters as a negative factor in terms of their economic resilience. The inverse relationship between the manufacturing share and the industry mix factor across the six regions is shown in Figure 12. *Finally*, and converse to the former point, where industry mix enters as a positive factor in terms of overall resilience, services tend to dominate. This is specifically the case in the Cape Metro.

Whereas the services orientation of the Cape Metro makes the region more resilient, this is mainly in terms of resistance to the recession impact; regarding recoverability, it is evident that the Cape Metro suffered adverse regional competitiveness factors relative to the non-metro regions. The dominance of the financial services sector in the Cape Metro economy presumably explains the problematic recovery of the city economy in the context of the post-2009 global financial crisis period.

Figure 12: Western Cape economic resilience: Industry mix vs manufacturing share

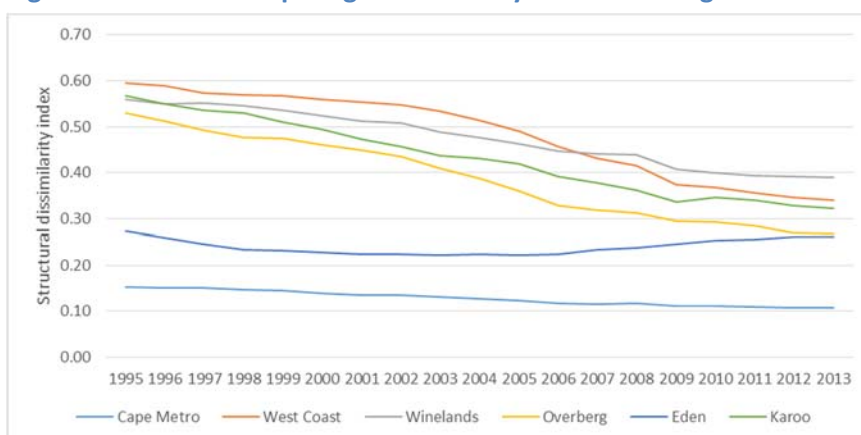


Source: Quantec Research; own calculations

Therefore, it seems that industry structure does play a role in determining economic resilience (particularly as far as the resistance to the impact of the recession is concerned); however, it is the regional competitiveness that really matters, both regarding resistance to the recession impact and the recoverability from the recession impact.

In the results from the six Western Cape regions, the economic resilience of the Eden and Overberg regions stand out. Closer inspection reveals that both these regions possess relatively well-balanced industry structures, both are coastal regions and rapidly expanding, outperforming the others, both have revealed comparative advantages in the agri-processing sectors and tourism (as reflected in the location quotient of the catering & accommodation sector – see Table 1). Further research may be required to understand the specific regional shift factors at play in determining the overall economic resilience of these regions; however, it is instructive to briefly consider the difference between short-term cyclical change and longer-run structural change.

Figure 13: Western Cape regional industry structure: Krugman structural dissimilarity indices



Source: Quantec Research; own calculations

A brief overview of the methodological issues involved in this regard was provided in section 2.2.3. Krugman structural dissimilarity indices were calculated (see Figure 13). A lower value of the index indicates a similar industry structure between that of the sub-region and the broader province and *vice versa*. The chart displays the structural change that the Western Cape regions have experienced over the 1995-2013 period.

The chart shows, for instance, that the Cape Metro's industry structure is very close to that of the Province, which makes sense as 73% of provincial value added is generated in the Metro. The structural dissimilarity of the Cape Metro has also moderated over time, presumably as the metro's economic activities became more diversified. It is also evident that the non-metro regions have different industry structures compared to the metro. Alternatively, the Krugman structural dissimilarity indices are generally on a higher level compared to that of the Metro. As these regions' industry structures became more diversified (and services oriented), their structural dissimilarity with that of the Province moderated, explaining the downward trend in the non-metro indices.

However, the structural dissimilarity of only four of the five non-metro regions has tended to converge with that of the Province. An important exception is Eden. Eden's industry structure tended to diverge from that of the Province from around 2006-07. This reflects the comparatively higher contribution of manufacturing and construction activities in the region. The share of these two industries increased from 24.6% to 26% between 1995 and 2013, compared to the corresponding share in the province falling from 25.9% to 21.2% - see Table 4.

Table 4: Western Cape regions: share of manufacturing & construction in GDP, 1995 to 2013

District	1995	2000	2005	2010	2013
Cape Metro	24.4	23.1	21.4	20.4	19.9
West Coast	28.5	27.0	25.2	22.1	20.8
Cape Winelands	36.4	32.2	29.4	27.7	26.2
Overberg	20.9	19.5	21.4	24.2	22.9
Eden	24.6	25.1	25.3	26.1	25.9
Central Karoo	10.6	9.5	12.4	16.6	16.7
Western Cape	25.9	24.3	22.7	21.8	21.2

Source: Quantec Research

This is a highly important finding as Eden has been identified as the most resilient region in the Western Cape. In the literature, it is generally found that the larger the share of services in regional employment (or output) and the smaller the share of manufacturing, the resilience of the region will be higher (Martin *et al*, 2016: 576). One may therefore expect that the Eden economy may be sensitive to business cycle impacts given its larger (and growing) share of manufacturing and construction activities, contrary to the analysis above pointing to Eden's superior resilience in the Province. *How do we solve this apparent contradiction?*

Figure 12 provides a clue, namely that it is mainly regional competitiveness factors, which drive the resilience of the Eden District. Industry mix does enter positively; however, the influence thereof on Eden's economic resilience is relatively small and very similar to that for the Overberg, the Cape Metro and the Central Karoo. Industry mix adds negatively in terms of the economic resilience of the West Coast and Cape Winelands regions where we find greater specialization, i.e. steel making in the West Coast and agri-processing in the Cape Winelands. While both these regions host relatively large manufacturing and construction sectors, their growth have been sub-par, explaining the sharp decline of their share on overall provincial GDP (Table 4). The results in respect of Eden points to the possibility that regional competitiveness factors can actually override the adverse impact that cyclically sensitive sectors, such as manufacturing and construction, can have on the economic resilience of a region.

