What is an Adequate Living Wage Level for South Africa?

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COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people have been attributed, cited and referenced.

Signature Signed by candidate **Date: 17/12/2023**

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ABSTRACT

The study presented in this dissertation had three aims: To determine what an adequate living wage level for South Africa would be, to assess the differences between provinces when looking at quality of life (QoL) and income and what the implications arising from this would be for a national living wage, and lastly, to compare Teng-Calleja et al's (2021) and Botha's (2021) QoL formulae. The study follows on from prior research conducted with data from two separate, geographically confined South African samples collected in 2015 and 2019. Like in this prior research, it argues that a subjective approach, rather than an objective, econometric approach is required to determine a relevant living wage level for South Africa and that Sen's Capability Model presents an adequate theoretical framework for this. A living wage is thus understood as the wage level from which onwards it becomes possible for individuals to have choice over the areas of life which matter to them, meaning that they have acquired the capabilities they desire. Having such choice – or capabilities realised - is equated to a good QoL. The research differs from previous studies in that it is based on a large, nationally diverse sample with participants residing in all nine South African provinces (N=1,015) and utilises both Teng-Calleja's and Botha's QoL formulae, allowing for comparison. Data was collected in late 2022 and early 2023. In this cross-sectional, exploratory, and descriptive survey study QoL was determined as the degree to which individuals perceived their valued capabilities to be realised. Two approaches to calculating QoL were employed in the analysis. QoL was plotted against individuals' self-reported income levels using a local polynomial regression (locally estimated scatterplot smoothing or LOESS). The results showed that both methods led to similar results. A monthly living wage of at least R10,000 – R11,000 would allow South Africans to achieve a good QoL. In the provincial analyses, Western Cape, Eastern Cape, and Gauteng reported the highest average incomes and Free State, Limpopo, and North West reported the lower average incomes in the sample. Provincial LOESS curves produced living wage amounts which varied greatly by province, ranging from R5,000 – R22,000 per month. Results showed that Mpumalanga, Western Cape, and Limpopo would require the lowest monthly incomes to achieve a decent QoL, followed by Eastern Cape, KwaZulu-Natal, Free State, Gauteng, and again Western Cape which produced the largest required income range to achieve a good QoL, ranging from R8,000 – R22,000. Lastly, Teng-Calleja's and Botha's formulae for calculating QoL produced nearly identical results. These results provide employers who aim to pay a living wage with a benchmark amount, and advocates for living wages can use the benchmark to inform living wage policy.

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CHAPTER 1: INTRDUCTION

The aim of this dissertation was to determine a living wage level for South Africa based on self-report data collected from a large sample of working individuals between late 2022 and 2023. Similar research had been conducted before with data collected in Cape Town and Tshwane in 2015 (Carr et al., 2018) and the Cape Municipality in 2019 (Botha, 2021). In both publications the authors argued that no work conducted for pay should be remunerated at a level lower than what would be required for individuals to afford a humble, but decent life. This wage threshold is called a living wage. In line with Carr et al. and Botha, in this dissertation, a psychological approach to determining a living wage is seen as more adequate than an approach based on cost-of-living indicators (see also Carr et al., 2016; Meyer & Maleka, 2023; Oghenetega, 2023., Teng-Calleja et al., 2021). While Carr et al. (2018) and Botha were able to show that such a psychological approach – based on working individuals' subjective experiences – can be used to determine a living wage, the research presented in this dissertation differs in four ways: It is (a) based on more recent data which were (b) collected from across South Africa, (c) plots provincial income and proposed living wage differences, and (d) provides a comparison between two methods of measuring QoL. Unlike prior research, it thus allows to propose a national and provincial-level living wage amount – or range, based on the psychological approach developed previously.

Understanding what would constitute a living wage level in South Africa is important as every day approximately five and a half million workers across South Africa perform arduous work in formal jobs that, despite often taking up 40-45 hours per week, do not keep them and their dependants out of poverty; these are the 'working poor' (Budlender et al., 2015). The working poor refer to individuals and families who maintain regular employment but fall under the poverty line due to low wages. The statistics show that working poverty is widespread not just in South Africa, but across the world (ILO, 2019), even though paid employment is commonly considered a front-runner among poverty eradication strategies (Cheung & Chou, 2015; Eardley, 1998; Feder & Yu, 2020; ILO, 2011, 2019; *Statistics on working poverty,* 2019). In 2011, the global average percentage of workers classified as working poor was 39.1%. The percentages vary widely between geographic regions, however, and are especially severe in Sub-Saharan Africa. In 2011, 81.5% of workers were classified as poor in this region (ILO, 2011). This trend continued over the next decade: Africans represented 56% of the world's working poor in 2018, despite African employment representing only 14% of global

employment (ILO, 2019). The prominence of the working poor, particularly in Africa and Southern Africa, forms the broad backdrop for this dissertation.

As a means of protecting the precarious workforce from exploitation and for inequality reduction (Nxesi, 2023), the South African government provides a minimum wage floor through the national minimum wage of R25.42 per hour in 2023 (R4,067.20 per month based on a 40-hour work week). For low-income workers, depending on their eligibility, income through work may be supplemented through a range of social grants (CCMA, 2023). Grants include the South African Social Security Agency (SASSA) social welfare grants consisting of child support (R500 per month per child), disability (R2,080 per month), pension (R2,080 – R2,100 per person per month), social relief of distress (variable, subject to a means test), care dependency (R2,080 per child per month), grant in aid (R500 per person per month), war veterans (R1,880), and foster child grants (R1,120 per child per month; Western Cape Government, 2023). Though grant amounts are low, they need to be balanced against the tax money available, as South Africa has a small taxpayer base with only 54.87% of the adult population being tax-registered (SARS tax statistics, 2021).

South Africa's national minimum wage first took effect on the 1st of January 2019 (Francis & Webster, 2019). There tends to be agreement that the national minimum wage level in South Africa is too low to enable workers a decent life (e.g. President Ramaphosa Cyril in IOL, 2018, para. 1). An explanation is that, worldwide, minimum wages tend to be determined to ensure a competitive economy while also making a difference to low-income workers rather than on considering the needs of those workers themselves (Eurofound, 2018). As a result, wages for much of today's workforce are low. In 2018, for example, for more than half the world's 3.3 billion working population, wages remained too low to experience economic wellbeing and security (ILO, 2018) and 21% of workers qualified as working poor (ILO, 2019). The global need for more sustainable, adequate remuneration against precarious employment and working poverty is becoming increasingly clear. In this context, adequate remuneration is understood as an income amount that enables those working to participate meaningfully in a society above mere survival (UNDP, 2014). Such an amount is often referred to as a living wage. Living wages are based on the principle that those engaging in paid work deserve quality of life (QoL) and work life, not just economic subsistence (Carr et al., 2016). To date, no authoritative living wage amount exists for South Africa. This makes it difficult for employers who aspire to pay adequate wages to know what amount this would be. The slow adoption of living wages could, partly, be due to the scarcity of empirical research surrounding living

wages, and sustainable livelihoods in South African contexts. This highlights the need for research in this area.

Additionally, there remains debate on how to determine a living wage. Living wages are frequently calculated econometrically by discerning what monetary value would allow individuals to purchase the goods considered a necessity. Using this approach, Trading Economics recommended a figure of R6,570 per person per month as a living wage for South Africa in 2018 (and have since not published an updated figure). This is substantially below the figures found in Carr et al.'s South African 2015 data (R10,000 per month) and Botha's (2021) 2019 data (R10,000 per month). While one of the reasons might be that the data only consisted of participants in two urban areas in which it is more costly to attain a positive QoL, it could also be that the econometric approach, such as the one used by Trading Economics, which is based on a predetermined basket of food, travelling costs, and a consideration for unforeseen expenses, ignores that many factors are necessary for a positive quality of life, which living wages are meant to enable (Carr et al, 2018). It ignores, for example, individuals' health, dignity, and capability to feel a sense of belonging within their communities (Dreyer., et al 2006). Additionally, in econometric approaches, a group of experts determines what is included in the basket of goods used to determine a living wage amount, thus imposing what individuals' need for a 'good life'. Objective indicators used in econometric living wage models are oversimplified as they assume individual circumstances are homogeneous, focus on material possessions instead of abilities, disabilities, advantages, and disadvantages, and because individuals adjust to their circumstances. It might thus be more appropriate not to consider quality of life as a function of individuals' possessions (Botha, 2021; Hasan, 2019). The premise on which this study is based is thus that an adequate living wage should be based on subjective, rather than objective, indicators. Sen's (1985) capability approach is one such model that assesses wellbeing from individual perspectives. The theoretical framework on which this study will be built is thus Sen's capability model. In this, the study follows the approach adopted previously by Botha (2021), Carr et al. (2018) and Teng-Calleja et al. (2021). Teng-Calleja et al. used data collected in the Philippines, however. While Carr et al. and Botha used South African data, the sample in Carr et al.'s research was obtained from only two urban areas in South Africa (Cape Town and Tshwane) and Botha's data was collected in the Cape Town Municipality. Thus, both are specific to particular urban areas. There is therefore a need to determine a living wage level based on data from working individuals living in different regions of South Africa. It is this need which the study presented in this dissertation addresses.

1.1. RESEARCH QUESTIONS

The present study will determine, via a subjective approach, an adequate living wage level for South African workers based on data from a national sample. The understanding is that a living wage is the wage amount from which an individual can obtain a positive quality of life and wellbeing. The national sample allows for the analysis of provincial differences in QoL and income, and the inclusion of both Teng-Calleja and Botha's methods of calculating QoL allow for a comparison between the two formulae. Thus, the research questions this dissertation aims to investigate is:

1. What is an adequate living wage level for South Africa?
2. What are differences between provinces when looking at QoL and income and what are the implications arising from this for a national living wage?
3. How do Teng-Calleja and Botha's formulae compare?

