TOWARDS MEASURING SOCIAL COHESION IN SOUTH AFRICA: LESSONS FOR NATION BRANDING DEVELOPERS

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Abstract

This article uses data collected across the four Waves of the National Income Dynamics Study (NIDS) to construct a measure of social cohesion for South Africa. We compare our index to one derived using the Afrobarometer data and find a large degree of consistency in trends in the index and its constituent components over time across the two datasets. However, there is less consistency in the measures once one moves to lower levels of geographic disaggregation. We also find far less variability in the constructed index relying on NIDS panel data as opposed to the repeated cross-sections from Afrobarometer. Having derived the index, we then correlate it with a variety of indicators of social and economic well-being. We show that higher levels of education, *per capita* income and employment are positively associated with higher social cohesion whilst social cohesion is negatively associated with poverty, service delivery protest and perceptions of crime. In addition, municipal policy and competence are closely associated with higher social cohesion. Whilst this work is exploratory, it is encouraging, and suggests new opportunities for future research to begin to take the link between social cohesion and economic and social development seriously.

1. Introduction

Building social cohesion is perhaps one of the most difficult yet

fundamental challenges facing South African society. Social cohesion speaks to the glue that binds us together, forging a common sense of identity and sense of belonging. It speaks to a willingness to extend trust to outsiders, to respect fellow citizens and uphold their dignity, and to be moved to action in the face of persistent inequality on behalf of those who are marginalised. Its very essence is a common humanity as embodied in the notion of *Ubuntu*. As such, it is at the heart of nation building, which in turn, is critical in being able to project a positive nation brand.

The point of any branding exercise is to promote a product to consumers. However, once a brand is established, the creators of the brand periodically need to review the extent to which their product continues to embody the ideals, values and norms encapsulated in the brand. Any divergence between actual attributes and the brand may cause the brand itself to lose credibility over time. Similarly, once a nation brand has been created, it is important to periodically review whether the identity, norms and values of the nation brand in fact, reflect the reality of the lived experience of its citizens upon whom the nation brand is premised. Herein lies the contribution of this article. Using available nationally representative data, we examine the state of social cohesion in South Africa. Put differently, we explore the extent to which the South African rainbow nation brand is reflected in the attitudes and perceptions of its citizens. This allows us one way to evaluate and reflect upon the credibility of the nation brand.

An additional benefit of this sort of internally reflective exercise is that to the extent that the nation brand does reflect the perceptions and lived experiences of its citizens, this can be used to further reinforce the nation brand in the hearts and minds of citizens, creating a self-reinforcing virtuous cycle, where a positive nation brand enhances social cohesion, which in turn, further strengthens the nation brand and so on. Not only will this yield positive external benefits for the nation, in terms of how external parties view South Africa, but it may also deliver additional domestic benefits by generating greater national consensus over policy priorities and direction.

However, whilst there is widespread agreement that social cohesion influences economic and social development, and that nurturing a more cohesive society is an important policy goal in itself, there has been little progress in trying to measure it and track progress in this domain over time. In part, this is because there is far less consensus

about what constitutes an appropriate definition of social cohesion in a South African context, or about the kinds of policies required to effectively promote a more cohesive South African society. Without definition, it becomes difficult to assess whether social cohesion has improved or worsened. It is equally difficult to track progress with any consistency at a national level, which is why the key causes and consequences of social cohesion remain obscured, making it difficult to formulate policies expected to materially improve social cohesion and achieve inclusive development. This, in turn, makes any evaluation of the nation brand difficult.

This article uses data collected across the four Waves of the National Income Dynamics Study (NIDS) to construct a measure of social cohesion based on a method proposed in the literature by Langer *et al* (2016). We compare our index to the one developed by Langer *et al* (2016), who rely on the Afrobarometer data, although we go further and map social cohesion at the provincial level using both datasets. The goal here is to develop an index that can be regularly updated and tracked at low cost given the ongoing collection of the panel data that constitutes NIDS. We want to be clear that this exercise is but a first attempt at relying on readily available, large-scale, nationally representative data to construct such an index. In this way, it differs from previous attempts to construct such an index that relied on smaller-scale studies (such as the once-off HSRC barometer project[1)]). Moreover, it is inevitable that issues of definition and debate concerning the appropriate variables to include in the construction of such an index will arise as a result of this work. We view this as a positive and critical step in advancing a broader research agenda of quantifying and tracking social cohesion over time, and in examining the link between social cohesion and economic welfare more broadly.

2. What is social cohesion?

Part of the difficulty of measuring social cohesion stems from the considerable number of definitions that are operationalised in this respect. For some, social cohesion inherently describes the bonds or relationships that exist between fellow citizens, especially in contexts characterised by ethnic heterogeneity (Taylor 1996; Schmeets 2012). For others, it is the quality of these connections between individuals and the groups to which they belong that matters (Marc *et al* 2012), since strong

affective relationships allow (local) group boundaries to be transcended via consensus as opposed to coercion in the pursuit of social welfare (Green *et al* 2009). The common thread to these definitions is their emphasis on participation and an adherence to a (common) superarching identity.

However, others argue for a definition of social cohesion that both highlights the capacity of a society to pursue its members' welfare while at the same time reducing inequalities and promoting inclusion amongst diverse groups (Council of Europe 2007). This is present in the OECD definition of social cohesion, for example, which holds that:

> A cohesive society works towards the well-being of all of its members, minimising disparities and avoiding marginalisation. It entails three major dimensions: fostering cohesion by building networks of relationships, trust and identity between different groups; fighting discrimination, exclusion and excessive inequalities; and enabling upward social mobility (OECD 2011).

In South Africa, discussions of social cohesion tend to reflect these same ideas. Struwig *et al* (2012: 1) identified social cohesion as the process of unifying South Africans across diverse backgrounds to create a common vision to work in the interest of the nation and all individuals therein. And both the President's Fifteen Year Review and the National Planning Commission recognise social cohesion as a key constituent of a broader development agenda for the country, an objective to be pursued in its own right, defining it as a "common attachment to the ethical principles of the constitution" (Chipkin and Ngqulunga 2008: 64). The Department of Social Development's White Paper on families identifies social cohesion as "a process of building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community" (Department of Social Development 2012: 4). Such mutual trust in the face of diversity is only possible when citizens have a shared identity to bind them.

We do not intend to resolve the definition question in this article definitively. For the purpose of this article, we adopt the approach of Langer *et al* (2016) who, after a substantial review of the literature, proposes a working definition that tries to reflect the importance of equality and social inclusion as central to social cohesion (processes

typically managed by the State) as well as the importance of affective bonds and interpersonal trust between individuals with diverse identities. Simply put, for Langer *et al* (2016), any measure of social cohesion must comprise the elements of trust (both inter-personal and institutional), identity (adherence to national identity in relation to their group (or ethnic) identity), and perceptions of relative inequality. This seems to us an acceptable starting point for our analysis, and is a definition that resonates with much of the South African literature.

3. Constructing a measure of social cohesion

We use all four Waves of the NIDS data to construct a measure of social cohesion, based on the approach adopted by Langer *et al* (2016). NIDS is a nationally representative panel dataset of South Africa that collects data every two years. In its fourth Wave it contains 43 231 observations at the individual level. Of this, 27 677 observations were adults (age 15 and above) who completed the social cohesion module.

For purposes of calibration and comparison, we repeat the exercise using the Afrobarometer data. This allows us to assess how well a measure of social cohesion (based on the NIDS data) compares to the one constructed by Langer *et al* (2016). The comparison will also help us assess how robust such an index might be across different datasets. The Afrobarometer is a series of public opinion surveys that gather information on perceptions of democracy, governance, markets and civil society. The surveys are run in a number of African countries; the initial Round, in 1999, comprised 12 countries while Round 5, the most recent Round for which results are available, was conducted between 2011 and 2013 and included 34 countries. For the purposes of this article, we focus on the three most recent Rounds; Round 5 (2011-2013), Round 4 (2008) and Round 3 (2005-2006), and we focus exclusively on South Africa. Using both datasets, we construct and map a measure of social cohesion at both the national and the provincial level. The weights appropriate for each dataset are applied.

4. Reconciling datasets

One of the difficulties with this exercise is that the questions used in Afrobarometer do not necessarily match those asked in NIDS. Conse-

quently, we select questions from NIDS that are as similar as possible to the Afrobarometer questions used by Langer *et al* (2016), or that reflect something to do with the three pillars of trust, inequality and identity. The tables below provide a comparison of the questions used from the Afrobarometer data, and those used from NIDS, and we discuss each pillar in turn.

There are a few key differences. *Table 1* provides the questions used to construct a measure of perceived inequality. There is some overlap in the questions from the two different surveys, although NIDS does not ask any questions about perceived unfair treatment of an ethnic group by the State. For our purposes, we measure perceived inequality by using the NIDS data from the ladder question which asks the respondent to position themselves on a six rung ladder of relative income at different points in time (past, present and future). If one characterises rungs 3 and 4 as being the midpoint, that is, about the same position as the average South African, then rungs one and two represent a position of perceived relative income disadvantage, whilst rungs five and six represent a position of perceived relative advantage. We code all individuals who report themselves to be on rung 3 or 4 as a value of 1, and all others (relative advantage and disadvantage) as zero. In other words, this variable reflects individuals who do not perceive themselves as significantly different than the mean or median citizen, at least in income terms.

We also construct a measure of optimism using this ladder question. Any individual who currently perceives themselves to be at an income disadvantage but who expects to climb the income ladder in the next five years is coded as optimistic or hopeful about future income prospects. We also include all individuals who currently report they enjoy a relative income advantage and who do not anticipate any deterioration in their income position in the next five years as optimistic.

Finally, respondents were also asked to classify their household's income position relative to other households in their village/suburb. Again, all individuals who reported their household to be average are coded as one (no perceived difference) whilst all others are coded as zero. This latter measure is very similar to a measure used by Langer *et al* (2016).

