An analysis of well-being in Gauteng province using the capability approach

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Abstract

This paper adopts a standard ‘capability approach’ to analyse individual well-being in Gauteng province of South Africa. The analysis is based on eight capabilities namely; ‘play’, ‘emotions’, ‘other species’, ‘affiliation’, ‘bodily health’, ‘bodily integrity’, ‘senses, imagination and thought’ and ‘control over one’s environment’. Data for analysis came from the Gauteng City-Region Observatory Quality of Life Survey IV-2015/16. A Multiple Correspondence Analysis was employed to generate an index for each capability. Each index is based on individual ‘functionings’ that deliberately cover both ‘hard’ and ‘soft’ indicators of well-being undergirded by assumptions of aspirations and freedom. Results show that capability achievements vary across race, age and gender, confirming the typical South African scenario of inequality. However, we observe broader levels of deprivation that are otherwise masked in earlier studies based only on objective dimensions.

JEL Classification C18 I32

1 Introduction

Improving individual and societal well-being is a major goal of economic development across the globe as high levels of poverty, inequality and deteriorating social fabrics remain significant challenges (ILO 2013; UN 2020; WEF 2020). Addressing these challenges has had some, but limited, impact (Friedman & Bhengu 2008; World Bank, 2018; Zizzamia et al., 2019). In South Africa, efforts have been made to understand these challenges at both national and local levels through extensive research. This paper is focused on Gauteng province, a small but highly populated province of South Africa which also serve as an economic hub.

Most enquiries on poverty and well-being in Gauteng are based on traditional objective and money-metric measures which allow comparison across countries (e.g. Tseng 2018; Kwenda & Benhura 2018; Mushongera et al. 2017). These studies have undoubtedly yielded policy prescriptions, such as social support and basic service delivery, which have influenced people’s lives in positive ways. However, some shortcomings exist which are accounted for by the ‘capability approach’ postulated by Sen (1985 1993 1999). Money-metric measures suffer from the fallacy that more money means higher well-being (Costanza et al. 2007). Although essential, income is not an end in itself (Daly & Posner 2011; Fioramonti 2014). The capability approach, offers an opportunity for evaluating how developmental inputs are translating into outputs that are subjectively experienced as better welfare (Kimhur 2020).

Other approaches of measuring well-being have also emerged in recent years, and these attempt to capture essential aspects of well-being that cannot be inferred from the money-metric measure (such as life expectancy, life satisfaction, feelings of security). Nonetheless, these approaches consider the objective and subjective aspects of well-being in isolation. In reality, well-being is more complex than suggested by these two dichotomies, and hence they limit the possibility of obtaining a holistic view of well-being (Veenhoven 2007). However, the capability approach strives to offer this holistic view that combines both approaches, as well as incorporating people’s aspirations and freedoms.

Numerous studies of well-being inspired by the capability approach have been published to date. However, most these studies have been limited in scope due to lack of data. For instance, researchers often compute composite social exclusion indices to evaluate well-being (e.g. Koo & Lee 2015; Rippin 2016). Unfortunately, the computation of a composite index misses the essence of what Sen envisaged and what the ten core capabilities suggested by Nussbaum (2000) attempt to capture, that is, a range of personal aspirations and the freedom to achieve them. Similar studies on the South African case also follow this trend, for example Klasen (1997; 2000), Higgs (2007), and Greyling and Tregenna (2017). These studies have educated us on quality of life and the heterogeneity of well-being at national and subnational levels. However, they fall short in providing a holistic view of well-being as they exclude some capabilities and hence mask achievements underlying individual capabilities.

The Gauteng City-Region Observatory (GCRO) Quality of Life (GCRO QoL) Survey IV-2015/16 (GCRO, 2016), provides a rich dataset for undertaking an analysis of well-being using the capability approach framework. The data set allowed us to compute eight of the ten capability indices suggested by Nussbaum (2003). Each index is based on individual ‘functionings’ that deliberately cover both ‘hard’ and ‘soft’ indicators of well-being. Unlike previous studies which simply aggregate functionings into a composite index, we place particular attention on the connections between functionings to generate an index for each capability. From these computations, we assess capability achievements across gender, race, and age, and suggest policy interventions where achievement levels indicate level of deprivation.