To address these research questions, relevant literature is presented in Chapter 2. It outlines the existing debate on defining QoL and two broad approaches commonly used to calculate QoL, objective and subjective indicators. The section follows with an argument for using Sen's Capabilities Approach as a subjective approach to QoL in South Africa for this study. The method employed in the current study is outlined in Chapter 3, where the choice of an exploratory, descriptive research design is explained. The chapter continues to outline the participants and sampling, data collection procedure and analysis, Botha's (2021) formula for calculating QoL, Teng-Calleja's (2021) formula for calculating QoL, the instrument used to collect data, and ethical considerations. In Chapter 4, the results are presented beginning with descriptive statistics and following with the Locally Estimated Scatterplot Smoothing (LOESS) curves used to determine living wage values both nationally and provincially. Chapter 5 concludes the paper with a discussion of the results, theoretical and practical implications, limitations, and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

This chapter begins by outlining two major approaches taken when calculating QoL, objective and subjective approaches. Thereafter, the use of a subjective approach in this paper is discussed. The study's theoretical framework, Sen's Capability approach, is outlined, followed by operationalising Sen's approach to assess QoL.

2.1. DEFINING QUALITY OF LIFE

In psychological research, how best to define and operationalise quality of life (QoL) as a construct has been debated for several decades. QoL has been measured using econometric (objective) indicators such as GDP and income amounts (Machu et al., 2020) as well as subjective indicators like health, gender, socioeconomic conditions, family relationships, friends and beliefs. While different disciplines argue different methods, such as the preference for an objective approach in economics, scholars arguing a subjective approach believe that to understand an individual's QoL, objective circumstances should not be assessed, but rather how the individual appraises these circumstances (Machu et al., 2020). To argue why a subjective approach to QoL has been chosen for this research, an overview of both the objective and subjective approaches to QoL are outlined below.

2.1.1. THE OBJECTIVE APPROACH

Objective QoL measures focus on statistics which are independent of personal perceptions and opinions and prioritise measures that reflect objective circumstances (Boelhouwer & Noll, 2014). For example, in economics, Growth Domestic Product (GDP) measures a country's wellbeing using its economy's total output, that is, the total value of goods produced in a country in a given year (Hasan, 2019). More goods sold imply greater income. Thus, GDP can also be considered the sum of the incomes of residents in a nation (Dasgupta, 2007). While the unit of analysis is thus countries, it is assumed that individuals' QoL is greater the better the country's GDP. Similar to the GDP approach, a resource-based approach to QoL assesses a nation's total variable resources (income and wealth) and allocates the resources equally among all residents (Meyer, 2014).

With the numerous varying QoL formulae constructed under the broad category of 'objective approaches' comes numerous varying objective variables which are measured, some which include: physicians per capita, savings rate, income per capita, income inequality,

purchasing power, suicide rates, literacy rates, homicide rates, police per capita, rates of rape, or education (Diener et al., 1997; Diener, 1995).

Attempting to bridge the gap between subjective and objective indicators falls the Utilitarian approaches which attempt to account for the subjectivity of QoL by making use of individuals' self-reported feelings towards their own lives (Nussbaum, 2011). Here, QoL is measured through the level of pleasure or satisfaction that individuals obtain from using goods or resources (Serban-Oprescu, 2011). However, total satisfaction is combined into an average satisfaction score for a society with the assumption that that QoL level applies to everyone within that society and distribution is ignored.

These methods have critiques. Firstly, they fail to consider the distribution of QoL by adding scores and creating an average. One aggregate score is allocated per society with the assumption that that QoL level applies to everyone within that society. This creates an inability to assess the QoL of particular groups of individuals, such as middle- or low-income earners, and the satisfaction of the poor might be skewed towards the positive by the satisfaction of the rich (Nussbaum, 2011). In the GDP approach, with only national-level financial inputs and outputs being considered, non-monetary aspects that could potentially influence wellbeing are ignored (Austin, 2016). Therefore, this approach presents an inaccurate measure of QoL by failing to consider the multidimensional nature of QoL or the individual circumstances that may influence individual QoL, a concern also noted of the utilitarian approaches (Hassan, 2019). Resource approaches do not consider the fact that different individual circumstances would require different amounts of resources to attain the same QoL. For example, a single mother of four children from a lower income background may require more resources than a single man with no children to achieve a similar QoL. It also, like the GDP approach, fails to consider non-wealth and income related QoL indicators such as the quality of healthcare and education that may influence QoL (Nussbaum, 2011). Objective measures of wellbeing used in econometric living wage models are therefore insufficient. These measures are oversimplified as they assume individual homogeneity, focus on material possessions instead of abilities, disabilities, advantages, and disadvantages, and because individuals adjust to their circumstances, true wellbeing may not be shown by their possessions and preferences (Botha, 2021; Hasan, 2019)

2.1.2. THE SUBJECTIVE APPROACH

Subjective approaches attempt to overcome the drawbacks of economic approaches which do not account for the multidimensionality of QoL and that different individuals in a given society might require different aspects of life to consider their QoL as positive. The multiple dimensions which might contribute to a person's evaluation of their QoL include characteristics aspects like health, gender, socioeconomic conditions, family relationships, friends and beliefs. As an individual's QoL indicators, these would be more accurately measured through the individual's subjective perception of each of the aspects which they themselves value (Hasan, 2019; Martinetti, 2000; Robertson, 2015). This approach is reflected in the World Health Organisation's (WHO) definition of QoL. The WHO defines QoL as individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (WHOQOL, 2012). A theoretical approach which accounts for the subjectivity of QoL is Sen's capability approach which he originally outlined in 1985. A brief overview of the approach is presented in the next section.

2.1.3. AN ARGUMENT FOR USING SEN'S CAPABILITIES APPROACH AS A SUBJECTIVE APPROACH TO QOL IN SOUTH AFRICA

In his capabilities approach, Sen (1985) viewed poverty as a deprivation of the capabilities a person requires to live a good life, rather than just inadequate incomes (see also Yao et al., 2017). His approach focuses on three main concepts: functionings, capabilities, and agency. Capabilities are the freedom which individuals perceive to have to choose specific functionings, that is to be and do specific things (for example, to be healthy, and to be able to choose a career, with agency describing the individual's ability to be an active member of society (Elliott, 2021; Naz, 2016; Sen, 1985). Sen labelled financial resources, such as those gained through incomes from work, as endowments. These are the resources required to achieve capabilities and to translate these capabilities into functionings. Income thus enables functionings through enhancing capabilities. Thus, Sen's approach considers which valued opportunities individuals feel they could make use of and considers the availability of the resources required to achieve these opportunities to the individuals (Chiappero-Martinetii & Ventkatapuram, 2014). Sen's framework, unlike econometric models, thus considers income as a means to an end rather than an end in itself. Income contributes to realising individuals' capabilities. In practical terms, Sen's model would suggest that wages need to be high enough

to allow employees freedom, and thus empower them to live dignified lives (Maleka et al., 2021; Sen, 1999).

In line with the above, in this dissertation, prosperity is not considered the result of the financial resources an individual has available, but as the degree to which individuals perceive they have a choice about different aspects of their lives. The degree of choice is expected to be correlated with income generated through work, however, as greater income should lead to greater choice. The research presented in this dissertation is thus based on the following assumptions:

1) The more capabilities (as defined by Sen (1985)) are fulfilled, the greater the possibility of being able to have a good life and improve QoL.
2) Determining minimum wage levels based solely on economic factors is insufficient without also considering personal preferences.
3) A living wage can be determined by analysis of these personal preferences.

Of course, this also assumes that the capabilities approach is applicable in the South African context. A number of researchers such as Nussbaum (2011), Botha (2021), and Elliot (2021) have highlighted that Sen intentionally made his approach open to interpretation by specifying only a few basic capabilities. Through this, he ensured that the approach would be flexible enough to apply to different geographical, cultural, and social contexts, such as the ones found in South Africa. At the same time, not having a defined set of capabilities introduced criticism. It makes it difficult to operationalise capabilities and could lead to misinterpretation, misuse, and misapplication of Sen's approach: Without an objectively justified list of valuable capabilities, the life that we should desire to have is not clear, making it difficult to identify the goal state for society or to assess how well a society is doing (Wells, 2020). Even though the debate remains open about whether the lack of specificity would be preferrable to a specified list of capabilities (Hammell, 2015; Jacobson, 2016; Naz, 2016; Robertson, 2015), this dissertation follows Botha's (2021) argument that a broadly defined capabilities list that includes the basic capabilities mentioned by Sen and allows for contextual adaptability is suitable for the purposes of this study.

To conclude, Sen's framework accounts for the multidimensionality of QoL as it considers that individuals might have different views on what life domains are important and attainable to them. The approach accounts for the known drawbacks of econometric approaches to QoL which (a) assume that all individuals require the same set of things to achieve a decent

QoL, (b) focus on material possessions instead of abilities, disabilities, advantages, and disadvantages, and (c) the fact that wellbeing may not be shown by possessions and preferences (Botha, 2021; Hasan, 2019). Sen's intentionally broad, open to interpretation conceptualisation of capabilities allows flexibility in its application to different geographical, cultural, and social contexts and improves its applicability to South African studies.