There are large differences in our approach in the identity domain. *Table 2* compares the questions available in Afrobarometer to those we used from NIDS. Whilst Afrobarometer asks directly about an

***Table 1*: Comparison of survey questions in Afrobarometer *versus* NIDS used to construct measure of Perceived Inequality**					
Afrobarometer			**NIDS**		
Perceived Inequality					
Question	**Answers**	**Coding for index**	**Question**	**Answers**	**Coding for index**
How do you rate your living conditions *versus* others?	1 = much worse 2 = worse 3 = same 4 = better 5 = much better	Proportion of respondents who answered "same"	Please imagine a six step ladder where the poorest people in South Africa stand on the bottom (the first step) and the richest people in South Africa stand on the highest step (the sixth step). On which step are you today and on which step do you expect to be five years from now?	6 = Richest 5 4 3 2 1 = Poorest	Proportion of respondents who answered three or four
How often is your ethnic group treated unfairly by the government?	0 = never 1 = some-times 2 = often 3 = always	Proportion of respondents who answered "never"	How would you classify your household in terms of income, compared with other households in your village/suburb?	1 = Much Above Average 2 = Above Average 3 = Average 4 = Below Average 5 = Much Below Average	Proportion of respondents who answered "Average"
			Optimism/Hope (constructed from ladder question)	Compares current rung on ladder to expected position in 5 years from now	Proportion of respondents currently below average who expect improved position and respondents above average who expect no deterioration in their position.

Table 2: **Comparison of survey questions in Afrobarometer versus NIDS used to construct measure of Identity/ Belonging**					
Afrobarometer			**NIDS**		
Question	**Answers**	**Coding for index**	**Question**	**Answers**	**Coding for index**
Identity					
If you had to choose between being a South African and being a (ethnic group), which of the following best expresses your feelings?	1 = I feel only (ethnic group) 2 = I feel more (ethnic group) than South African 3 = I feel equally (ethnic group) and South African 4 = I feel more South African than (ethnic group) 5 = I feel only South African	Proportion of respondents who either feel "more South African than ethnic group" or "only South African" (responses 4 and 5)	Think about the area (village or suburb) in which you live. How strong is your preference to continue living in this area?	1 = Strong Preference to Stay 2 = Moderate Preference to Stay 3 = Unsure 4 = Moderate Preference to Leave 5 = Strong Preference to Leave	Proportion of respondents who answered "Strong Preference to Stay" or "Moderate Preference to Stay"
			Using a scale of 1 to 10 where 1 means "Very dissatisfied" and 10 means "Very satisfied", how do you feel about your life as a whole right now?	10 = Very Satisfied 9 8 7 … 4 3 2 1 = Very Dissatisfied	Proportion of respondents who answered five to ten

individual's local identity relative to their national/South African identity, these kinds of questions are absent in NIDS. For this reason, we adopt a measure of identity that proxies for an individual's sense of belonging or rootedness in their community and combine it with a reflection of their overall life satisfaction (or subjective well-being). Simply put, identity is reconceptualised to 'belonging'. Respondents were asked to characterise how strong their preference was to continue living in their current neighbourhood. Individuals who report a strong or moderate preference to stay are coded as 1, whilst those who are neutral or express a desire to leave are coded as zero. We combine this with a measure of life satisfaction. Individuals were asked to report their life satisfaction using a 10-point scale. All individuals who reported a satisfaction level of 5 or above, (above average satisfaction) are coded as 1, whilst those expressing below average satisfaction are coded as zero. Our approach here represents a significant conceptual departure from Langer *et al* (2016) and is due to data limitations. The extension of preference to stay in a neighbourhood to a measure of preference to stay in the broader community or even the country is tenuous. Neighbourhood attributes, particularly in South Africa's socio-economically and racially segregated spatial patterns, does little to convince one of the connection to the broader societal level feelings of belonging. However, we contend that an individual who feels marginalised or excluded within their neighbourhood due to their local identity should be more likely to express a desire to leave their neighbourhood and report lower levels of life satisfaction.

Finally, in the domain of trust, NIDS does not include any questions relating to institutional trust but does ask individuals to report their trust in community members and strangers to return a lost wallet. These questions are similar to the Afrobarometer questions about trust in relatives, neighbours and strangers. Here, individuals who report it likely that a lost wallet would be returned are coded as 1, whilst those who report lower levels of trust (unlikely that wallet will be returned) are coded as zero.

5. Putting it all together

The final social cohesion index (SCI) is weighted equally between the three pillars — inequality, trust and identity. The inequality measure is calculated by averaging the responses of interest across the relevant

Table 3: **Comparison of survey questions in Afrobarometer vs NIDS used to construct measure of Trust**					
Afrobarometer			**NIDS**		
Trust					
Question	**Answers**	**Coding for index**	**Question**	**Answers**	**Coding for index**
How much do you trust the President?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"			
How much do you trust parliament?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"			
How much do you trust the police?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"			
How much do you trust courts of law?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"			
How much do you trust your relatives?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"	Imagine you lost a wallet or purse that contained R200 and it was found by a complete stranger. Is it very likely, somewhat likely or not likely at all to be returned with the money in it?	1 = Very Likely 2 = Somewhat Likely 3 = Not Likely	Proportion of respondents who answered "Very Likely" or "Somewhat Likely"
How much do you trust your neighbours?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"	Imagine you lost a wallet or purse that contained R200 and it was found by someone who lives close by. Is it very likely, somewhat likely or not likely at all to be returned with the money in it?	1 = Very Likely 2 = Somewhat Likely 3 = Not Likely	Proportion of respondents who answered "Very Likely" or "Somewhat Likely"
How much do you trust other people you know?	0 = not at all 1 = just a little 2 = somewhat 3 = a lot	Proportion of respondents who answered "a lot"			

inequality questions. For example, using the Afrobarometer questions as an example, if 35.31 per cent of respondents answered "3" to the living conditions question and 58.13 per cent of respondents felt their ethnic group was never treated unfairly by the government, the average of 46.72 per cent becomes our perceived inequality measure for the index. More specifically, the perceived inequality index actually reflects the proportion of individuals who do not perceive themselves as suffering any inequality relative to others, so it may in fact, be more appropriate to call it a measure of perceived equality of outcomes.

The trust component is calculated in a similar fashion — we obtain an average response for each trust question (since all are coded as 1/0), and then we calculate the average across the different trust measures to obtain the trust component for the index. In the Afrobarometer case, this ensures that institutional and interpersonal trust are equally weighted in the trust measure. In the case of NIDS, this means that the trust indicator reflects the weighted average of the belief that a lost wallet would likely be returned either by a stranger or someone living in one's own community. Again, this indicator has a positive interpretation — higher values indicate higher trust.

Finally, in the Afrobarometer data, the identity component reflects the fraction of individuals who reported themselves to only feel South African or to feel more South African than any other identity. A larger number of responses in this direction suggests that individuals subscribe to an over-arching national identity which is able to supersede local identities, thereby promoting cohesion across group boundaries. In NIDS, as explained, the identity measure reflects a sense of belonging and life satisfaction. This indicator reflects the average of two variables, namely, the number of individuals who report high life satisfaction and the number of individuals who report a preference to stay in their current neighbourhoods.

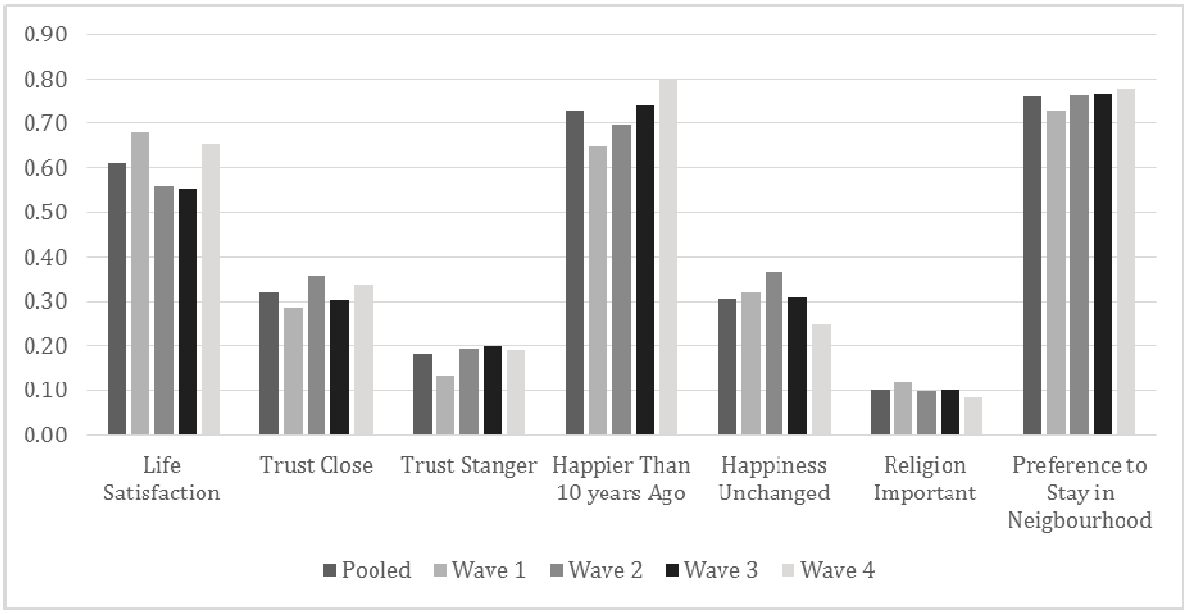
6. Descriptive statistics

Before presenting the index itself, we present descriptive statistics for the key variables that comprise the index for the four Waves of NIDS in *Table 4*. *Figures 1* and *2* present the same data graphically.