The next section contextualises the study while section 3 discusses the capability approach, section 4 looks at the data used, while section 5 discusses the methodology, section 6 looks at the results and section 7 concludes.

2 Study Context

Although Gauteng is South Africa’s smallest province by area, it contains the largest share of the national population – 25.8% in 2019 – and accounts for 35% of the national economy (Statistics South Africa – StatsSA, 2019a). The province is largely urban and comprises three of the
country’s largest metropolitan municipalities. It also attracts a large number of migrants and immigrants. In spite of the large population (an estimated 15.4 million in 2020), Gauteng has managed to maintain service delivery at reasonable levels over the years (StatsSA 2020). For example, over 90% of the population had adequate sanitation and access to piped water in 2017/2018 (GCRO QoL 2018).

However, Gauteng, is also known for high rates of crime as well as high perceptions of crime, which both compromise safety and security of residents. Gated communities have been on the rise and are an expression of a lack of faith in government to provide secure neighbourhoods (Harrison & Mabin 2006; Landman & Badenhorst 2015). There are also concerns over the lack of social cohesion, which results in racially charged and xenophobic tendencies (Abrahams, 2016; Ballard et al., 2019). Unemployment, poverty and inequality are also defining features of Gauteng. For example, in 2019, the unemployment rate stood at 31% while the Gini coefficient was over 0.70 (GCRO QoL 2019; StatsSA 2019b). Poverty patterns are closely linked to race where Black Africans, in particular, were highly disadvantaged by apartheid policies, lacking freedom of access to fundamental rights such as education, housing, sanitation, necessary for decent standard of living. It was against this background that South Africa adopted a non-racial constitution that guarantees human dignity, equality and freedom (Republic of South Africa (RSA) 1996).

3 Capability Approach

The capability approach is a normative framework for conceptualising and appraising welfare issues such as poverty and inequality (Kimhur 2020; Robeyns 2005). Developed by Amartya Sen (1985 1993 1999), the approach was an attempt to address the shortcomings of traditional methods of analysing poverty which overlooked the diverse, plural and multidimensional nature of human conditions and experiences. While multidimensional poverty studies take cognisance of the plurality of poverty by examining a diverse set of conditions they fall short of fully capturing the intrinsic dimensions of human well-being due to the lack of appropriate datasets that capture the softer aspects of well-being. In recent times, there has been an increase in measures that capture these intrinsic values which include indices such as the Social Progress Index (Porter et al. 2015), Happiness Index and the Quality of Life Index (Mushongera 2017). Although composite indices are informative, the capability approach goes a step further by emphasising a detailed analysis of each capability.

From a capability perspective, individual well-being is considered to be dependent on functionings. Functionings capture what individuals effectively want to do and to be (i.e. their aspirations) – for example to work, to learn, to be educated and to enjoy life. A set of functionings coupled with the freedom to attain them constitute a capability e.g. bodily health, bodily integrity and control over one’s environment (Robeyns 2005). Capabilities vary across individuals due to differences in their freedoms and preferences. For Kimhur (2020), the capability approach proposes capabilities as a space for evaluating or comparing individuals’ advantages and deprivations. This can be rationalised by the concept of conversion factors, which suggests that individuals possess different abilities to convert resources (means) into capabilities or functionings (ends). For instance, when presented with the same amount of food, different individuals can convert it into different outcomes (e.g. being able to be nourished) depending on personal and social factors such as metabolic rate, disability and gender norms. By acknowledging human diversity, the capability approach serves as an essential basis for comparing welfare across demographic groups.