2.2. OPERATIONALISING SEN'S CAPABILITIES APPROACH TO ASSESS QOL

Several survey studies have adopted variations of Sen's approach to calculate individuals' QoL to determine an adequate living wage level. Carr et al. (2018) also argued the subjectivity of QoL and its inability to be prescribed externally, proposing a living wage of R10,000. Carr et al. assessed QoL by asking three questions: (a) "How satisfied are you with life in general?" (assessing life satisfaction), (b) "How would you rate your physical wellbeing?" (assessing physical well-being), and (c) "How would you rate your stress levels?" (assessing mental stress). After also assessing quality of work life, fairness, and income levels, relationships were plotted on a LOESS curve.

Teng-Calleja et al.'s (2021) study conducted in the Philippines sought to assess capabilities more directly than Carr et al. (2018). They used 13 life domains or capabilities as indicators of a good life. These capabilities were based on a national survey conducted by Sycip et al. (2008). They were quality of housing; quality of neighbourhood; employment; quality of working life; savings, wealth and belongings; social relationships; leisure and spare time activities; physical health; psychological/mental health and emotional wellbeing; religion and spiritual life; information and knowledge; political participation; and government performance. To calculate QoL, Teng-Calleja et al. proposed the concept of a capability score. The capability score indicates the degree to which respondents perceive the ability to achieve the different life domains weighted by the perceived importance of each of the domains for a good life. This indicates the degree to which individuals perceive they have the freedom of choice over the aspects of life that matter to them. The higher the capability score (QoL), the greater the respondent's perceived ability to attain valued domains or their QoL.

Botha's (2021) used the same domains to determine individuals' QoL in a dataset collected in the Cape Metropole District of Cape Town, South Africa. She calculated the capability score differently, though. Only those domains which participants had rated as important were included in the QoL calculation. She argued that life domains that individuals

could achieve, but had no care for, would have little to no impact on their QoL. Based on this QoL calculation, Botha proposed a living wage of R10,000 per month, as at this income level, QoL steadily increased and no participants experienced an absence of capability, that is, the participants capability scores were above three and the LOESS curve stabilised.

Using the same dataset as Botha (2021), Oghenetega (2023) used two methods of calculating living wage. First, he created a LOESS curve on the income variable and weighted capability variable. This was done in two ways, with weighted capabilities operationalised as a continuous variable, and then as a categorical variable. Using this method, he arrived at a living wage of R15,000 and R16,000-R18,000 respectively. The second method was similar to Carr et al. (2018) and Teng-Calleja (2019) by using a cubic and logistic function to approximate the relationship between capability and monthly wages. Oghenetega also utilised linear, asymmetric sigmoidal (Gompertz), exponential, and quadratic functional forms. Using this method, he arrived at living wages of R9,914.96 - R10,671.53.

In summary, subjective approaches of calculating QoL, as opposed to objective approaches, attempt to overcome the drawbacks of objective approaches by accounting for the multidimensionality of QoL and that different individuals in a given society might require different aspects of life to consider their QoL as positive. Sen's framework in particular was used as the theoretical framework of this study because it accounts for the multidimensionality of QoL by considering that individuals might have different views on what life domains are important and attainable to them. The approach accounts for the known drawbacks of objective econometric approaches to QoL which (a) assume that all individuals require the same set of things to achieve a decent QoL, (b) focus on material possessions instead of abilities, disabilities, advantages, and disadvantages, and (c) the fact that wellbeing may not be shown by possessions and preferences (Botha, 2021; Hasan, 2019). Several survey studies have adopted variations of Sen's approach to calculate individuals' QoL to determine an adequate living wage level. Carr et al. (2018) proposed a living wage of R10,000 by plotting income with QoL (as measured using three questions) on a LOESS curve. Teng-Calleja et al.'s (2021) study used 13 life domains or capabilities as indicators of a good life. To calculate QoL, Teng-Calleja et al. used a capability score which indicated the degree to which individuals perceived they had the freedom of choice over the aspects of life that mattered to them. Botha's (2021) used the same domains to determine individuals' QoL but calculated the capability score differently by only including those domains which participants had rated as important in the QoL calculation. Based on this QoL calculation, Botha proposed a living wage of R10,000 per

month. Oghenetega (2023) used the same dataset as Botha (2021) and produced two different LOESS curves as well as various functional forms to approximate the relationoship between the capability and income variables. Oghenetega's (2021) methods produced living wages ranging from R9,914.96 – R18,000.

Given the exploratory nature of this research, no hypotheses have been presented. The Methods employed in the study are outlined in the following chapter.

CHAPTER 3: METHOD

In this chapter, the exploratory, descriptive research design employed in the study is outlined. Thereafter, a description of the participants and sampling methods, data collection instrument, variables of interest, data collection procedure, methods of data analysis, and ethical considerations are presented. The data for this study was made available by the dissertation supervisor. It had been collected via surveys between November 2022 and February 2023 and had not yet been analysed.

3.1.RESEARCH DESIGN

An exploratory, descriptive research design was used. This approach was taken as exploratory research is useful to gain insights into concepts that are not well researched or understood, providing foundation and a better understanding of the given research topic (Elman et al., 2020). A descriptive design was used as the study aimed to describe the sample with the intention of generalising the sample to the national population. The data was quantitative and cross-sectional which allowed for the analysis of income levels and the production of a suitable living wage level, representative of the sample at the time that the data was produced.

3.2.PARTICIPANTS AND SAMPLING

In terms of data collection, the aim was to obtain as large a sample size as possible given the funding available for data collectors. The trained data collectors ultimately administered 1,648 surveys one-on-one to working adults in all nine South African provinces. While the number of participants targeted per province was proportionate to the percentage of the population living in that province and thus represented a stratified approach at provincial level, within each province convenience sampling was employed. Data collectors approached individuals in the community in which they were residing during the university holidays.

Of the total sample, n = 587 individuals did not complete the entirety of the capability items. Their responses were thus removed from the dataset. Response sets in which individual items were excluded were kept. The missing values were replaced with the sample mean answer for those items. According to Field (2009), if the study sample is large and the number of missing values is small then it would be less likely that replacing missing values with sample means would significantly suppress the standard deviation and standard error. Where participants had indicated receiving their income daily, weekly or fortnightly the income

amounts provided were converted into monthly incomes. The average salary in South Africa is reported to be at a gross monthly income amount of R31,300 by Salary Explorer as of May 2023. Because this study aims to determine a living wage level which is the minimum monthly income through work required to live a humble, but decent life, monthly income amounts above R31,300 per month were removed from the sample. Together, 46 respondents were removed for either missing values or due to high salary amounts. The final sample size consisted of N = 1,015 participants.

Of the final sample, 569 participants identified as female (56.1%), 423 as male (41.7%), ten as gender non-conforming (1%), four as transgender (0.4%), and nine had preferred not to respond (0.9%). Based on Stats SA's 2021 census, 51.1% of the population are female and 48.9% male, therefore the gender distribution in the study sample approximated the gender distribution in the national population. The average household size in the sample was 3.93 (SD = 1.59), with the minimum consisting of one member and the maximum consisting of six members. 89 (8.8%) of the households reported being single person households and 230 (22.7%) being households of six or more. The South African General Household Survey of 2021 reported an average household size of 3.34 people, with 23.3% being single person households, and 13.9% households of six people or more. Therefore, the study slightly overrepresented households of six or more people, and slightly underrepresented single person households. This might be as the study focused on lower income individuals for whom it might be less possible and who might thus be less likely to live by themselves.

Participants reported having to support an average of 6.6 people with their salaries (SD = 2.26), with the minimum number of dependents being four and the maximum being 19. The average number of children in each household were calculated at 2.68 (SD = 1.41), with the minimum being one and the maximum being seven. In total, 452 households (44.5%) reported having two working incomes, followed by 367 (36.2%) with one working income, and 142 (14%) with three working incomes. The minimum number of working incomes per household was reported at zero (n = 5), and the maximum number of working incomes, and a possible outlier, was reported at 22 (n = 1), followed by six (n = 2).

Education level was roughly evenly dispersed, with 204 participants (20.1%) having some high school experience, 379 (37.3%) having graduated high school, 99 (9.7%) having a non-completed tertiary education, 148 (14.5%) having a college diploma, 135 (13.2%) having a degree, 42 (4.2%) having an honours degree, six (0.6%) having a master's degree and four

respondents (0.4%) did not respond to this item. In terms of living arrangements, 285 (28.3%) reported living in a rental home (formal structure), just less than half that number (n = 122, 12.2%) reported living in a rented informal structure. The same number of respondents (n = 121; 11.9%) reported being the owner of a formal home which had not yet been paid off, 34 (3.4%) reported owning an informal structure which had not yet been fully paid for. At close to one third of all participants (n = 304, 30%), the largest participant group stayed in an owned home (formal structure), 143 (14.2%) in an owned informal structure. Most participants (61%, n = 619) engaged in permanent full-time employment, followed by 22.5% (n = 228) engaging in contract full time employment and 6.6% (n = 67) in permanent part-time employment.

3.3. INSTRUMENT

The survey employed to collect the data had been used previously in a study conducted with participants residing in the Cape Town Municipality in 2019. The data collected in this study formed the basis for Botha's (2021) and Oghenetega's (2023) studies. A copy of the survey is provided in the Appendix. A cover letter outlined the purpose of the study, that participation was voluntary, and included a checkbox for participants to indicate their willingness to participate in the study. Thereafter, participants provided demographic information related to their household income, living situations, and employment information. At the end of the survey participants who indicated that they were willing to complete the questionnaire again in future provided their cellphone number. The survey was available in English and Afrikaans. For this study, the variables of interest are Income, and Perceived Importance of Capabilities and Perceived Achievability of Capabilities as indicators of QoL.