Trust levels are low on average.[2)] Around a third of respondents report that they think it is likely that a lost wallet would be returned to them if someone who lived in their community found it. This lack of trust

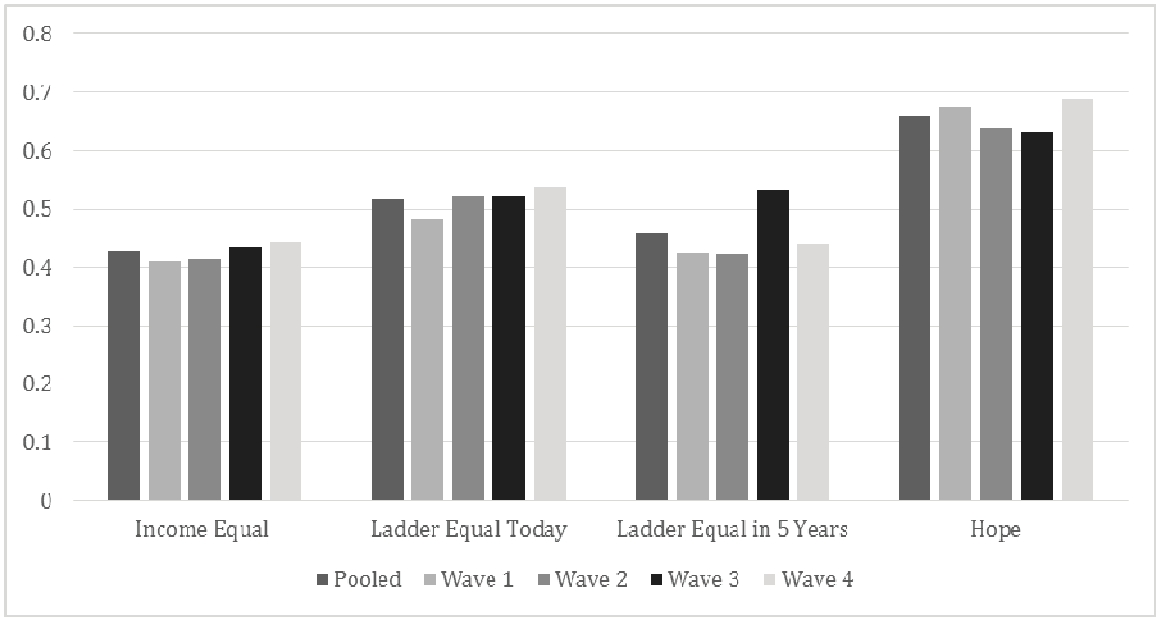
***Table 4*: Descriptive Statistics of key variables used to construct SCI (NIDS) by Wave**								
	Pooled	**Wave 1**	**Wave 2**	**W2-W1**	**Wave 3**	**W3-W2**	**Wave 4**	**W4-W3**
VARIABLES	**Mean**	**Mean**	**Mean**	**t**	**Mean**	**t**	**Mean**	**t**
Wellbeing and Trust								
Life Satisfaction	0.61	0.68	0.56	-21.68	0.55	-1.17	0.66	21.46
Trust community member to return wallet	0.32	0.29	0.36	13.12	0.30	-10.48	0.34	7.13
Trust Stanger to return wallet	0.18	0.14	0.19	13.21	0.20	1.59	0.19	-2.09
Happier Than 10 years Ago	0.73	0.65	0.70	6.97	0.74	7.19	0.80	11.87
Happiness Unchanged	0.31	0.32	0.37	8.78	0.31	-11.60	0.25	-14.12
Religion Important	0.10	0.12	0.10	-6.59	0.10	0.81	0.08	-5.51
Prefer to Stay in Neighbourhood	0.76	0.73	0.76	7.11	0.77	0.87	0.78	3.09
Perceptions of Inequality								
HH income is same as average in neighbourhood	0.43	0.41	0.41	0.65	0.43	3.95	0.44	1.98
Relative Income Equal Today	0.52	0.48	0.52	6.62	0.52	-0.28	0.54	3.50
Relative Income Equal expected in 5 Years	0.46	0.42	0.42	-0.20	0.53	19.02	0.44	-18.03
Relative Income Advantage	0.13	0.11	0.16	12.67	0.10	-17.60	0.14	12.55
Relative Income Disadvantage	0.44	0.48	0.42	-9.48	0.47	7.97	0.41	-10.25
Relative Income Advantage Today	0.04	0.04	0.04	1.06	0.03	-6.36	0.04	5.60
Relative Income Disadvantage Today	0.45	0.48	0.44	-7.06	0.45	2.62	0.42	-5.56
Relative Income Advantage expected in 5 Years	0.45	0.51	0.43	-12.95	0.37	-10.10	0.49	22.79
Relative income Disadvantage expected in 5 Years	0.09	0.07	0.15	21.70	0.09	-14.12	0.07	-8.25
Optimistic about future income (escape disadv, remain adv)	0.66	0.68	0.64	-6.46	0.63	-1.28	0.69	11.46
Note: t-test reports test of mean difference for successive Waves, that is, test of significance for Wave 1 vs Wave 2, Wave 2 vs Wave 3, and Wave 3 vs Wave 4.								

Figure 1: **Well-being and trust by Wave (NIDS)**



Note: Bars are ordered across each variable as they appear in the legend.

Figure 2: **Perceived inequality by Wave (NIDS)**



Note: Bars are ordered across each variable as they appear in the legend.

is fairly consistent across the four Waves. Despite these low levels of community trust, over three quarters of citizens report a preference to remain living in their current neighbourhoods, and there is little variation in this measure across the four Waves. Unsurprisingly, respondents' trust that a lost wallet would be returned by a stranger is lower, and again, there is little variation across the Waves.

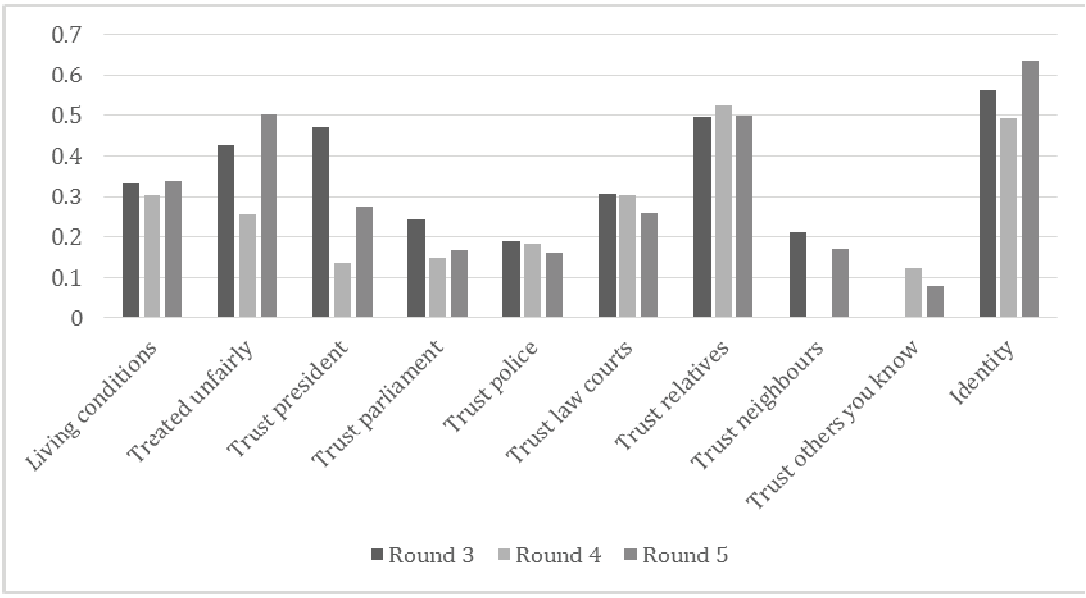
There appears to be an upward trend in reported happiness over the four Waves, with the number of individuals reporting that they were happier in the present period than ten years ago, increasing from two-thirds in Wave 1 to 80 per cent in Wave 4. Interestingly, the same pattern is not evident in terms of reported life satisfaction. Whilst over two-thirds of respondents report above average satisfaction with their lives in Wave 1 and Wave 4 of NIDS, this declines significantly in Waves 2 and 3.

Turning to perceived income inequality, in the pooled sample across all four Waves, just over half of all respondents characterised themselves as being on rung 3 or 4 at the time of the interview (52 per cent). This varied from 48 per cent in Wave 1, increasing to 54 per cent by Wave 4. Interestingly, only 4 per cent of respondents classified themselves as being on Rung 5 or 6 (thereby enjoying a relatively advantaged income position) compared to 45 per cent who reported themselves in a position of relative income disadvantage. However, two thirds of citizens exhibit optimism about their income status over a five-year horizon, and this is fairly consistent across the four Waves. Finally, just over 40 per cent of respondents reported their household income to be about the same as other households in their neighbourhood (Income equal), and again, this remains fairly consistent over time.

For comparison purposes, we present a brief overview of the relevant variables from Afrobarometer. The means over Rounds 3-5 of the survey are presented in *Table 5*, and graphically in *Figure 3*. The two inequality measures (living conditions and unfair treatment) indicate a worsening for Round 4 but then an improvement for Round 5. The change in the living conditions variable appears small while the change in perceived treatment of ethnic group is dramatic — in Round 4, individuals clearly felt that the government treated their own ethnic group unfairly, while this improved significantly in Round 5.[3)] The identity measure shows a similar trend, decreasing from Round 3 to Round 4 but then improving in Round 5. In contrast, the trust measures display a clear reduction in the level of trust felt by South Africans from Round 3

***Table 5*: Descriptive statistics of key variables from Afrobarometer, by Round**			
Variable	**Round 3**	**Round 4**	**Round 5**
Living conditions average	0,33	0,31	0,34
Ethnic group not treated unfairly	0,43	0,26	0,50
Trust president	0,47	0,13	0,27
Trust parliament	0,24	0,15	0,17
Trust police	0,19	0,18	0,16
Trust law courts	0,31	0,30	0,26
Trust relatives	0,50	0,52	0,50
Trust neighbours	0,21		0,17
Trust people from own ethnic group	0,18		
Trust people from other ethnic groups	0,88		
Trust others you know		0,12	0,08
Trust other South Africans		0,07	
South African identity most important	0,56	0,49	0,64
NOTE: The variables reported here are coded as described in *Tables 1-3*			

Figure 3: Variables used to construct SCI based on Afrobarometer data by Round



Note: The variables reported here are coded as described in Tables 1-3. The bars represent the fraction of individuals who report that they trust an individual/institution, who perceive no relative inequality between themselves and others, and who report a South African identity to be most important to them. Bars are ordered chronologically from Round Three to Round Five within each variable.

to Round 5. This pattern is consistent for both institutional and interpersonal trust, although more marked for the former.[4)]