Although the capability approach was pioneered by Amartya Sen, many scholars – such as Alkire (2002), Nussbaum (2003 2011), Robeyns (2006 2017), Wolff and De-Shalit (2007) – have not only extended the approach but have also suggested pragmatic ways of applying the approach and grounds for empirical exploration (Kimhur 2020). In this paper, we have adopted Nussbaum’s (2003) version of the approach, which is based on a set of ten capabilities. These include: Life, Bodily health, Bodily integrity, Senses Imagination and thought, Emotions, Practical reason, Affiliation, Other species, Play, and Control over one’s environment, as discussed under choice of indicators.

4 Data

4.1 Data

Our study uses data from the QoL Survey IV-2015/16 conducted by the GCRO (GCRO, 2016). The survey collects data on a number of variables related to health and well-being, economic circumstances, housing and perceptions of service delivery, crime and safety, community and public participation, psychosocial attitudes, satisfaction with government, transport and mobility, local community and neighbourhood dynamics, and political and social values and attitudes. Data were collected from a random sample of 30 002 respondents across all 529 wards in Gauteng, which makes the QoL IV-2015/16 one of the largest single living-conditions survey in South Africa (Mushongera et al. 2017). The data collection process utilised geo-located face-to-face interviews based on questionnaires programmed in computer-assisted personal interviewing software. Incoming data were subjected to rigorous quality control measures, such that some recoding and corrections were made during the data validation process (GCRO 2015). The data were then weighted to adjust for the sample design and for population distribution (ward, race and gender) based on the 2011 South African Census. The dataset (GCRO 2016) captures both objective and subjective elements best suited for analysing well-being as per eight of Nussbaum’s ten core capabilities. Our analysis was based on 29 880 of the total 30 002
individuals surveyed after dropping 122 individuals because their racial group was not made explicit in their questionnaires. This small number did not affect the representativity of the data.

### 4.2 Choice of indicators

Although Nussbaum's capabilities are important, not many surveys contain questions that directly refer to what is implied by each. Whereas the analysis of capabilities envisaged by Nussbaum would consider aspirations and freedoms, these are not explicitly present in the GCRO QoL surveys. Scientific research suggests that where it is not possible to obtain a variable demanded by theory, a researcher can either omit the variable or use a proxy variable which reasonably captures what is implied by the missing one. In our case, we used proxy variables in our dataset which is common in scientific research as a way of minimising specification bias resulting from omitting a variable (Frost 1979; Huang et al. 2005). Below we discuss the eight capabilities we considered and the corresponding proxies we used in particular cases.

**Bodily Health**

Nussbaum considers bodily health to comprise good health, reproductive health, adequate nourishment and adequate shelter. The relationships between these factors and bodily health are well established in the literature, for example on housing conditions (Breysse et al., 2004), water quality (Hutton & Bartram 2008) and nutrition (Hercberg et al. 2008). These aspects are critical within the South African context, where informal housing is widespread, access to clean water is not universal and food security is a problem. All these factors are recognised internationally as basic human rights and are enshrined in the South African Constitution as such (RSA 1996; StatsSA 2019c). To represent this capability, we used the following variables from the QoL dataset: ‘Dwelling type’; ‘Living space (number of rooms per capita)’; ‘Water quality’; ‘Health prevents daily work’; ‘Hunger’; and ‘Subjective health rating’ (GCRO 2016).

**Bodily Integrity**

Bodily integrity is the autonomy and self-determination a person has over his/her body. Nussbaum refers to people's mobility, safety and the freedom to make choices on reproductive and sexual matters. Deeply rooted in classical liberalism, the concept of bodily integrity stretches back for centuries and refocuses attention towards individual sovereignty over one's body beyond the reach of governmental power (Mill, 1859; Patella-Rey, 2018). In fact, John Stuart Mill considered bodily integrity and individualism as elements of human well-being because they give individuals total control over themselves, their bodies and their minds (Mill 1859 in Patella-Rey, 2018). This conception of bodily integrity was adopted by the South African government and is enshrined as a right in Section 12(2) of the South African Constitution (RSA 1996). To represent bodily integrity, variables from the QoL dataset relating to the following factors were used: ‘Home safety’, ‘Safety during the day’, ‘Safety and night’, and ‘Safety and security services’ (GCRO 2016).