3.3.1. INCOME

Participant income levels were measured using the following items: "If you don't mind sharing, how much income do you get paid in cash or in your bank account when you get paid?", "Do you get paid daily, weekly, fortnightly or monthly? and "How many days did you work in the last month?". All amounts provided were converted into monthly amounts. Where individuals were not comfortable providing an income amount, they were asked to indicate an income range if they felt more comfortable doing so. Participants were free not to share their income. In that case they were thanked for their willingness to participate, and the survey administration ended.

3.3.2. QUALITY OF LIFE (QOL)

What life domains participants valued and the degree to which they felt able to obtain these to the degree they wished (i.e. their capabilities) were measured using the capabilities section of the survey (block 2 and 3 in Appendix A). A QoL score for each participant was determined from participants' responses to these items. They assessed:

(1) the importance participants placed on a specified list of life domains and
(2) the degree to which participants believed they would be able to achieve each life domain.

This measure had been created by Teng-Calleja et al. (2021) for their living wage study conducted in the Philippines. Teng-Calleja et al. had identified the 13 domains based on Sycip et al's (2008) research. The specific domains included in the survey were quality of housing; quality of neighbourhood; employment; quality of working life; savings, wealth and belongings; social relationships; leisure and spare time activities; physical health; psychological/mental health and emotional wellbeing; religion and spiritual life; information and knowledge; political participation; and government performance. They developed descriptors for each life domain by reviewing existing literature, holding focus group and roundtable discussions.

Each life domain's importance was assessed using the following question: "How important is *[insert domain]* for you to say that you have a good life?". Participants provided their answers on a 4-point Likert scale in which 1 indicated *not at all important,* 2 *not important*, 3 *important* and 4 *very important*. Participants' perceived ability to achieve these life domains were assessed using the following question "How possible is it for you right now to obtain the *[insert domain]* that allows you to have a good life." For these items, the response scale options were 1 = *completely impossible*, 2 = *impossible*, 3 = *possible* and 4 = *completely possible*. Participants' scores of both sets of items were combined into an overall QoL score per participant as outlined in Section 3.5.

3.4 DATA COLLECTION PROCEDURE

Students from the University of Cape Town (UCT) were given training to become familiar with the study's aims, procedure, survey, and to standardize the survey administration, while also alerting students to the benefits of paying living wages. The students were asked to administer the surveys in the places in which they resided over the university holidays (November 2022 to February 2023) and to target working individuals who would ideally not

earn more than R25,000. This would generally include teachers, nurses, police personnel, firefighters, administrators, etc, and would be less likely to include individuals with degrees such as accountants, lawyers, doctors, engineers, etc. They were not instructed to administer these surveys in any specific location types (for examples, malls or bus stops). Each data collector was provided with a target number of response sets to collect (up to a maximum of 20 completed surveys). The target depended on the number of surveys required and number of data collectors available in that province. Survey administration was estimated to take 30 minutes. Data collectors were paid R75 per completed survey equating to an hourly rate of R150 which was estimated to comprise a living wage based on equivalent studies conducted in 2015 and 2019.

Data collectors read out the cover letter to participants or offered participants to read it themselves. Where participants were more familiar with a language other than English or Afrikaans, the data collector provided the information verbally in their home language. Participants were asked whether they would like assistance filling it out. The surveys were available in both, pen and paper and electronic format on the cloud software Qualtrics. Data collectors who collected data using a paper version of the questionnaire were requested to note the start and end time and to capture the data into Qualtrics upon completion. Payment was provided via electronic funds transfer once the data had been checked for completion on Qualtrics. Payments were affected on a weekly basis as the payment provided was expected to contribute to some of the data collectors' living cost and thus had to be made timeously.

3.5 DATA ANALYSIS

The IBM Statistical Package for Social Sciences (SPSS), version 28.0.1.1 (15) was used to analyse the data. Based on the degree to which participants saw it as possible to achieve the different life domains (Block 3 in the attached questionnaire) and the value placed on each domain (Block 2 in the attached questionnaire), a weighted capability score was calculated for each participant which represented the participants' QoL.

The capability score indicated the degree to which respondents perceived they had freedom of choice over the aspects of life that mattered to them. Therefore, the higher the capability score, the greater the respondents' perceived ability to attain valued domains of quality of life. A QoL score of three or higher indicated a positive QoL as it indicated that participants saw it as possible to attain a life domain to the degree they required to live a good life. Teng-Calleja

et al. (2021) and Botha (2021) used slightly different calculations. For the purposes of this study and to compare the results of the formulae, both methods will be used.

Teng-Calleja's capability score was calculated using the formula:

$$\text{Capability score} = \frac{\sum_{i=1}^{13} PF_i \times PI_i}{\sum_{i=1}^{13} PI_i}$$

In this formula, PI is the importance the respondent placed on a life domain, PF is their perceived freedom or ability to achieve it, and $i = \{1,2,3,\ldots,13\}$ represents each of the 13 life domains included in the survey. Each respondent's average capability score was calculated by multiplying each respondent's PF and PI score for the same life domain, summing the results for each domain, and dividing the total by the sum of each domain's PI score.

Since the response options ranged from 1 = *not important* to 4 = *very important*, this formula would produce a Capability score between 1 = *perceived inability to achieve valued domain* to 4 = *perceived ability to achieve valued domain*. The calculation can be understood as the mean of PF across all valued domains considered, weighted by the PI of each of these domains. Thus, the higher the capability score, the greater the respondent's PF to attain their valued domains of quality of life. This method was also utilised by Oghenetega (2023) in his living wage study.

Botha used the same formula as Teng-Calleja et al (2021) with a slight variation:

$$\text{Capability score} = \frac{\sum_{i=1}^{13} PF_i \times Y_i}{\sum_{i=1}^{13} Y}$$

PF is the participant's perceived freedom or ability to achieve a life domain, and $i = \{1,2,3,\ldots,13\}$ an index for each of the 13 life domains included in the survey. However, the degree to which life domains were seen as important, previously referred to as 'PI' in Teng-Calleja's approach, was recoded based on how much the participant valued the life domains, represented in the formula as Y. PI scores of one and two which indicated that the life domain was considered not important were recoded into the value zero, so that the life domain did not get included into the Capability score, responses of three were recoded into the value one, so that the perceived freedom of life domains which were considered important remained at the PF value which the participant had provided. Without this recoding, a domain which was not valued by a respondent would have been included in their overall QoL score. According to Botha (2021), recoding of the variables provided a more accurate measure of the respondents' QoL by only accounting for the domains which they perceived as relevant.

Once each participant had been allocated a capability score, the relationship between QoL (capability score) and wages was determined using local polynomial regression resulting in a locally estimated scatterplot smoothing or LOESS curve. A LOESS curve intends to fit the best curve to the data instead of fitting the data to a pre-defined linear or curved shape (Opsomer & Ruppert, 1997). As opposed to linear regression, LOESS curves determine the relationship between variables point by point and not across the entire range of data-points (Statsdirect Limited, 2018). This results in a curve which best represents the data dispersion in a scatterplot at each combination of data-points for the two variables considered. Therefore, LOESS curves detect the complexities in the relationship between two variables that could be missed in linear regression analysis. The percentage of points to fit for smoothing was left at the default value of 50% to avoid the risk of over-or-under-smoothing.

3.6 ETHICAL CONSIDERATIONS

Ethical approval for the study had been obtained from the Faculty of Commerce Ethics in Research Committee at the University of Cape Town (UCT) in 2022. Ethical concerns were identified as low. Participants were informed that their study participation was voluntary and that they could withdraw at any time without consequences. They were asked for both verbal and written consent before participating in the survey and no identifiable information such as names or addresses were recorded. Participants' phone numbers were recorded without names when participants consented to be contacted for future research. Because of the sensitive nature of individual income, and the fact that some of the data collectors lived in the same community as participants and at times were known to participants, participants might have felt resistance to answer honestly and might have feared judgement by the data collectors when providing this information. It might also be possible, due to the nature and purpose of this study, that participants had expectations that salaries or working conditions would improve after participating in this study. For this reason, the study purpose was described to each participant by the data collector before they decided whether to participate in the study. Thus, participants would have understood that the data was for research purposes and that there would be no direct consequences to their work situations.

The following chapter will present the results of the study analyses.

CHAPTER 4: RESULTS

This chapter presents the results of the study's analyses. Firstly, the descriptive statistics for Perceived Importance (PI) and Perceived Freedom (PF) of the 13 life domains and the descriptive statistics for monthly income, QoL (Teng-Calleja) and QoL (Botha) are presented. Secondly, the LOESS curves used to determine the national living wage amounts that this study will propose are presented and interpreted. Lastly, provincial LOESS curves are presented and interpreted.

4.1. DESCRIPTIVE STATISTICS

Table 1 displays the descriptive statistics for the variables Perceived Importance (PI) and Perceived Freedom (PF) of the 13 life domains presented to participants. Mean values for PI were above three for all domains except political participation, indicating that, on average, participants considered all domains besides political participation as important for having a good life. For PF, only four domains had mean values above three. These were physical health, psychological/mental health and emotional wellbeing, religion and spiritual life, and information and knowledge, indicating that, on average, only these four domains were seen as attainable to the sample.