7. Variations in trust, identity and perceived inequality by province

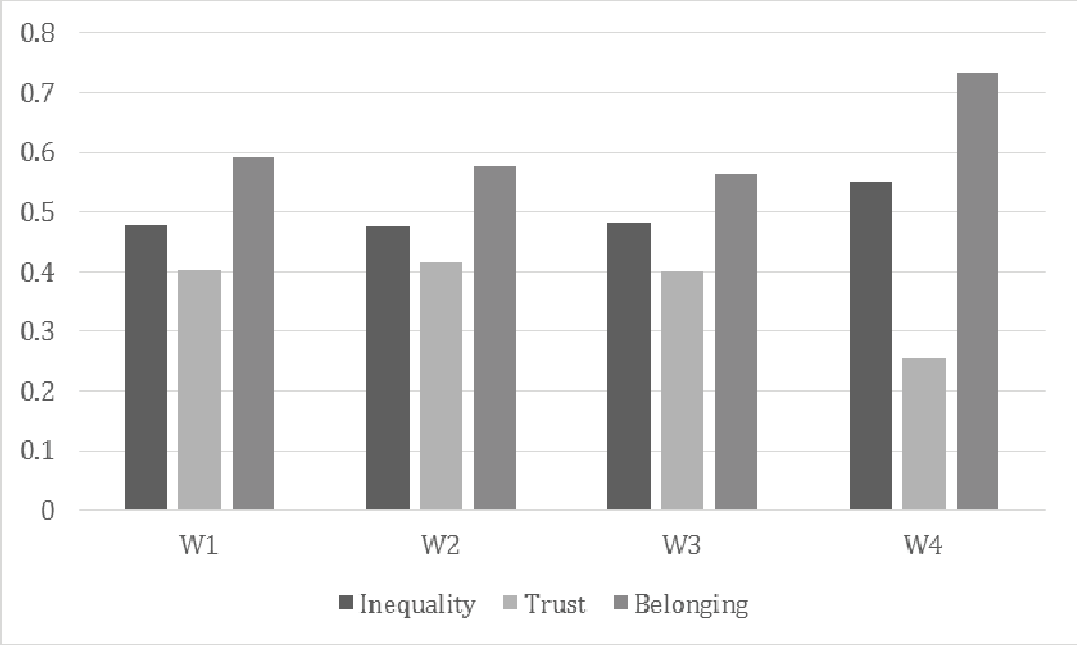
Using the responses to the questions detailed above, we are able to examine variations in the constituent parts of the index both nationally and by province over time. As described earlier, the final social cohesion index (SCI) is weighted equally between the three pillars — inequality, trust and identity.

Of interest to us is the fact that whilst there is some variation in the questions asked in NIDS compared to Afrobarometer across these three domains, the magnitude of the responses and trends are often in the same direction. *Figures 4* and *5* present the indicators (based on the weighted average responses to the variables described above) for perceived inequality, trust and identity at a national level for both datasets. The data underlying these figures can be found in the *Appendix*, *Tables A1* and *A2*.

There is a good deal of consistency in the constituent components, despite underlying differences in variables used to construct the measures. Note that if one averages the responses to the questions on interpersonal trust from the Afrobarometer (trust in relatives, neighbours and others you know), the mean response is very similar to that obtained in the NIDS question concerning the likelihood of a lost wallet being returned by an individual living in your own community. Similarly, between 55 per cent and 66 per cent of Afrobarometer respondents indicate a strong identification with a national as opposed to local identity, whilst in NIDS, three quarters of respondents indicate a desire to remain rooted in their current neighbourhoods and the majority report fairly high levels of life satisfaction. And finally, in terms of perceptions of economic inequality, the averaged responses of the questions in Afrobarometer are close to the relative income measures obtained from using the ladder question in NIDS.

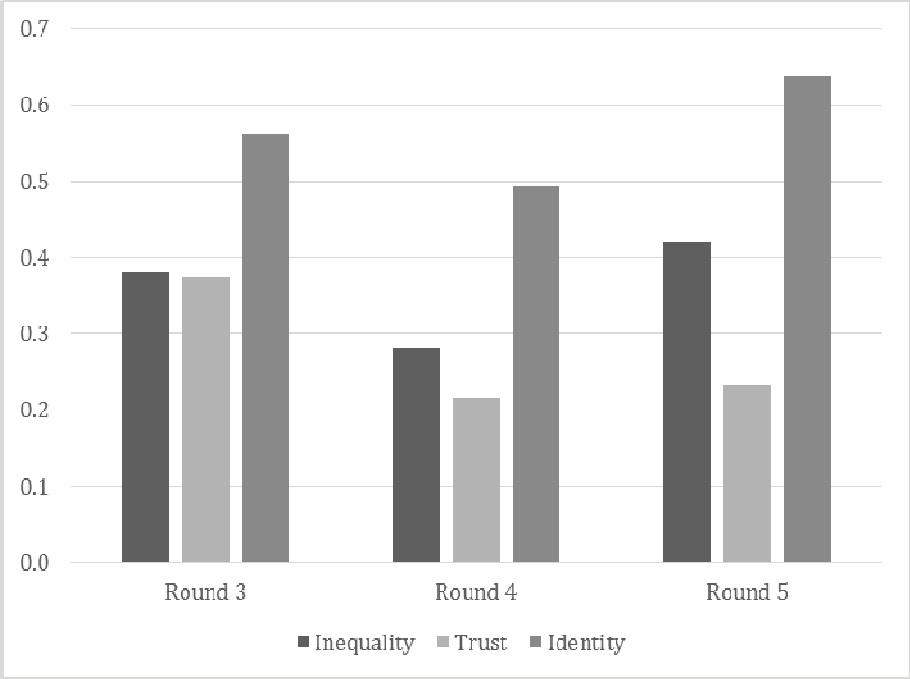
Moreover, the trends in the components over time appear to be in the same direction when one compares the initial time period with the last. In both datasets, there is an increase in the fraction of individuals who do not perceive themselves to be different than the average citizen in relative income terms, as well as an increase in a sense of national

Figure 4: **NIDS: Variations in perceived inequality, trust and belonging by Wave**



Note: Bars are ordered within each Wave with Inequality as the leftmost bar, Trust in the centre and Identity as the rightmost.

Figure 5: Afrobarometer: Variations in perceived inequality, trust and belonging by Round



Note: Bars are ordered within each Round with Inequality as the leftmost bar, Trust in the centre and Identity as the rightmost.

identity or belonging. Conversely, there has been a decline in reported trust over time and this is evident in both datasets. In the *Appendix*, we provide provincial level breakdowns for these three pillars (*Tables A1* and *A2*) as well as a graphical summary (*Figures A1-A6*).

Before moving on to discuss the final index, we first discuss the key indicator variables that make up the index and their respective determinants. This is important because if it can be established that particular socio-demographic and economic variables positively predict the key indicators, then these findings may provide some useful insights for policymakers and branding officials.

8. Determinants of key indicators that constitute social cohesion

Table 6 reports the results from OLS regressions, which explore whether there are any significant socio-demographic predictors of individual perceptions of trust, belonging and perceived equality. We only report regression results for NIDS in this section and the data are pooled across all four Waves of NIDS. Importantly, these regressions examine the predictors of an individual response in any given social cohesion indicator domain, that is, what predicts the likelihood that an individual is trusting, perceives no income inequality in their position relative to the average South African, and feels a sense of rootedness and life satisfaction in their existing community.

As one might expect, there is considerable provincial and time variation in all three measures. For example, respondents are significantly more likely to report that a stolen wallet would be returned in subsequent Waves of NIDS compared to the baseline in 2008. Interestingly, the largest of these positive time trends in reported trust is in Wave 2 (2010), which is the same year South Africa hosted the FIFA World Cup. Individual perceptions of income equality increase over time whilst the sense of belonging appears to fall in Waves 2 and 3, before improving again in Wave 4.

Educational attainment is a significant determinant of all three index components, albeit the economic effects are small given the size of the coefficients.[5)] This accords with a broader literature that suggests that one of the values of education, other than knowledge transfer, is the role it promotes in promoting shared values and social cohesion (Barr 2004). To the extent that education positively predicts the indi-

***Table 6*: OLS regression of determinants of individual trust, perceived equality and sense of belonging**

VARIABLES	(1) Trust	(2) Perceived equality	(3) Sense of belonging
Individual is female	-0.144	0.975*	1.530***
	(0.491)	(0.538)	(0.439)
Years of education	0.532***	2.214***	0.567***
	(0.080)	(0.088)	(0.069)
Individual is employed	-0.841	7.138***	3.165***
	(0.548)	(0.603)	(0.518)
Age	0.069	-0.723***	-0.336***
	(0.076)	(0.078)	(0.064)
Age squared	0.000	0.009***	0.006***
	(0.001)	(0.001)	(0.001)
Individual is Black	-0.985	-23.794***	-18.069***
	(2.032)	(2.135)	(1.671)
Individual is White	3.986	-8.199***	-0.258
	(2.467)	(2.504)	(1.927)
Individual is Coloured	-8.706***	-15.213***	-7.202***
	(2.295)	(2.389)	(1.884)
Western Cape	-2.549**	-1.299	-0.187
	(1.240)	(1.205)	(0.979)
Eastern Cape	-11.009***	-4.520***	0.710
	(0.828)	(0.916)	(0.765)
Northern Cape	-6.140***	-5.153***	1.291
	(1.091)	(1.215)	(1.004)
Free State	-1.211	7.181***	3.716***
	(1.184)	(1.085)	(0.917)
KwaZulu-Natal	-4.529***	-6.719***	-3.696***
	(0.824)	(0.866)	(0.711)
North West	-4.285***	-1.842*	2.714***
	(1.191)	(1.017)	(0.951)
Gauteng	-6.718***	3.272***	-2.092**
	(0.865)	(0.963)	(0.833)
Mpumalanga	3.423***	-2.498**	-1.946**
	(1.021)	(0.978)	(0.837)
Wave 2	7.177***	1.627**	-3.407***
	(0.668)	(0.702)	(0.573)
Wave 3	4.782***	1.218*	-3.843***
	(0.672)	(0.644)	(0.579)
Wave 4	5.834***	2.294***	1.581***
	(0.658)	(0.623)	(0.564)
Constant	18.385***	62.302***	80.808***
	(2.774)	(2.843)	(2.324)
Observations	67,680	62,326	71,265
R-squared	0.027	0.117	0.072

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, *p<0.1

vidual components of social cohesion, we would expect it to be positively associated with any social cohesion index derived therefrom.

Employed individuals are significantly more likely to feel a sense of belonging and relative income equality, but interestingly, employment status has no significant effect on trust. Younger individuals are significantly less likely to feel a sense of belonging in or commitment to remaining in their current neighbourhoods, and are also significantly less likely to perceive their income position as being similar to others. The economic magnitude of these effects is small though, but the qualitative finding resonates with work published in the most recent *Child Gauge (2015)*.