**Senses, imagination and thought**

Nussbaum (2003) closely connects this capability with the basic literacy skills that comes from exposure to an adequate education. South Africa suffered a long history of racial segregation, and one way of maintaining this division was to have an unequal education system in which black Africans, in particular, were disadvantaged compared to whites (Phillips 1999). Poor or low levels of education expose individuals to suboptimal behaviours, mental health and quality of life generally (Fuller et al. 2002). Two variables were used to represent this capability, namely ‘Education’ and ‘Disability’ (GCRO, 2016). We included disability as physical limitations can potentially impede a person from fully using their imagination and thought, see Table 3 for variable definitions.

**Control of one’s environment**

Citizens, in general, have a right to participate in political and developmental matters that affect them, which happens through voting, community development planning and the courts (Smith & Rubin 2015). In democratic societies, people's ability to make political choices is greater than in autocratic regimes. As a democratic institution, the South African government has provided several platforms through which people can engage with government, make political choices, participate in governance matters, and exercise both freedoms of speech and association. For example, citizens have a right to vote and to participate in the integrated development planning process at the local level, where they can contribute to projects and programmes in their residential areas. We identified a set of variables to represent this capability from our QoL data, namely ‘Voter registration’, ‘Perception of politics’, ‘Employment status’, ‘Business ownership’ and ‘Social grant recipient’ (GCRO 2016). Variable definitions are in Table 4.

**Affiliation**

Nussbaum considers this capability as the ability to live with others, to show concern for others and to be treated with respect and dignity. This entails being treated as equal to others and as worthy, irrespective of race, sex, sexual orientation, ethnicity, caste, religion and national origin (Benbow et al. 2014; Nussbaum 2003). These factors generally refer to the concept of social inclusion, which Sen (2000) considered an important aspect of individual well-being. Social inclusivity dates back to Adam Smith (1776) who emphasised the importance of being able to
interact freely with others. Social exclusion may induce other deprivations, thereby limiting living opportunities (Zheng & Walsham 2008). After many years of social exclusion, South Africa adopted a socially inclusive constitution that recognises the various forms of affiliation as envisaged by Nussbaum. Variables selected were, ‘Participation in club’, Attitudes towards foreigners’, ‘Perceptions about place of whites in contemporary South Africa’ and ‘Perceptions about hitting partner’.

**Emotions, Play and Other species**

Emotions include mental, ‘headspace’ aspects that relate to how people feel about themselves and others. Emotions are subjective, psychological and expressive, and can be short and long term. According to Fredrickson's (1998) broaden-and-build theory of positive emotions, people's daily experiences of positive emotions compound over time and have an impact on a variety of life outcomes such as better physical health, longevity, higher incomes and satisfaction with life (Fredrickson et al. 2008). From our dataset, we identified two variables that came the closest in representing emotions, namely ‘Nobody cares about me’ and ‘Feelings of depression’ (GCRO 2016). Nussbaum considers play as comprising the ability to laugh, play and enjoy recreational activities. In general, play is associated with children because of its contribution to their optimal development (Ginsburg, 2007). However, it is also a critical element of adult life (Barnett 2017). It is ‘roomy’, encompassing a wide range of recreational activities (Eberle 2014).

Research has shown that play is associated with creativity, physical and mental well-being, and higher levels of productivity (Csikszentmihalyi 1996; West et al. 2016). For example, Kim et al. (2014) argue that serious engagement in leisure activities leads to happiness and life satisfaction, and to successful ageing among older adults. Currently, South Africa has a National Sport and Recreational Plan that has been designed to equitably improve the lives of all South Africans, revitalise the delivery of sport and recreation, and to build an active nation (RSA 2011). We represent this capability by: ‘Family time’, ‘Leisure time’ and ‘Parks/public spaces’. Care for one's environment is important for the well-being of both current and future generations (World Health Organization 2009). Nussbaum (2003) considers the ability to live with and have concern for animals, plants and the world of nature as one of the core capabilities. On a broader scale, human activities such as urban development, mining, farming and industrialisation have negative impacts on the environment that compromise environmental sustainability and thus reduce people's capabilities in this category.