Table 1

Minima (Min), Maxima (Max), Mean (M) and Standard Deviation (SD) importance and freedom ratings of each capability (possible score range: 1-4), (N = 1,015)

	Perceived Importance				Perceived Freedom			
	Min	Max	M	SD	Min	Max	M	SD
Housing	1	4	3.68	.575	1	4	2.79	.951
Quality of Neighbourhood	1	4	3.41	.712	1	4	2.86	.845
Employment	1	4	3.68	.560	1	4	2.89	.874
Quality of Working Life	1	4	3.53	.624	1	4	2.95	.792
Savings, Wealth, and Belongings	1	4	3.61	.628	1	4	2.52	.943
Social Relationships	1	4	3.35	.733	1	4	3.22	.705
Leisure and Spare Time Activities	1	4	3.30	.746	1	4	2.91	.833
Physical Health	1	4	3.55	.629	1	4	3.05	.782
Psychological/Mental Health and Emotional Wellbeing	1	4	3.52	.671	1	4	3.01	.734
Religion and Spiritual Life	1	4	3.23	.874	1	4	3.30	.773
Information and Knowledge	1	4	3.33	.720	1	4	3.12	.738

Political Participation	1	4	2.53	.961	1	4	2.74	.890
Government Performance	1	4	3.08	.939	1	4	2.09	.895

Note. A score of 3 indicates that a capability is important/is perceived to be achievable

The three domains that participants, on average, considered most important for a good life were housing (M=3.68), employment (M=3.68), and savings, wealth, and belongings (M=3.61). The least important domains were religion and spiritual life (M=3.23), government performance (M=3.08), and political participation (M=2.53), but only political participation was considered not important.

Participants saw religion and spiritual life (M=3.30), social relationships (M=3.22), and information and knowledge (M=3.12) as most achievable to the degree which would allow them a good life. Participants saw it as least possible to achieve the levels required to have a good life in the areas of political participation (M=2.74), savings, wealth, and belongings (M=2.52), and government performance (M=2.09).

Table 2 contains the descriptive statistics for the variables Monthly Income and QoL (determined using both Botha's (2021) and Teng Calleja et al.'s (2021) Capability score calculations). On average, perceived freedom to attain the study domains had a mean value of 2.88. This being below three indicates that participants did not experience a reasonably strong sense of freedom to achieve all domains. The average monthly income across all participants was R9,538.09. Using Botha's Capability score formula, a mean value of 2.94 was calculated. It was almost identical to the mean value obtained when using Teng Calleja's formula (M = 2.91). These values being just below three indicate that on average, participants felt just about able to achieve the domains in life which were important to them.

Table 2

Descriptive Statistics (minimum, maximum, mean (M) and standard deviation (SD) for Study Variables (N = 1,015)

	Minimum	Maximum	M	SD
Monthly Income	R25.00	R31,200.00	9,538.09	6,958.81
Botha Capability Score	1	4	2.94	.534
Teng Calleja Capability Score	1	4	2.91	.499

4.2. LOCALLY ESTIMATED SCATTERPLOT SMOOTHING (LOESS) CURVES

Once each participant had been allocated a capability score, the relationship between QoL (capability) and wages was determined using local polynomial regression (locally estimated scatterplot smoothing or LOESS). LOESS curves determine the relationship between variables point by point and not across the entire range of data-points (Statsdirect Limited, 2018). This results in a curve which best represents the data dispersion in a scatterplot at each combination of data-points for the two variables considered. The income point at which QoL reached a level of three (indicating that it was possible to achieve the QoL desired) was used to determine what wage level allowed for a decent life and should thus be considered a living wage.

Figure 1 shows the LOESS curve between QoL (as defined by Botha (2021)) and Monthly Income. It shows that as income increased, QoL steadily increased, with the curve reaching a QoL of three at an income level of approximately R10,000. Therefore, at a monthly income level of R10,000, participants were able to obtain a decent quality of life.

Figure 1

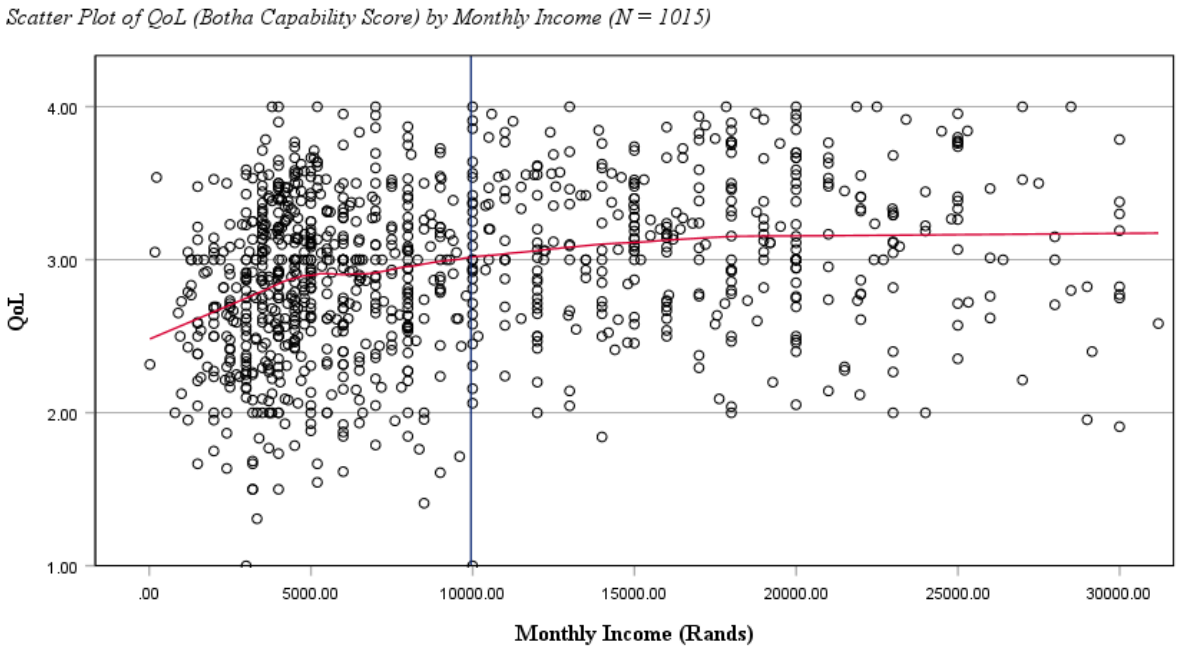
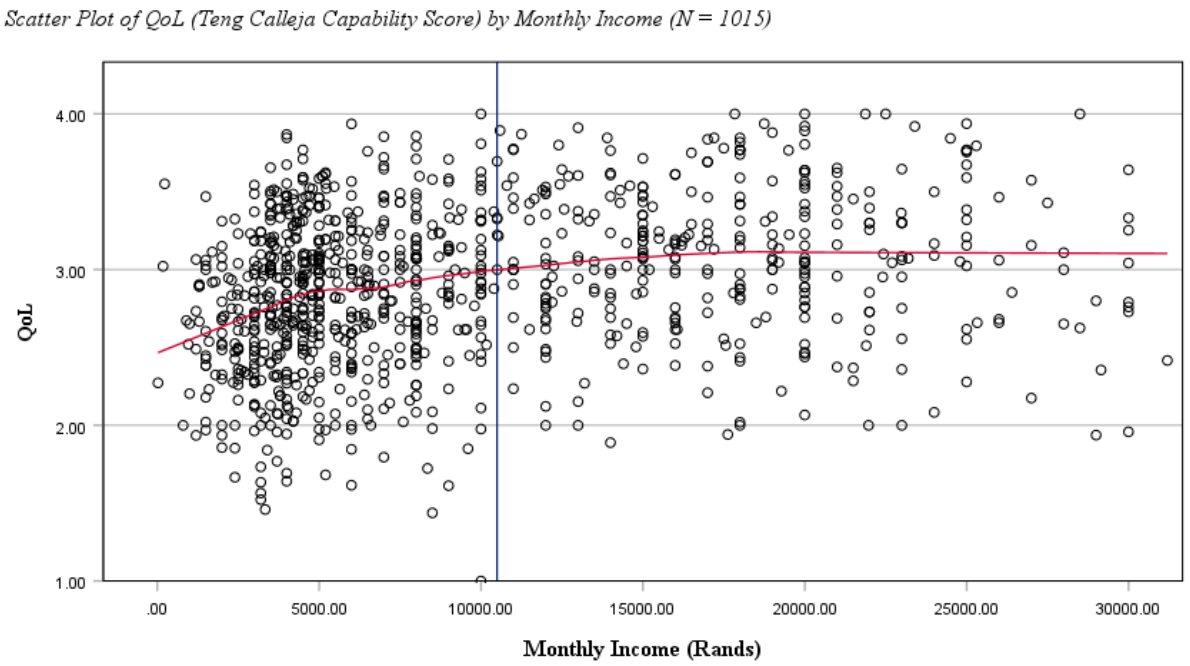


Figure 2 displays the LOESS curve between QoL (as defined by Teng-Calleja) and Monthly Income. The curve looks almost identical to the one shown in Figure 1, just that a QoL of three is reached at a slightly higher income level of approximately R11,000. Therefore, using this method, a monthly income level of R11,000 enabled participants to obtain a decent

quality of life. Based on these results, a national living wage of R10,000 – R11,000 should be provided to make it possible for South Africa's working population to obtain a good QoL.

Figure 2



4.3. PROVINCIAL ANALYSES

Provincial analyses were conducted to assess the variations in results across provinces. Five participants did not provide their provinces and were removed, leaving a sample size of 1,010 participants for these analyses.

Table 3 contains the average income, PF, QoL (Botha) and QoL (Teng-Calleja) for each province. Participants in the Western Cape, Eastern Cape, and Gauteng had the highest average incomes of R10,961.32 (*n*=94), R10,351.70 (*n*=105), and R9,643.12 (*n*=288), respectively. The lowest average incomes were seen in the Free State, Limpopo, and North-West Provinces, at R7,486.46 (*n*=64), R8,128.77 (*n*=120), and R8,439.00 (*n*=49). PF means were quite consistent across the provinces at just below M = 3.00, ranging from 2.81 to 3.04. Participants in Mpumalanga (3.04), North-West Province (2.98), and the Western Cape (2.93) reported the highest levels of perceived freedom, with participants in KwaZulu-Natal (2.81), the Free State (2.84), and Northern Cape (2.84) reporting the lowest average scores.