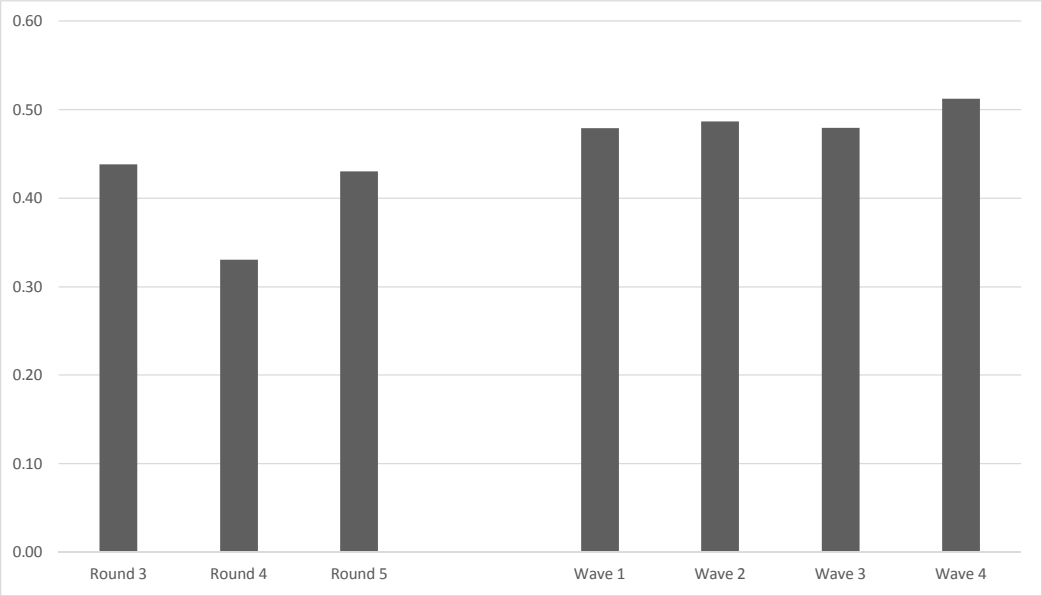
9. Social cohesion in South Africa

As already noted, the social cohesion index is weighted equally between the three constituent components — inequality, trust and identity. Given the way we have constructed our components, higher values of the SCI indicate higher levels of cohesion, that is, higher trust, less perception of relative economic inequality, and stronger sense of national identity or commitment to community and higher life satisfaction.

Figure 6 presents a graphical comparison of a national social cohesion index over time, based on Afrobarometer data as well as NIDS data (see *Appendix Tables A1* and *A2* for data). Again, there is a fair amount of consistency in the two indices, with both reflecting an upward trend in more recent Waves of data. At the same time, however, the graphs make clear that differences in the variables used to construct the index can have a substantial effect on the index (as might differences in sampling frames). Consider that Round 4 of Afrobarometer was conducted in 2008, the same year as Wave 1 of NIDS. The respective indices for these two datasets are quite different, with an SCI of 0,33 based on Afrobarometer data compared to an SCI of 0,48 using NIDS. Whilst we are encouraged that the data trends move in the same direction despite these definitional differences, these size differences do again point to the need for robust engagement and debate over the measurement and definition of social cohesion, and for a concerted effort to include appropriate questions in the relevant datasets.

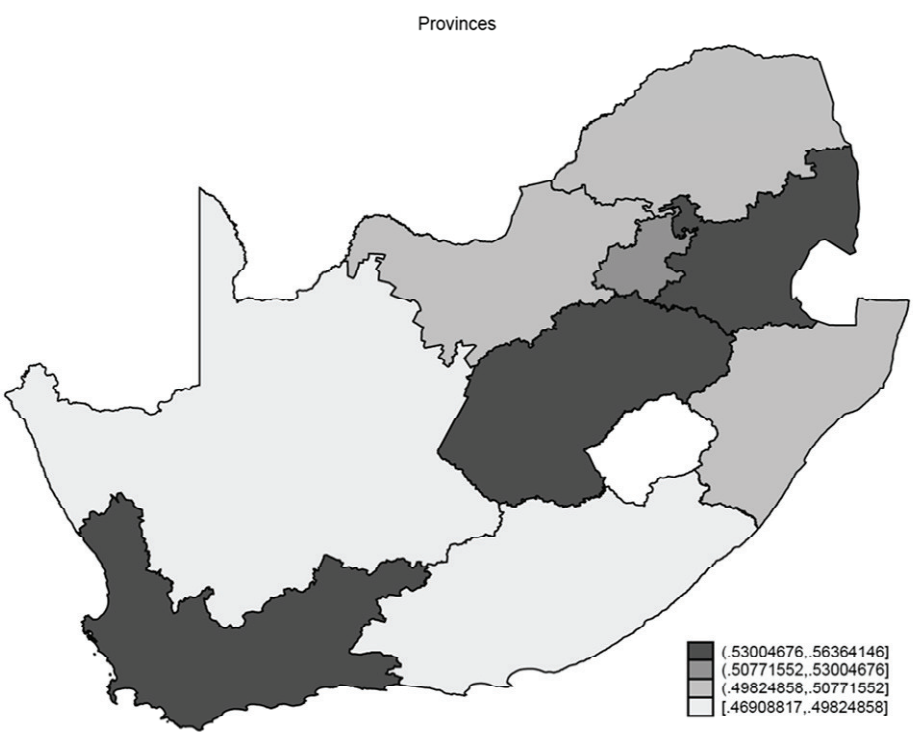
Finally, *Figure 7* provides a map of social cohesion at the provincial level using NIDS Wave 4 data. There is great potential inherent in developing and tracking such an index over time, especially if it can be

Figure 6: **SCI over time: Afrobarometer and NIDS**



Note: Bars are ordered chronologically from Round Three to Round Five and from Wave One to Wave Four.

Figure 7: **Mapping social cohesion: NIDS Wave 4**



linked to lower levels of disaggregation. In the map, darker areas indicate higher levels of social cohesion based on our NIDS measure, while lighter areas reflect relatively lower levels of social cohesion.

10. Correlating NIDS SCI and outcome indicators of interest

Since there is a widespread agreement that social cohesion influences economic and social development, in this final section, we explore the correlation between our SCI index constructed using NIDS data and a number of economic and social variables. In order to have enough variation in our correlations, we do this analysis at the provincial level, that is, we examine the correlation between provincial SCI and provincial measures of economic and social development. The underlying external provincial data used can be found in *Tables A3-A5* in the *Appendix*. As far as possible, we try to match data in the same year. Where this is not possible, we provide multiple correlations with different Waves of NIDS for comparison purposes. For example, we correlate our Gross Domestic Product (GDP) *per capita* measure for 2013 with the NIDS SCI for both Wave 3 (2012) and Wave 4 (2014).

The exploratory results reported in *Table 7* are very encouraging. In most cases, the sign on the correlation co-efficient moves in the correct direction, and for some cases, the magnitude of the correlation is sizeable. For example, higher levels of GDP *per capita* are correlated with higher levels of social cohesion; conversely, higher incidence of poverty displays a negative correlation. Higher levels of labour force participation are positively correlated with social cohesion whilst higher unemployment displays a negative association. This accords with the regression results in *Table 6* that suggest that employment status is a positive predictor of perceptions of equality and a sense of belonging.

We also include three measures from the Municipal IQ.[6)] These include the incidence of service delivery protests, a municipal productivity index (MPI) and the compliance and governance index (CGI). The MPI combines financial and non-financial data to assess the ability of individuals to engage with local economies. It does not reflect directly on municipal competence, but rather how spending patterns of a municipality reinforce and affect socio-economic contexts. In contrast, CGI focuses on how well municipalities are meeting basic planning, reporting, financial management and capacity requirements. The results sug-

Table 7: Correlations between provincial SCI (NIDS) and indicators of economic well-being						
Indicator	**Data source**	**Year**	**Corr with 2008 SCI**	**Corr with 2010 SCI**	**Corr with 2012 SCI**	**Corr with 2014 SCI**
GDP *per capita*	StatsSA[7)]	2008	0.50			
		2013			0.67	0.56
Poverty gap (%)	StatsSA[8)]	2009	-0.36	-0.64		
		2011			-0.72	
Headcount poverty (%)	StatsSA[9)]	2009	-0.38	-0.59		
		2011			-0.75	
Labour force participation	StasSA[10)]	2008	0.38	0.66		
		2012			0.65	0.51
Unemployment rate	StatsSA[11)]	2008	-0.14	-0.48		
		2012			-0.07	
Compliance and Governance Index	Municipal IQ[12)]	2014				0.45
Municipal Productivity index	Municipal IQ[13)]	2014				0.43
No of service delivery protests 2013	Municipal IQ[14)]	2013			-0.05	-0.16
Total crimes	SAPS data	2008-2009	0.04	0.14		
		2011-2012			0.44	
		2012-2013			0.46	0.22
Contact crimes	SAPS data	2008-2009	-0.10	0.01		
		2011-2012			0.31	
		2012-2013			0.36	0.13
Property crimes	SAPS data	2008-2009	0.06	0.13		
		2011-2012			0.40	
		2012-2013			0.44	0.24

gest that lower levels of social cohesion are associated with a higher incidence of service delivery protests, but that MPI and CGI are positively associated with social cohesion. Simply put, municipal policy and competence are closely associated with higher social cohesion.

Finally, the association between social cohesion and crime is a little ambiguous. There appears to be a few negative correlations between the incidence of crime and social cohesion. It is not immediately clear why this should be the case, but may well have to do with problems in the timing and coverage of the provincial crime statistics.

We explore this a little further by looking within NIDS which collects data on household perceptions of the frequency of domestic violence, gang activity, drug use and violence in the neighbourhood. *Table 8* presents correlation co-efficients for these measures against the indicator measures that constitute the SCI for the pooled dataset across all four Waves of NIDS. In most cases, there is a negative correlation between perceptions of violence and crime and reported trust, perceived equality and a sense of belonging, with the exception of Limpopo and Mpumalanga.

The obvious point in all of this is that correlation need not imply causality. Social cohesion may be both a cause and a consequence of many of these social and economic variables. This is an open question, and one that forms the domain of an ongoing research programme on the link between social cohesion and inclusive growth. This is precisely the impetus that we hope this contribution will provide.