The question that needs to be investigated further is: *Which factors drive the regional competitiveness of the Eden region?* The divergence of its Krugman structural dissimilarity index hints at some autonomous forces at play. Factors highlighted by Martin *et al* (2016: 578) which typically drive a region's competitiveness include, the institutional context; the national (provincial) innovation regime (e.g. R&D expenditure relative to value added generated); the entrepreneurial culture; the knowledge infrastructure; the financial infrastructure (particularly in terms of SMME access to finance); labour market effectiveness and skill endowments. Regarding the latter the direction of causation runs from skill endowment to productivity of firms to economic resilience.

Briguglio (2009: 7-18) calculates economic resilience indices, including a range of factors capturing the influence of macro-economic stability (budget deficits; inflation rates; the unemployment rate and government debt ratio); micro-economic efficiency (the size of the government; freedom to trade internationally); governance and social development (education and health indicators). It should be noted that many of these variables are determined at the national level, with regions not necessarily exerting influence. Nonetheless, these variables provide some perspective on the factors that can be gauged in order to ascertain a region's competitiveness. Further research is required to investigate the regional competitiveness of the Eden region in the Western Cape.

5. Concluding remarks

This paper assessed the economic resilience of the Western Cape economy. The research was motivated in the context of the author's interest in business cycle research in general and recent work on Western Cape economic trends. Furthermore, the research was of an exploratory nature and has uncovered a number of areas for fruitful future research.

The Western Cape economy is one of the leading regions of the wider South African economy. While economic activity is concentrated in the region, both sectorally and regionally, interesting patterns of economic growth have evolved in the sub-regions. The most rapidly growing sub-regions are outside of the Cape Metro (which accounts for 73% of value added generated in the Province), notably that of Eden and the Overberg.

Over time, economic activity radiated out from the Cape Metro via agricultural development and supporting manufacturing and services activities. Today the economic linkages between the Cape Metro and the municipalities in closer proximity (e.g. Stellenbosch and Drakenstein in the Cape Winelands; Overstrand and Theewaterskloof in the Overberg and Swartland and Saldanha in the West Coast), as well as the other inland regions are evident. Agriculture (including food & beverage processing) and tourism are two important industries and most regions host diversified commercial services. The Eden sub-node (with its leading municipalities, Mossel Bay, George and Knysna) is less dependent on economic linkages with the Cape Metro. Its industry structure also tended to diverge from the other district economies and that of the Metro.

The Western Cape economy was the fastest growing province in the country in the five years before the 2009 recession; however, was overtaken by the larger Gauteng and Kwa-Zulu Natal provinces after the recession. The aftermath of the global financial crisis and the dominance of the financial services sector in the Western Cape assist in explaining the comparatively poor recoverability of the Western Cape from the recession impact. Not only did one of the province's mainstay sectors' growth come under pressure, but has secondary economic activities such as construction and manufacturing witnessed delayed and weak recoveries.

It should be pointed out that the services orientation of the Cape Metro (and some of the other non-metro economies) did improve these regions' and that of the province's *resistance* to the 2009 recession impact. However, when the combined role of industry mix and regional competitiveness is considered, it becomes clear that the strong *recoverability* of the Eden and Overberg regions in particular is related to the overriding enhancing impact of regional competitiveness factors. In the latter regard, the Cape Metro suffers adverse influences. More research is required to ascertain what exactly these adverse competitiveness factors are in the case of the Metro and what they are in driving Eden and the Overberg's competitiveness.

Eden and the Overberg come to the fore as the two most resilient district economies in the Western Cape. Whereas industry structure assists in explaining their resilience, it seems that regional competitiveness factors are by far the dominant driver of these regions' economic resilience. One

factor uncovered by the analysis, is the structural divergence of the Eden economy, showing comparatively stronger growing manufacturing and construction activities over the longer term.

Whereas this finding appears paradoxical in view of the proven business cycle sensitivity of these sectors, the more important factor is *regional competitiveness*. Whilst the larger role of manufacturing and construction may have added to the regions' vulnerability to the recession impact, two important aspects countered this vulnerability. *Firstly*, the region (including the Overberg) possess well-balanced industry structures, including well-developed services industries, improving resistance to recession. *Secondly*, the regional competitiveness factors tend to override cyclical vulnerability of manufacturing and construction in driving regional economic resilience.

Therefore, the main implications drawn from the analysis of the 2009 recession impact on the Western Cape economic growth path is the following:

- It would appear as if the national outperformance of the Western Cape economy suffered some setback in the wake of the 2009 recession. Its dominant and fast-growing services industries' growth was affected by the post-2009 global financial sector conditions and poor recoverability of its manufacturing and constructions sectors. This is particularly true in the Cape Metro, which dominates the economic output of the Province. A qualitative change in the structural growth path may be necessary for the region to re-assert its economic outperformance and in embarking on an improved growth path (*ala* Boschma, 2015).
- The development of secondary economic activities, such as manufacturing and construction, remains critical in terms of the absorption of surplus semi-and unskilled labour (which can be trained and upskilled to meet the demands of the modern economy). However, to counter the Province's consequent vulnerability to recessionary impacts, it is equally important that regional competitiveness be enhanced, alongside the development of well-balanced industry structures. In this regard, the superior economic resilience of the Eden and Overberg economies, clearly linked to regional competitiveness factors, may point policy makers in the right direction.

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15 November 2016

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