The average QoL (Botha) scores were consistently marginally higher than the average QoL (Teng Calleja) scores. The Free State reported the lowest QoL in the sample for both QoL (Botha) and QoL (Teng Calleja) at 2.85 and 2.84, respectively. Participants in Mpumalanga

(*M* = 3.11, Botha; *M* = 3.07, Teng Calleja), North-West Province (*M* = 3,02, Botha; *M* = 2.99, Teng Calleja) and Western Cape (*M* = 3.03, Botha; *M* = 2.97, Teng-Calleja) had the highest average QoL levels. Across all domains, only Mpumalanga's PF and QoL average scores were above three, indicating that the residents of Mpumalanga, on average, felt able to obtain the life domains they valued and could thus be seen as experiencing a good QoL.

Table 3

Province	N	Average Income (Rands)	Income SD	PF	QoL (Botha)	QoL (Teng-Calleja et al.)
Eastern Cape	105	10,351.7	6,764.55	2.85	2.90	2.88
Free State	64	7,486.46	7,486.46	2.84	2.85	2.84
Gauteng	288	9,643.12	7,506.41	2.86	2.87	2.86
KwaZulu-Natal (KZN)	182	9,009.31	6,393.61	2.81	2.90	2.86
Limpopo	120	8,128.77	5,642.13	2.92	2.97	2.94
Mpumalanga	61	8,702.34	6,344.56	3.04	3.11	3.07
Northern Cape	47	9,615.49	7,269.59	2.84	3.06	2.92
North West	49	8,439.00	6,316.37	2.98	3.02	2.99
Western Cape	94	10,961.32	7,746.20	2.93	3.03	2.97
Total	1010					

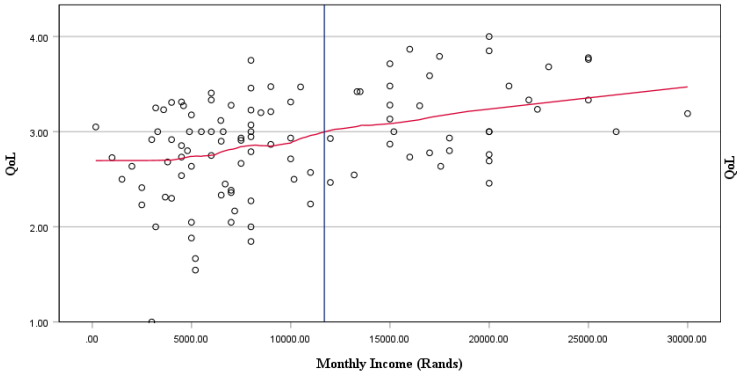
Table Showing Variable Means Between Provinces

The relationships between QoL (capability) and wages in each province were determined using LOESS curves. As the number of participants per province was proportional to the proportion of residents per province, participant numbers in the Northern Cape and North-West Province were low (*n* = 47 and *n* = 49, respectively). Thus, no curves were presented for these two provinces. The graphs are presented in Figure 3 (for Botha's QoL) and Figure 4 (Teng-Calleja's QoL), respectively.

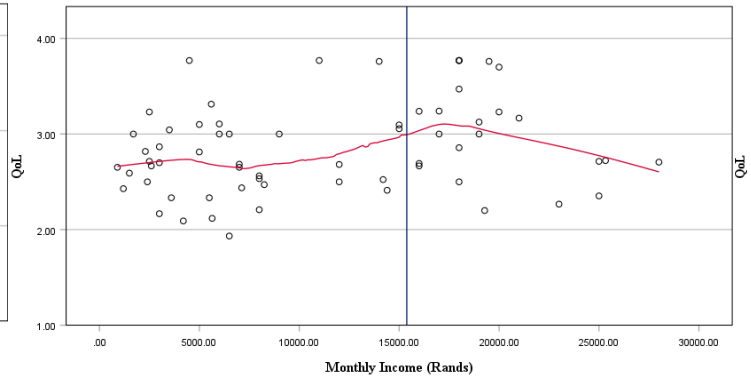
Figure 3

Scatterplots and LOESS curves for QoL determined using Botha's (2021) formula and Monthly Income for participants residing in the Eastern Cape (a), Free State (b), Gauteng (c), KwaZulu Natal (d), Limpopo (e), Mpumalanga (f) and the Western Cape (g)

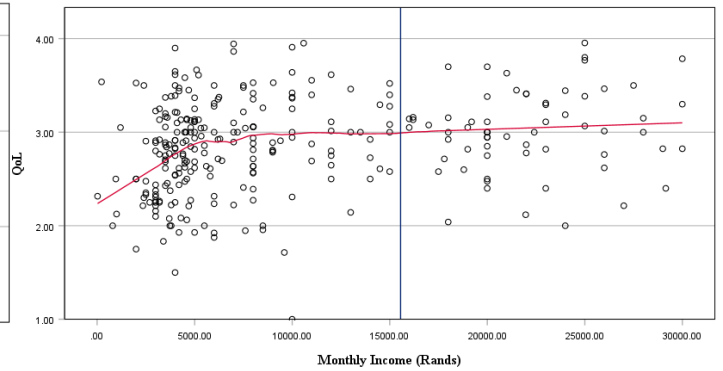
(a) Eastern Cape (N = 105)



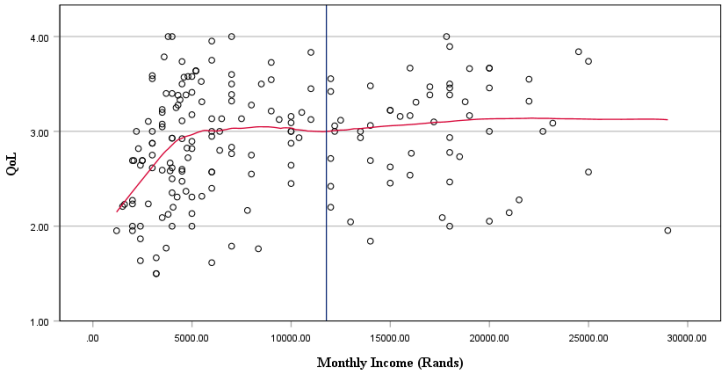
(b) Free State (N = 64)



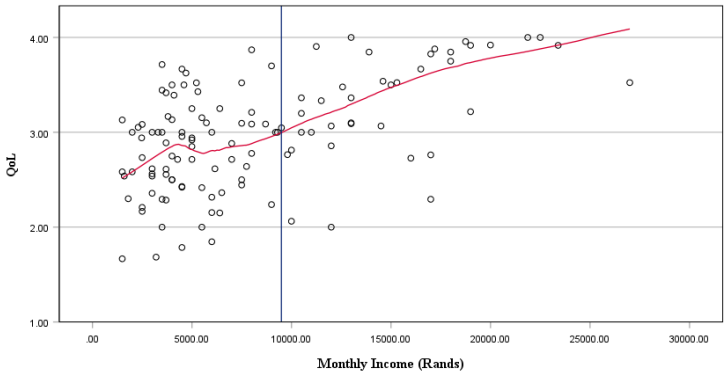
(c) Gauteng (N = 288)



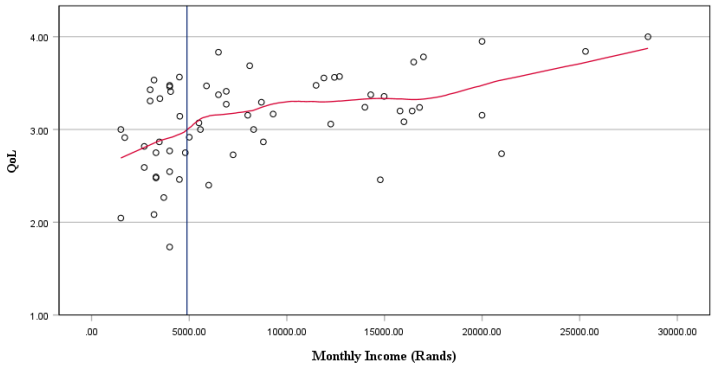
(d) KwaZulu Natal (N = 182)



(e) Limpopo (N = 120)



(f) Mpumalanga (N = 61)



(g) Western Cape (N = 94)