11. Conclusion

This article uses data collected across the four Waves of the NIDS to construct a measure of social cohesion based on a method proposed in the literature by Langer *et al* (2016). We compare our index to the one developed by Langer *et al* (2016) who rely on the Afrobarometer data, although we go further and map social cohesion at the provincial level using both datasets. This article is a first attempt at relying on a readily available, large-scale, nationally representative data to construct such an index.

Despite some differences in the variables used to construct the indices, we find a significant degree of consistency in trends in the index and its constituent components over time across the two datasets. This is encouraging, since consistency is an important characteristic of a

Table 8: Correlations between household perceptions of crime and violence and indicators of social cohesion (NIDS)						
	Province	**Gang**	**Murder**	**Drugs**	**Domestic Violence**	**Violence**
Trust	WC	-0.074	-0.077	-0.199	-0.084	-0.078
	EC	-0.081	-0.078	-0.110	-0.016	-0.024
	NC	-0.060	-0.101	-0.108	-0.055	-0.041
	FS	-0.147	-0.068	-0.107	-0.047	-0.022
	KZN	-0.082	-0.100	-0.163	-0.015	-0.020
	NW	-0.066	-0.063	-0.126	-0.011	0.034
	GP	-0.062	-0.043	-0.114	-0.026	-0.008
	MP	0.106	0.037	-0.128	0.154	0.128
	LP	0.012	0.016	-0.110	0.061	0.032
Perceived Equality	WC	-0.074	-0.077	-0.050	-0.056	-0.068
	EC	-0.051	-0.018	0.019	-0.029	-0.046
	NC	0.072	0.012	0.024	-0.010	-0.028
	FS	-0.074	-0.099	-0.022	-0.035	-0.025
	KZN	-0.019	-0.023	-0.004	-0.069	-0.050
	NW	0.035	0.047	0.072	-0.010	-0.008
	GP	-0.081	-0.105	-0.046	-0.077	-0.085
	MP	0.049	-0.046	0.080	0.041	0.025
	LP	0.030	0.003	-0.004	0.036	0.032
Belonging	WC	-0.174	-0.162	-0.088	-0.114	-0.115
	EC	-0.046	-0.034	0.048	-0.053	-0.073
	NC	-0.063	-0.038	-0.036	-0.023	-0.064
	FS	-0.038	-0.055	-0.003	-0.094	-0.085
	KZN	-0.027	-0.027	0.045	-0.081	-0.067
	NW	-0.039	-0.006	-0.039	-0.036	-0.009
	GP	-0.123	-0.118	-0.072	-0.151	-0.135
	MP	-0.050	-0.033	0.029	-0.057	-0.054
	LP	0.013	0.032	0.130	-0.034	-0.047

robust indicator. However, there is less consistency in the measures once one moves to lower levels of geographic disaggregation, and we find that the relative ranking of provinces in terms of their social cohesion levels does not match well. This is a crucial question for ongoing research to explore. Moreover, it is important that policymakers and academics begin to take seriously the collection of data that is representative at the local area level, since this is the level at which social cohesion truly interfaces with opportunities for inclusive development.

Moreover, the need remains for agreement to be reached on what constitutes an appropriate definition of social cohesion in a South Africa context if such an index is to be developed and tracked over time. This article has demonstrated that small differences in the variables used to construct the index can produce quite different results, certainly in level terms. There is little value in an index that constantly changes due to differences in definition. Moreover, this article has shown that there is far less variability in the constructed index relying on panel data as opposed to repeated cross-sections, so the nature of the data that will be collected to track social cohesion is also something to be resolved. Relying on large-scale, existing datasets that are collected regularly (such as NIDS) provides one way to ensure positive progress in measurement and tracking of social cohesion over time, so avenues to include additional questions to collect necessary data should also be explored.

Finally, this article has presented evidence that higher levels of education, *per capita* income and employment are positively associated with higher social cohesion and that poverty, service delivery protest and perceptions of crime are negatively correlated with social cohesion. In addition, municipal policy and competence are closely associated with higher social cohesion. Whilst this work is exploratory, it is encouraging, and suggests exciting new opportunities for future research to begin to take the link between social cohesion and economic and social development seriously.

APPENDIX

Table A1: **NIDS: Key components of SCI and the index itself by province and Wave**					
Wave 4	**Province**	**Trust**	**Belonging**	**Equality**	**SCI**
	Western Cape	0.18	0.79	0.62	0.53
	Eastern Cape	0.17	0.74	0.53	0.48
	Northern Cape	0.17	0.73	0.51	0.47
	Free State	0.22	0.78	0.59	0.53
	KwaZulu-Natal	0.29	0.70	0.51	0.50
	North West	0.27	0.75	0.50	0.51
	Gauteng	0.29	0.67	0.61	0.52
	Mpumalanga	0.43	0.71	0.55	0.56
	Limpopo	0.26	0.71	0.52	0.50
	National	0.25	0.73	0.55	0.51
Wave 3	**Province**	**Trust**	**Belonging**	**Equality**	**SCI**
	Western Cape	0.27	0.73	0.58	0.53
	Eastern Cape	0.26	0.63	0.43	0.44
	Northern Cape	0.21	0.67	0.50	0.46
	Free State	0.27	0.65	0.61	0.51
	KwaZulu-Natal	0.28	0.66	0.49	0.48
	North West	0.26	0.67	0.53	0.49
	Gauteng	0.21	0.64	0.60	0.49
	Mpumalanga	0.25	0.68	0.45	0.46
	Limpopo	0.26	0.64	0.48	0.46
	National	0.25	0.66	0.52	0.48
Wave 2	**Province**	**Trust**	**Belonging**	**Equality**	**SCI**
	Western Cape	0.34	0.74	0.58	0.55
	Eastern Cape	0.16	0.65	0.42	0.41
	Northern Cape	0.29	0.79	0.48	0.52
	Free State	0.42	0.69	0.56	0.55
	KwaZulu-Natal	0.25	0.63	0.47	0.45
	North West	0.30	0.72	0.49	0.50
	Gauteng	0.23	0.71	0.61	0.52
	Mpumalanga	0.38	0.50	0.47	0.45
	Limpopo	0.32	0.60	0.52	0.48
	National	0.30	0.67	0.51	0.49
Wave 1	**Province**	**Trust**	**Belonging**	**Equality**	**SCI**
	Western Cape	0.24	0.80	0.60	0.54
	Eastern Cape	0.12	0.70	0.46	0.43
	Northern Cape	0.18	0.80	0.51	0.49
	Free State	0.23	0.69	0.59	0.50
	KwaZulu-Natal	0.16	0.61	0.43	0.40
	North West	0.20	0.69	0.47	0.45
	Gauteng	0.22	0.70	0.60	0.51
	Mpumalanga	0.24	0.76	0.52	0.51
	Limpopo	0.34	0.72	0.50	0.52
	National	0.21	0.72	0.52	0.48

Table A2: **Afrobarometer: Key components of SCI and the index itself by province and Round**				
Round 3	**SCI**	**Inequality**	**Trust**	**Identity**
South Africa	0.4381	0.3797	0.3731	0.5617
Eastern Cape	0.4652	0.4501	0.3423	0.6034
Free State	0.5527	0.5353	0.3698	0.7529
Gauteng	0.4083	0.3978	0.2404	0.5868
KwaZulu-Natal	0.3880	0.3311	0.2233	0.6098
Limpopo	0.3470	0.4039	0.2342	0.4028
Mpumalanga	0.4094	0.2764	0.3114	0.6405
North West	0.4744	0.4416	0.2916	0.6901
Northern Cape	0.3582	0.2317	0.2813	0.5615
Western Cape	0.2489	0.2514	0.2652	0.2302
Round 4	**SCI**	**Inequality**	**Trust**	**Identity**
South Africa	0.3303	0.2816	0.2161	0.4934
Eastern Cape	0.3737	0.2818	0.2567	0.5825
Free State	0.3729	0.3634	0.2222	0.5331
Gauteng	0.3306	0.3437	0.1962	0.4518
KwaZulu-Natal	0.3376	0.2973	0.2105	0.5050
Limpopo	0.2867	0.1852	0.1783	0.4966
Mpumalanga	0.4030	0.2791	0.2213	0.7085
North West	0.4029	0.2817	0.2813	0.6458
Northern Cape	0.3608	0.2149	0.2971	0.5705
Western Cape	0.1891	0.1808	0.1895	0.1970
Round 5	**SCI**	**Inequality**	**Trust**	**Identity**
South Africa	0.4303	0.4212	0.2332	0.6365
Eastern Cape	0.4898	0.4965	0.2281	0.7448
Free State	0.4700	0.5421	0.2053	0.6625
Gauteng	0.3772	0.3771	0.2305	0.5238
KwaZulu-Natal	0.4245	0.3989	0.2238	0.6507
Limpopo	0.4697	0.3315	0.3059	0.7718
Mpumalanga	0.4684	0.5681	0.2620	0.5751
North West	0.3833	0.4255	0.2010	0.5235
Northern Cape	0.5184	0.5547	0.2685	0.7320
Western Cape	0.4177	0.3697	0.2025	0.6810