South Africa predominantly uses fossil fuels which impact negatively on the environment. In and around Gauteng, there is a concentration of heavy industries, coal-fired power stations, coal-to-liquid industries, significant use of motor vehicles, and the domestic use of liquid fuel for cooking and lighting – all of which generate significant amounts of air pollution (Mushongera 2015). Acid mine drainage across Gauteng also poses a health threat to people, plants and animals (Bobbins 2015). The ‘Other species’ capability was represented by ‘Care for the environment’ and ‘Climate change’ (GCRO 2016).

**Recoding of Indicators**

The QoL survey asks a wide range of questions and the response options vary significantly. For instance, some questions have binary responses while others used Likert scales. To ensure that our proxy variables were all based on an ordinal scale of measurement, the indicators were recoded using a standard ordinal ranking procedure; the lowest rank indicates the worst outcomes while the highest indicates the best possible outcome (see OECD 2008, p.28). Where responses were thinly spread across categories in some questions, the categories were clustered (while preserving the ordinal ranking) in order to obtain a reasonable number of observations in each group.

[1] For example, for the Health Status Indicator, a rank of 1 is assigned to individuals with very poor health; 2 for poor health; 3 for good health; and 4 for excellent health.

**5 Methodology**

We applied multiple correspondence analysis (MCA), which is a generalisation of principal component analysis where the indicators of interest are categorical rather than continuous variables. It is also an objective statistical approach for generating both the appropriate indicator weights and the corresponding capability. MCA entails applying regular correspondence analysis to the Burt matrix, which is distinguished as a set of all two-way cross-tabulations of the variables (Greenacre 2007). We applied the analytical algorithm of joint correspondence analysis to the Burt matrix in order to account for the poor diagonal fit of MCA that is associated with inflated measures of variation. This generated several dimensions containing sets of factor scores relating to each of the capability indicators. Factor scores associated with the dimension that captures the highest amount of total variation in the data (i.e. principal inertia) were used as weights for the capability indicators. Each capability index (CI) was computed as a weighted sum of the relevant indicators as shown in this equation –

\[
CI = \sum_{q=1}^{Q} \left( \sum_{k=1}^{K} R_k^q W_k^q \right), \quad q \in \{1, 2, \ldots, Q\}; \quad k \in \{1, 2, \ldots K\}
\]
Indices computed using MCA tend to be negative in the lower end due to negative weights, hence making it difficult to interpret the indices. For ease of interpretation, we normalised all indices using the min–max method so that the resultant indices are co-bounded between 0 and 1, where 0 indicates the lowest well-being and 1 is the highest possible level. Generally, the weighting structure is intuitive, that is, negative or relatively low weights are attached to poor conditions which reduce well-being, and vice versa. Therefore, the resultant indices were consistent with the monotonicity axiom, which states that more is better. Based on the MCA process, we generated capability indices for each individual in the sample, and the descriptive statistics for the overall sample, by demographic group (sex, race, age). All estimations were conducted in Stata 15 software (StataCorp 2015).

[2] Our capability indices (CI) are normalised (bounded between 0 and 1) using the min–max method as follows: (CI-CImin)(CImax-CImin).

6 Results And Analysis

We present our results based on the MCA procedure and then present our main results showing an assessment of the capability achievements by demographic group.

6.1 Overall capability indices

The box-and-whisker plot in Fig. 1 shows information on the level (median), spread (range and interquartile range), symmetry about the median, outliers and the average values for each capability (Cox 2009; Tukey 1977). Apart from ‘affiliation’, all capabilities are negatively skewed, implying there are more individuals with very low capability scores (outliers), which lowers the average more than the median.