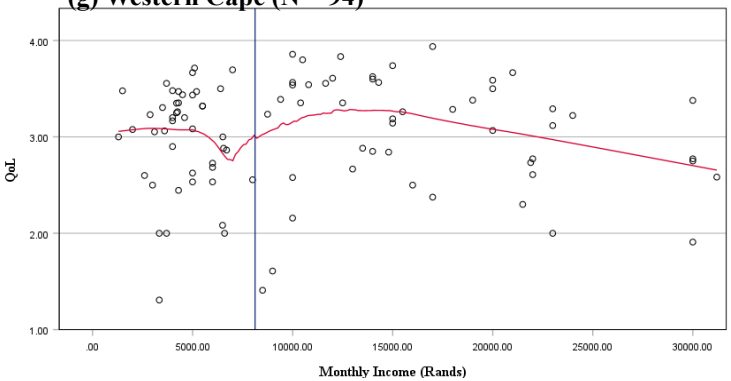
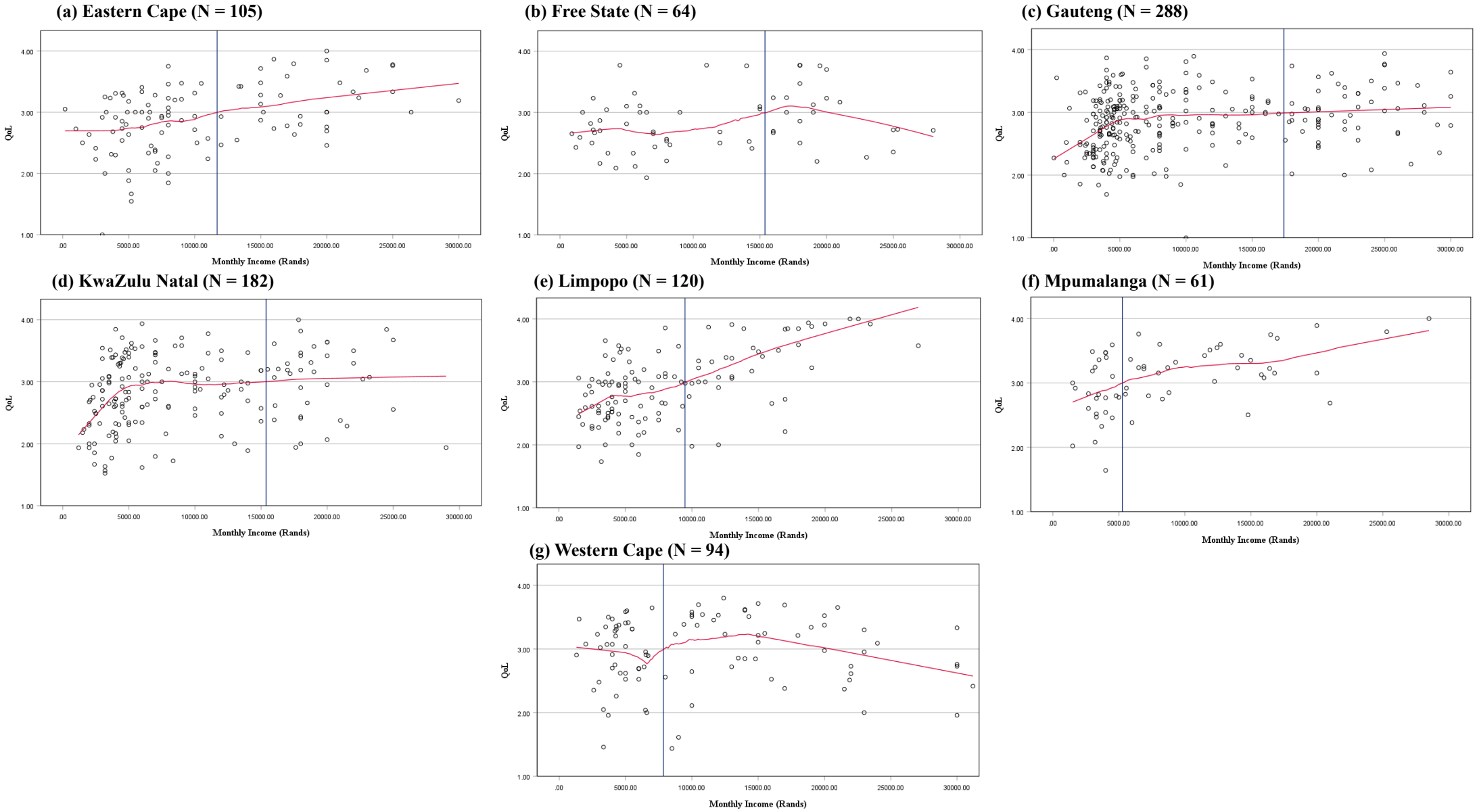


Figure 4

Scatterplots and LOESS curves for QoL determined using Teng-Calleja et al.'s (2021) formula and Monthly Income for participants residing in the Eastern Cape (a), Free State (b), Gauteng (c), KwaZulu Natal (d), Limpopo (e), Mpumalanga (f) and the Western Cape (g)



4.3.1. EASTERN CAPE

Botha's LOESS steadily increased and reached a QoL of three at a monthly income level of approximately R12,000. Teng-Calleja's method produced value of approximately R12,000. Based on these results, a monthly income level of R12,000 seemed to invoke a decent quality of life for individuals in the Eastern Cape.

4.3.2. FREE STATE

Both Botha's and Teng-Calleja's LOESS curves reached a QoL of three at a monthly income level of just above R15,000 and fell below three at an income level of R20,000 per month. This indicated that residents of the Free State experienced a decent QoL when earning monthly incomes between R15,000 – R20,000, after which an increase in income became associated with a less than decent QoL.

4.3.3. GAUTENG

In Gauteng, both Botha's and Teng-Calleja's LOESS curves began with a rapid increase, indicating that a marginal increase in income was associated with significant increases in QoL. At an income level of about R15,500 per month using Botha's method, and R17,500 for Teng-Calleja's method, the curves reached and passed a QoL of three. This indicated that an income level of R15,500 – R17,500 was adequate for individuals in Gauteng to obtain a decent QoL.

4.3.4. KWAZULU-NATAL

In KwaZulu-Natal, both Botha's and Teng-Calleja's LOESS curves began with a rapid increase, indicating that a marginal increase in income was associated with significant increases in QoL. Botha's curve began to stabilise and reached a QoL of three at an income of approximately R12,500 per month, while Teng Calleja's reached a QoL at a monthly income of approximately R15,500. This indicates that at a monthly income level of between R12,500 – R15,500, individuals in KwaZulu-Natal experienced a decent QoL.

4.3.5. LIMPOPO

Limpopo's LOESS curves maintained rapid increases at each income level where increases in income were associated with significant increases in QoL. QoL reached three at a monthly income of approximately R9,000 in both Botha's and Teng Calleja's LOESS curves. At a monthly income level of about R9,000, individuals in Limpopo demonstrated a decent QoL.

4.3.6. MPUMALANGA

In Mpumalanga, a QoL of three was reached at a monthly income of approximately R5,000. This indicates that residents of Mpumalanga experience a good QoL at a monthly income of at least R5,000.

4.3.7. WESTERN CAPE

Lastly, in the Western Cape, QoL steadily decreased as income increased to about R8,000 per month. After this point, QoL began to rise until a monthly income of about R14,000 was reached, and then begun to decline. At an income of R8,000 – R22,000, QoL was above three. This indicates that residents of the Western Cape experienced a decent QoL at income levels of between R8,000 and R22,000 per month.

Table 4 displays a summary of the above results, presenting the income amounts or ranges required to obtain a decent QoL by province.

Table 4

Income Required for a Decent QoL by Province (N = 1010)

Province	Botha Capability Score (R)	Teng Calleja Capability Score (R)
Eastern Cape	12,000	12,000
Free State	15,000 – 20,000	15,000 – 20,000
Gauteng	15,500	17,500
KwaZulu-Natal	12,500	15,500
Limpopo	9,000	9,000
Mpumalanga	5,000	5,000
Western Cape	8,000 – 22,000	8,000 – 22,000

CHAPTER 5: DISCUSSION

This chapter will discuss the results presented in Chapter 4 and use these results to answer the study research questions. Firstly, findings related to the QoL domains assessed are presented. Secondly, a national living wage is proposed. Thirdly, the differences that arose between provinces, and their implications on a national living wage, are presented. Thirdly, the results produced by using Teng-Calleja and Botha's QoL formulae are compared. Following this are the theoretical and practical implications, limitations, and recommendations for future research. The chapter concludes with the study conclusion.

5.1. QUALITY OF LIFE DOMAINS

Based on the statistical analyses conducted above, the three domains considered to be the most important for obtaining a good QoL were housing, employment, and savings, wealth, and belongings. In Botha's (2021) study, using a sample from only the Cape Metropole District, produced similar results, with the most important domains being housing, employment, and quality of work life. Participants in this study expressed the highest perceived freedom to achieve the QoL domains spiritual life, social relationships, and information and knowledge. The domains which required the most monetary contributions such as housing, quality of neighbourhood, and savings, wealth, and belongings, ranked at the bottom half of the table as domains with the lowest perceived freedom to achieve indicating a lack of financial confidence in the sample, occurring too in Botha (2021). Conversely, the domains requiring the least monetary contributions, such as religion and spiritual life, government performance, and political participation, ranked as the least important domains to participants. On average, perceived freedom to attain the study domains was below the study's threshold of three out of four, indicating that, on average, participants did not feel reasonably confident in their ability to attain the QoL domains presented in the study. Monthly income across all participants in the present study was R9,538.09. Botha's (2021) study sample earned an average of R 7,677 per month, a value slightly lower than the present study, but which only consisted of residents in the Cape Metropole District. However, with a standard deviation of R6,958.81, income varied greatly, which is consistent with and can be attributed to South Africa being the world's most unequal society, with significant income disparities amongst the population's income earners (World Bank, 2022a).

5.2. WHAT IS AN ADEQUATE NATIONAL LIVING WAGE?

The analyses used to calculate a national living wage amount that would enable individuals to experience a decent QoL imputed a monthly income range of R10,000 – R11,000. This suggests that, at a monthly income amount of at least R10,000 – R11,000, individuals would be able to experience a decent QoL, that is, an amount which would enable respondents to perceive that they have freedom of choice over the aspects of life that matter to them. Botha's (2021) study concluded with a living wage amount of R10,000, therefore, the present study corroborates this result. However, Oghenetega (2023) proposes a living wage amount of R15,000 as an appropriate living wage amount. Both Botha (2021) and Oghenetega (2023) used the 2019 Cape Metropole Data, while the present study utilised a national sample.