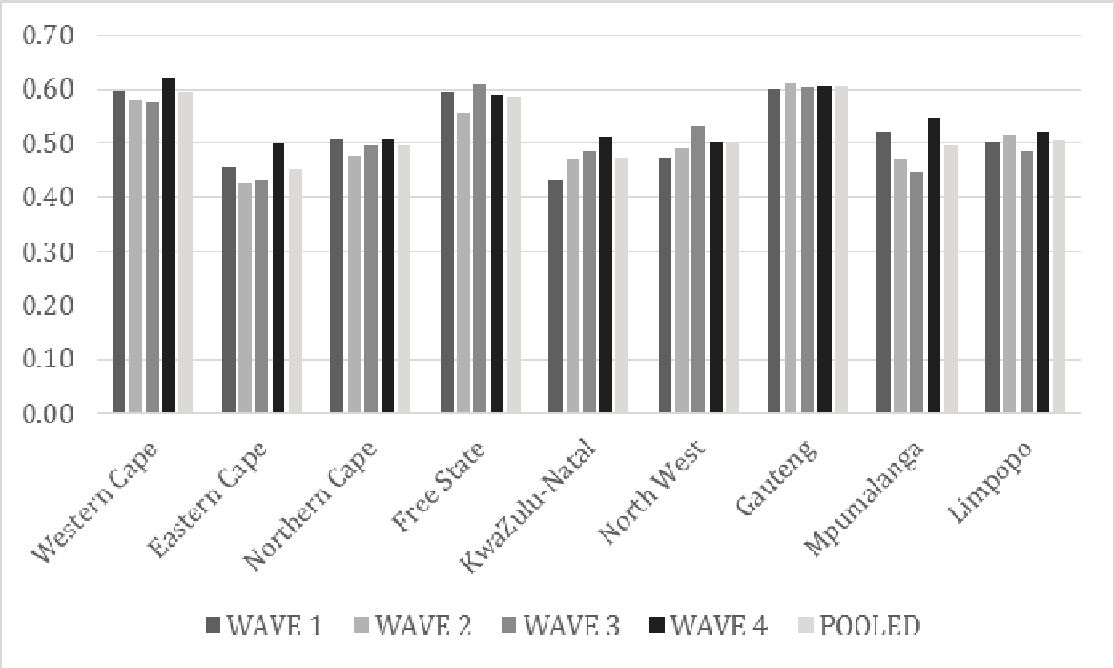
Table A3: External data on social and economic outcomes by province (2008-2009)								
Date	**2008**	**2008**	**2008**	**2009**	**2009**	**2008-2009**	**2008-2009**	**2008-2009**
Province	**GDP pc**	**Unempl rate**	**Labour force participation rate**	**Headcount poverty (%)**	**Poverty gap (%)**	**Total crimes**	**Contact crime**	**Property crime**
Eastern Cape	27750,12	0,26	0,47	0,71	0,37	216666,00	78175,00	54838,00
Free State	48657,75	0,24	0,61	0,62	0,28	132342,00	50041,00	33814,00
Gauteng	69984,34	0,22	0,73	0,33	0,13	638225,00	203371,00	161707,00
KwaZulu-Natal	40588,88	0,22	0,54	0,65	0,33	340113,00	116603,00	80311,00
Limpopo	31975,09	0,30	0,43	0,79	0,44	97567,00	34929,00	24079,00
Mpumalanga	44914,85	0,23	0,56	0,67	0,34	131412,00	46451,00	36604,00
North West	45795,53	0,24	0,56	0,61	0,29	117121,00	39147,00	29738,00
Northern Cape	48657,75	0,23	0,58	0,63	0,30	50277,00	21087,00	11379,00
Western Cape	61370,14	0,18	0,67	0,35	0,14	398249,00	88338,00	94618,00
Corr with 2008 SCI	0,50	-0,14	0,38	-0,38	-0,36	0,04	-0,10	0,06
Corr with 2010 SCI	0,71	-0,48	0,66	-0,59	-0,64	0,14	0,01	0,13

Table A4: External data on social and economic outcomes by province (2011-2013)								
Date	**2013**	**2012**	**2012**	**2011**	**2011**	**2014**	**2014**	**2013**
Province	**GDP pc.**	**Unempl. rate**	**Labour force participa-tion rate**	**Headcount poverty (%)**	**Poverty gap (%)**	**Compliance and Govern-ance Index**	**Municipal Productiv-ity index**	**No. service delivery protests**
Eastern Cape	40762,27	0,28	0,45	0,61	0,27	73,70	36,90	33,84
Free State	65419,17	0,31	0,59	0,41	0,18	73,90	43,40	11,28
Gauteng	94331,56	0,26	0,70	0,23	0,08	87,30	52,80	35,25
KwaZulu-Natal	53900,52	0,20	0,48	0,57	0,26	82,40	36,00	21,15
Limpopo	46819,60	0,19	0,39	0,64	0,30	69,40	38,30	2,82
Mpumalanga	64991,59	0,29	0,57	0,52	0,22	78,80	42,90	8,46
North West	66701,90	0,26	0,48	0,51	0,23	71,30	40,40	7,05
Northern Cape	60638,09	0,28	0,56	0,47	0,19	72,40	44,40	5,64
Western Cape	80868,67	0,23	0,68	0,25	0,09	91,40	51,70	15,51
Corr with 2012 SCI	0,67	-0,07	0,65	-0,75	-0,72			-0,05
Corr with 2014 SCI	0,56		0,51			0,45	0,43	-0,16

Table A5: **External data crime by province (2011-2013)**

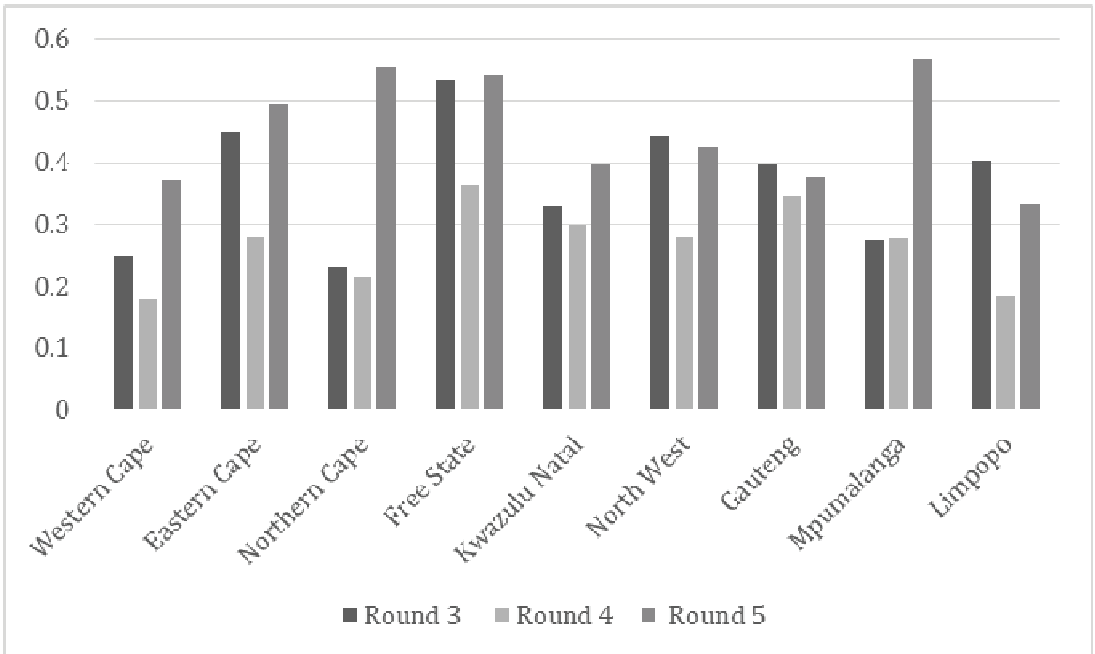
Date	**2011-2012**	**2012-2013**	**2011-2012**	**2012-2013**	**2011-2012**	**2012-2013**
Province	**Total crimes**	**Total crimes**	**Contact crime**	**Contact crime**	**Property crimes**	**Property crimes**
Eastern Cape	214465	209126	75779	72650	55742	55484
Free State	126391	131785	47486	48480	31772	34738
Gauteng	577991	584325	160289	153610	147690	153759
KwaZulu-Natal	348416	362680	105443	105444	84433	91128
Limpopo	113634	112953	38826	36786	29335	28533
Mpumalanga	122191	121172	36661	33692	36169	36312
North West	111030	115319	36112	36067	30389	31725
Northern Cape	45258	47697	18038	18649	11081	12533
Western Cape	447241	465997	97301	103346	104013	114122
Corr with 2012 SCI	0,44	0,46	0,31	0,36	0,40	0,44
Corr with 2014 SCI		0,22		0,13		0,24

Figure A1: **NIDS: Perceived Income Equality by Province, Waves 1-4**



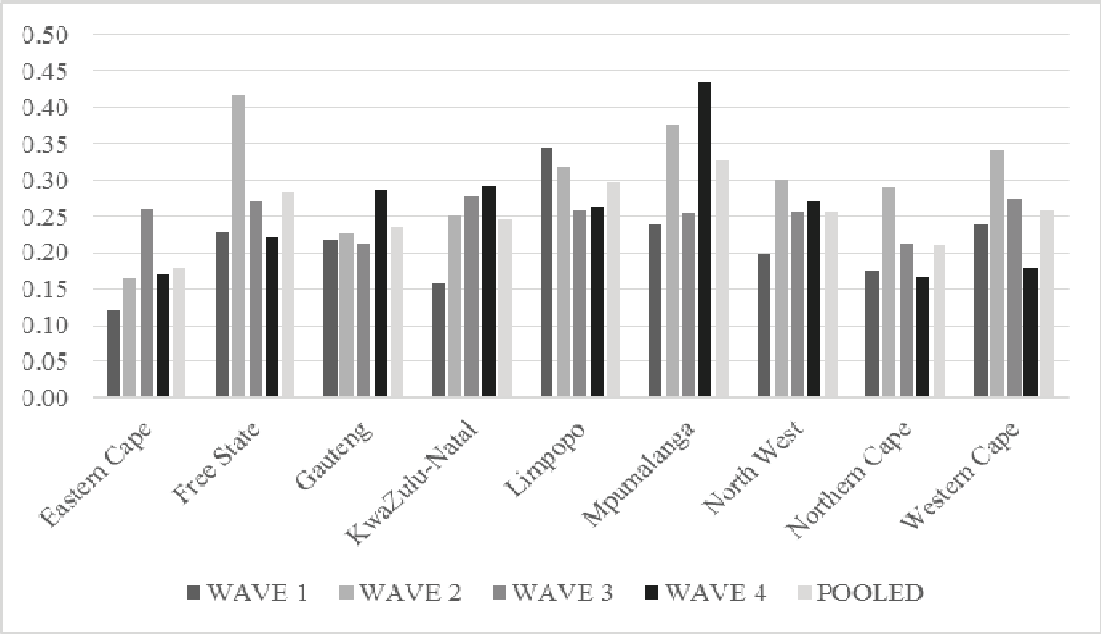
NOTE: Bars ordered chronologically from Wave One to Wave Four over each province.