Results suggest that there are different levels of achievement across the capabilities in Gauteng. However, we cannot make a direct comparison across capabilities because controlling for differences in the underlying distributions is beyond this study. Three capabilities – ‘play’, ‘senses, imagination and thought’ and ‘other species’ – had high scores relative to the maximum possible value of 1. ‘Bodily health’, ‘bodily integrity’ and ‘emotions’ are midway from the maximum possible achievement. ‘Control over one’s environment’ and ‘affiliation’ have scores that are very low compared to the possible maximum value. The latter capability relates to socially accepted perceptions towards social cohesion, which includes racial tension, xenophobic attitudes, domestic violence and withdrawal from civic activities. In subsequent sections, we examine whether there is a variation in the level of capability achievement across demographic groups.

6.2 Capability Indices by demographic group

Table 1 shows mean values for capability indices (Panel I) and median values (Panel II). On average, there were no significant gender differences in the level of achievement across capabilities except for ‘control over one’s environment’ and ‘affiliation’. This also holds when considering median values, except for ‘affiliation’ where gender differences vanish. In relative terms, South African women have a lower achievement in ‘control over one’s environment’ than their male counterparts.
Table 1
Capability indices by demographic group

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>Sex</th>
<th>Race</th>
<th>Age group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>African</td>
<td>Coloured</td>
</tr>
<tr>
<td>Panel I: Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play</td>
<td>0.90</td>
<td>0.91</td>
<td>0.89</td>
<td>0.88</td>
</tr>
<tr>
<td>Other species</td>
<td>0.89</td>
<td>0.89</td>
<td>0.88</td>
<td>0.88</td>
</tr>
<tr>
<td>Senses, imag. and thou.</td>
<td>0.90</td>
<td>0.91</td>
<td>0.89</td>
<td>0.88</td>
</tr>
<tr>
<td>Bodily health</td>
<td>0.80</td>
<td>0.80</td>
<td>0.79</td>
<td>0.77</td>
</tr>
<tr>
<td>Bodily integrity</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.58</td>
</tr>
<tr>
<td>Emotions</td>
<td>0.61</td>
<td>0.62</td>
<td>0.61</td>
<td>0.60</td>
</tr>
<tr>
<td>Control over env.</td>
<td>0.47</td>
<td>0.44</td>
<td>0.49</td>
<td>0.45</td>
</tr>
<tr>
<td>Affiliation</td>
<td>0.43</td>
<td>0.45</td>
<td>0.41</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panel II: Median</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Other species</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Senses, imag. and thou.</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.88</td>
</tr>
<tr>
<td>Bodily health</td>
<td>0.84</td>
<td>0.85</td>
<td>0.84</td>
<td>0.79</td>
</tr>
<tr>
<td>Bodily integrity</td>
<td>0.63</td>
<td>0.63</td>
<td>0.63</td>
<td>0.61</td>
</tr>
<tr>
<td>Emotions</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
</tr>
<tr>
<td>Control over env.</td>
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<td>0.49</td>
<td>0.55</td>
<td>0.49</td>
</tr>
<tr>
<td>Affiliation</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Out of the four race groups, Black Africans and Coloureds score lower on average than whites across all capabilities. When considering the median, the position of Black Africans and Coloureds is maintained relative to whites except for ‘play’, ‘affiliation’ and ‘other species’, where parity is achieved. We observe that out of the four race groups, Black Africans are disadvantaged on the component measures that have been compiled to represent ‘senses, imagination and thought’. Indians/Asians have similar achievements to Whites, except for ‘bodily integrity’ and ‘emotions’, where they have lower achievements on average. Across age groups, the elderly fare worse than others in ‘bodily health’ and ‘control over one’s environment’, while youth score lower on ‘affiliation’. We find no significant differences in achievements across other capabilities by age.


7 Conclusion And Recommendations

Our study provides an analysis of well-being in Gauteng province based on Sen’s capability approach which integrates objective and subjective measures, and hence provides a holistic view. The approach focuses on individual and the conditions that frame what each individual is willing and able to be. According to Nussbaum, who operationalised this approach, any analysis of poverty and inequality needs to emphasise issues of justice, freedom and the need for a decent life (Nussbaum 2011). Not many studies classically apply the capability approach using Nussbaum’s core capabilities. Using GCRO QoL data, this paper is attempt to fill this gap. Given that the QoL survey was not specifically designed to capture the exact capabilities Nussbaum identifies, we adopted a proxy approach which is common practice in scientific research as a way of minimising specification biases that results from the omission of a variable.