Figure A2: **Afrobarometer: Perceived Income Equality by Province, Rounds 3-5**



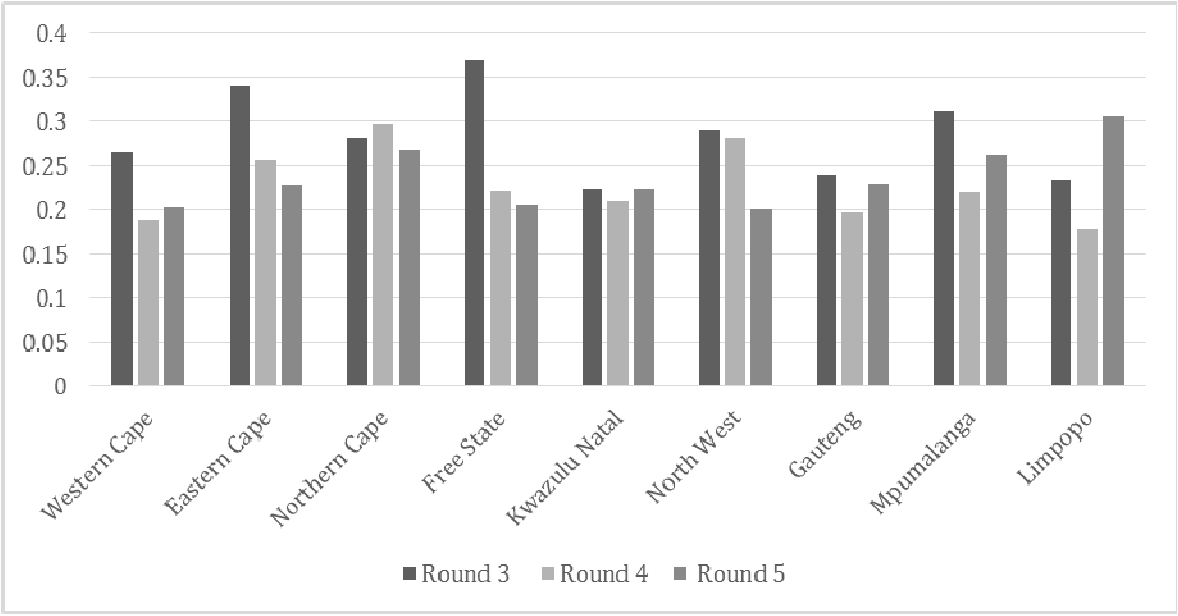
Note: Bars ordered chronologically from Round Three to Round Five over each province.

Figure A3: **NIDS: Trust by Province, Waves 1-4**



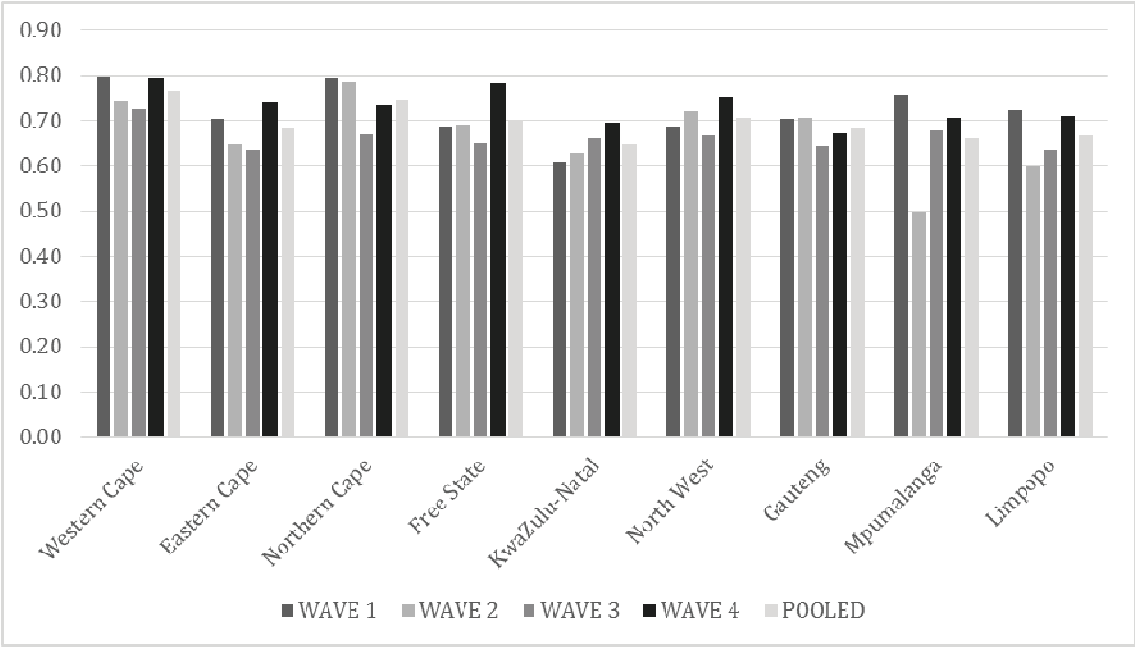
Note: Bars ordered chronologically from Wave One to Wave Four over each province.

Figure A4: **Afrobarometer Trust by Province, Rounds 3-5**



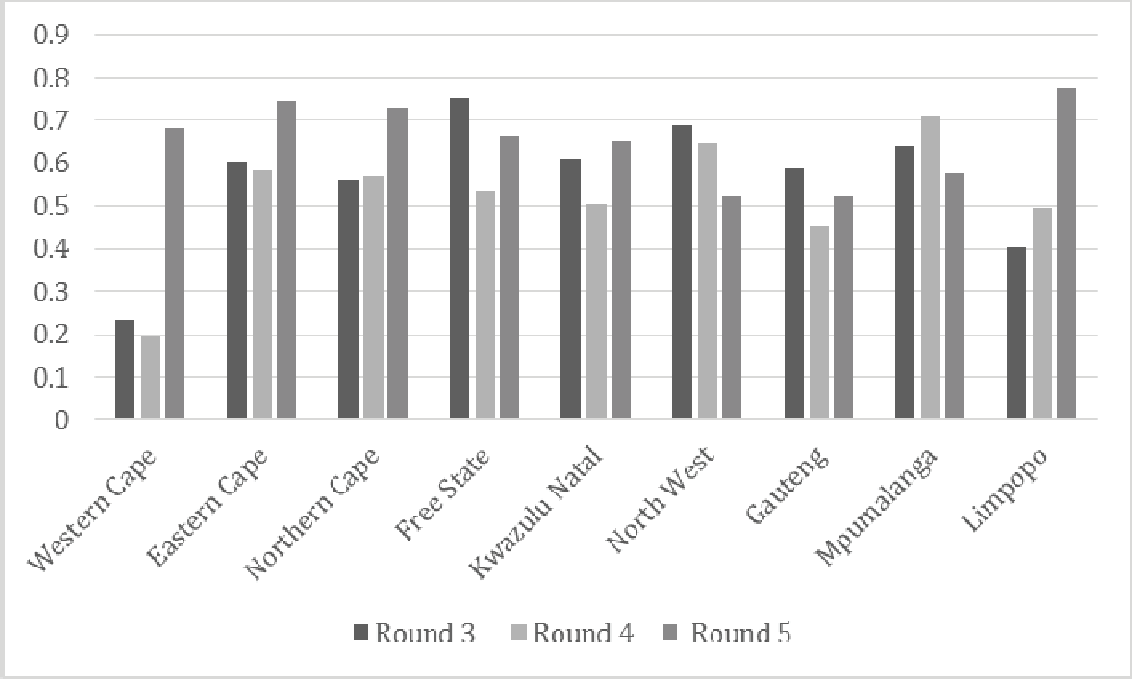
Note: Bars ordered chronologically from Round Three to Round Five over each province.

Figure A5: **NIDS: Belonging by Province, Waves 1-4**



Note: Bars ordered chronologically from Wave One to Wave Four over each province.

Figure A6: **Afrobarometer: Identity by Province, Rounds 3-5**



Note: Bars ordered chronologically from Round Three to Round Five over each province.

Endnotes

1. Struwig, J, Davids, Y D, Roberts, B, Sithole, M, Tilley, V, Weir-Smith, T and T Mokhele (2011), *Towards a social cohesion barometer for South Africa*. University of the Western Cape, Research Paper.
2. Likert Scale variables (trust, importance of religion, preference to stay etc) are represented as dummy variables where strong and moderate positive responses are coded as one whilst neutral and negative responses are coded as zero.
3. Remember that this variable captures the proportion of respondents who answered 'never' to how often they are treated unfairly — hence, an increase in the proportion who answered 'never' is a positive result, not an indication of more unfair treatment.
4. In Afrobarometer, the majority of the questions remain the same over the three Rounds, although the interpersonal trust questions differ slightly. Specifically, in Round 4 the interpersonal trust questions are "How much do you trust your relatives", "How much do you trust other people you know" and "How much do you trust other South Africans". In Round 3 these questions are "How much do you trust your relatives", "How much do you trust your neighbours", "How much do you trust people from your own ethnic group" and "How much do you trust people from other ethnic groups". We assume that the combined questions in each Round yield a measure of interpersonal trust. As such, we averaged the answers over the three or four questions in each Round to attain a measure for interpersonal trust.
5. The coefficients represent the effect of an additional year of education on the mean score for each indicator for an individual.
6. The Municipal IQ monitors 278 South African municipalities and quantifies their performance on a range of indicators.
7. http://www.statssa.gov.za/publications/P0441/P04413rdQuarter2014.pdf; http://www.statssa.gov.za/publications/P0302/P03022006.pdf; http://www. statssa.gov.za/publications/P0302/P03022014.pdf; http://www.statssa.gov. za/publications/P0302/P03022008.pdf; http://www.statssa.gov.za/publications/P0302/P0302203.pdf.
8. http://www.statssa.gov.za/publications/Report-03-10-06/Report-03-10-06March2014.pdf
9. http://www.statssa.gov.za/publications/Report-03-10-06/Report-03-10-06March2014.pdf
10. http://www.statssa.gov.za/?page_id=1854&PPN=P0211
11. http://www.statssa.gov.za/?page_id=1854&PPN=P0211
12. https://africacheck.org/wp-content/uploads/2014/03/201312021614519448. pdf.
13. https://www.overstrand.gov.za/en/media-section/news/100-overstrand-best-performer-in-sa
14. https://www.overstrand.gov.za/en/media-section/news/100-overstrand-best-performer-in-sa.

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