From the perspective of a capability approach, individual well-being is dependent on ‘functionings’ that represent an individual’s aspirations. A set of functionings that is coupled with the freedom to achieve them constitutes a capability. As such, variation in capabilities across individuals depends heavily on differences in both the individuals’ freedoms and in any preferences they might have. This explains why two individuals belonging to the same income group may have varying capabilities; and hence the capability approach is better placed to evaluate an individual’s welfare compared to purely income-based approaches. Accordingly, the capability approach is also more appropriate for
assessing the extent to which individual rights and freedoms contained in the South African Constitution (RSA 1996) have been realised. We computed indices for eight of Nussbaum’s ten core capabilities using the MCA procedure and examined their distribution and estimated differentials across sex, age and race. The outcome was more informative than a composite index because we were able to unpack the relative achievements for each individual across various indicators.

Overall, while the capabilities of ‘play’, ‘senses, imagination and thought’ and ‘other species’ have high scores in the province, ‘bodily integrity’ and ‘affiliation’ have low scores. Thus, improvements in welfare could be achieved by enhancing the status of the indicators underlying these particular capabilities. In the case of ‘affiliation’, the poor performance (low achievement score) largely reflects the minimal participation in social clubs and societies in Gauteng. This is possibly shaped by the diverse nature of the province’s population and the rise of exclusive gated communities. The low achievement in ‘bodily integrity’ is consistent with the high level of crime in Gauteng, which limits an individual’s ability to move and live securely. This calls for government interventions towards enhancing safety and security in the province.

Results show very small gender differentials across capabilities contrary to the general notion in South African on gender differentials in well-being. However, women are more deprived in the ‘control over one’s environment’ capability than men. This result is partly driven by the gender gap in economic status, where women are worse off than men, as well as by the patriarchal nature of political and community leadership in the country. In mitigation, the government should actively work on improving women’s economic and leadership status in the province. Racially, there are huge disparities between black and white South Africans. Results reported at the mean highlight that Black Africans score lower than White South Africans across all capabilities. This shows that Black South Africans are deprived in both ‘hard’ and ‘soft’ aspects of well-being. Programmes to combat poverty and building inclusive socio-economic development needs to be intensified. Capability achievements also vary by age. For example, the elderly score poorly in ‘bodily health’ compared to the youth and middle-aged cohorts. Strategies to improve the elderly’s living conditions and access to healthcare are therefore essential. Also, the youth have a lower achievement in ‘affiliation’ compared to others.

Our results for commonly analysed dimensions (i.e. objective measures) are consistent with previous South African studies. This study, however, provides additional insights into well-being by including subjective dimensions – such as play, affiliation, emotions and care for other species – which are missing in previous studies. Based on the indicators used to measure ‘play’ and ‘other species’, we find high achievement in these capabilities. There is modest achievement in ‘emotions’, where there is little variation across demographic groups. Generally, ‘affiliation’ has the lowest achievement level, with a highly dispersed distribution. It is therefore imperative that the government strengthens interventions aimed at maximising social inclusion.

Finally, we recommend that future studies on capabilities should pay attention to three key aspects. First, the underlying factors that generate deprivation in capabilities need to be explored. This may involve collecting primary data that specifically interrogate these issues. Second, dedicated studies that collect data based on Nussbaum’s actual capabilities are needed to avoid reliance on proxies. Third, since Nussbaum’s list was not designed to be definitive, future studies could base their capabilities more explicitly on local contexts.

Declarations

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Ethical approval. This article does not contain any studies with human participants or animals performed by any of the authors. It used secondary data.

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Tables

Tables 2-4 are not available with this version

Figures

Figure 1

Capability indices – overall

Notes: x symbol denotes the outliers. The mean values are indicated in the box-whisker plots.