As of the 1st of March 2023, the South African minimum wage is R25.42 per hour, equating to a monthly minimum wage of R4,067.20 (CCMA, 2023). The living wage amount proposed in the present study is thus more than double the minimum wage amount, an increase of at least R5,932.80 – R6,932.80 required to enable South Africans to attain a decent QoL. This proposed amount is far above the current national minimum wage, suggesting that at the current minimum wage level of R4,067.20, it is unlikely for South Africans to experience a decent QoL.

5.3. PROVINCIAL ANALYSES

Participants in the Western Cape, Eastern Cape, and Gauteng had the highest average incomes. With Cape Town (Western Cape), Johannesburg (Gauteng) and Pretoria (Gauteng) being amongst the 15 most expensive cities to live in based on Business Insider Africa's cost of living index, it is consistent that the individuals from the Western Cape and Gauteng samples had an increased average income. The lower average incomes in the sample were seen in Free State, Limpopo, and North West. Adzuna's 2018 report indicates that the percentage of salaries spent on rent is lowest in North West, Northern Cape, Free State, and Limpopo, which may suggest a lower cost of living in these provinces (de Villiers, 2019). Mpumalanga was the only province to report average PF and QoL scores above three across all domains, indicating that the residents of Mpumalanga, on average, felt able to obtain the life domains they felt were most important to them, as well as experienced a decent QoL.

While the present study proposes a national living wage of R10,000 – R11,000, this value varied greatly in the provincial analyses ranging from R5,000 – R22,000 per month. Botha and Teng Calleja's method for calculating QoL produced nearly identical results, only

only by R3,000 in KwaZulu-Natal, and R2,000 in the Gauteng. Analyses showed Mpumalanga (R5,000), Western Cape (R8,000 – R22,000) and Limpopo (R9,000) to require the lowest monthly incomes to achieve a decent QoL, followed by Eastern Cape (R12,000), KwaZulu-Natal (R12,500 – R15,500), Free State (R15,000 – R20,000), and Gauteng (R15,500 – R17,500).Western Cape produced the highest calculated living wage value of R22,000. Western Cape has the highest proportion of residents living in urban (rather than non-urban) areas in the country (StatsSA, 2022) and is the province with the lowest proportion of adults living poverty (StatsSA, 2022). Thus, it is consistent that it would produce a higher living wage income required to obtain a decent QoL. Additionally, in StatsSA 2015 report, Western Cape placed second as the most unequal province in South Africa, providing possible insight into the wide range of R8,000 – R22,000 in its LOESS curve (StatsSA, 2020),

Botha's (2021) study, using participants from the Cape Metropole District, proposed a monthly income of R10,000 as a possible national living wage level for South Africa. To compare this to the results from the present studies Western Cape analysis, which produced a monthly income of R8,000 – R22,000, a decent QoL was reached at a lower monthly income in the present study. This could be attributed to the fact that Botha's study consisted only of residents in Cape Town, which would be a higher earning, more frequently touristed area, as opposed to the present study which consisted of participants from various regions in the Western Cape.

The variance in the calculated living wage amounts by province suggest that residents of the different provinces would require different wages to achieve a decent QoL. As a result, residents of the different provinces may experience different perceived satisfaction with the national minimum wage. None of the provinces produced a living wage amount equal to, or below, the national minimum wage. Therefore, it is unlikely that residents in any of the nine provinces would perceive the national minimum wage to be sufficient to experience a decent QoL. However, Mpumalanga's calculated living wage was just R932.80 above the minimum wage compared to, for example, Eastern Cape's calculated living wage of R7,982.80 above the minimum wage. Residents of Mpumalanga may find the minimum wage near sufficient to create a decent QoL, with residents of the Eastern Cape experiencing difficulty to do so. This suggests that the provincial differences in the calculated living wage levels may have implications for the national minimum wage, with residents of certain provinces finding it much easier to obtain a decent QoL with that amount than others. It is thus recommended that provincial differences are taken into account in national minimum wage discussions.

5.4. COMPARING TENG CALLEJA'S AND BOTHA'S QOL FORMULAE

Botha's method of calculating QoL consistently produced scores very marginally above Teng-Calleja's method. This is likely because Botha's method considered only the QoL domains which each participant considered important. Introducing domains which participants did not consider important, and do not actively care to participate in or achieve, marginally reduced QoL. However, Botha's and Teng-Calleja's methods of calculating QoL produced nearly identical results.

5.5.THEORETICAL AND PRACTICAL IMPLICATIONS

This study contributed to manifesting this theoretically founded method of determining living wages based on using subjective instead of economic indicators, lending greater value to this method. Additionally, it expanded existing research conducted in smaller samples in South Africa, the Philippines and New Zealand in a national sample, providing a living wage from a nationally representative sample, as well as providing provincial analyses.

Secondly, the study results are intended to inform future wage policy in South Africa. A number of South African employers have expressed interest in the results via the Living Wage South Africa Network which is coordinated by the South African Research Chair Initiative Chair: Creation of Decent Work and Sustainable Livelihood under which this study falls. Their intention is to use the living wage as a benchmark for salary setting at low-income positions.

Thirdly, the study results (via National Minimum Wage Commissioners who are members of the Living Wage South Africa Network) are intended to be disseminated to the National Minimum Wage Commission whose draft medium-target is for the national minimum wage to reach living wage level (South African Government, 2022).

Further, this study provided provincial analyses which remain scarce. These analyses displayed vast differences in average income levels and required living wages to achieve a decent QoL, highlighting the need for provincial differences to be considered in wage setting. This information is intended to inform minimum wage policy in reaching an income amount more suited to the population given the differences.

Lastly, this study made use of two methods of calculating QoL, being Teng-Calleja et al.'s (2021) and Botha's (2021). This allowed for novel comparison between the two methods and the results that each produced.

5.6. LIMITATIONS

This study relied on participants being truthful, especially with regards to their income levels. Because of the sensitive nature of individual income, a limitation of this study arises where participants may have felt resistance to answer honestly and might have feared judgement by the data collectors when providing this information. Additionally, given that the data collectors were present while participants took the survey, a response bias may have affected their responses (Pannucci & Wilkins, 2010). Furthermore, a limitation associated with the present study is the use of self-report surveys which are inherently biased and influenced by the respondents' feelings at the time of completing the survey (Furnham, 1986). Lastly, insufficient participants were obtained for analysis of the North West and Northern Cape, therefore, these provinces had to be excluded from the provincial analyses of this study. Thus, the strength of the provincial analyses presented is diminished.

5.7. RECOMMENDATIONS FOR FUTURE RESEARCH

Living wage research, particularly regarding the calculation of such an amount in South Africa, remains scarce and would be beneficial in advocating for the shift from minimum to living wages in South Africa. Future research which intends to provide provincial analyses should ensure that sufficient participants are obtained from each province, so as to avoid the exclusion of provinces from the analysis. It may also be useful to explore the provincial differences further to identify more accurate living wage recommendations per region which consider the cost of living and living conditions, as well as the source of the vast differences in provincial QoL and living wage amounts required to attain a decent QoL.

5.8. CONCLUSION

The present study aimed to, firstly, calculate a monthly living wage amount which would enable South Africans to achieve a decent quality of life (QoL) using a nationally representative sample from all nine provinces of South Africa. To do so, a capability score which represented QoL was calculated for each participant. This was done in two ways, one using Botha's (2021) methods, and the second using Teng-Calleja's (2021) method. The relationship between QoL (capability) and wages was determined using a local polynomial regression (locally estimated scatterplot smoothing or LOESS) curve. Two LOESS curves were produced, one using Botha's QoL, and one using Teng-Calleja's QoL. These curves produced living wage amounts of R10,000 and R11,000 respectively. Thus, the monthly living wage amount proposed by this study is between R10,000 and R11,000.

The second aim was to assess the differences between provinces when looking at QoL and income and the implications arising from this for a national living wage. Western Cape, Eastern Cape, and Gauteng displayed the highest average incomes with Free State, Limpopo, and North West falling in the lower average income bracket of the provinces. Provincial LOESS curves were created and analysed to determine the province-specific monthly living wage amounts that would enable residents to obtain a decent quality of life. Results varied greatly ranging from R5,000 – R22,000 per month. Analyses showed Mpumalanga (R5,000) Western Cape (R8,000 – R22,000) and Limpopo (R9,000) to require the lowest monthly incomes to achieve a decent QoL, followed by Eastern Cape (R12,000), KwaZulu-Natal (R12,500 – R15,500), Free State (R15,000 – R20,000), and Gauteng (R15,500 – R17,500). Western Cape produced the widest range of required income values, from the lowest required living wage (R8,000) to the highest living wage of the provinces (R22,000). The variance in the calculated living wage amounts by province suggest that residents of the different provinces would require different wages to achieve a decent QoL. As a result, residents of the different provinces may experience different perceived satisfaction with the national minimum wage. This suggests that the provincial differences in the calculated living wage levels may have implications for the national minimum wage, with residents of certain provinces finding it easier to obtain a decent QoL with the given amount than others. It is thus recommended that provincial differences are taken into account in national minimum wage discussions.

The last aim for this study was to assess how Teng-Calleja and Botha's formulae compare, and results showed that Botha's method of calculating QoL consistently produced scores very marginally above Teng-Calleja's method, likely because Botha's method considered only the QoL domains which each participant considered important. Introducing domains which participants did not consider important, and do not actively care to participate in or achieve, marginally reduced QoL. However, Botha's and Teng-Calleja's methods of calculating QoL produced nearly identical results. While producing nearly identical results, this study will conclude with the opinion of Botha's method being more valuable, due to the fact that it ensures that domains which are not valued by a respondent are not included in their overall QoL score, providing a more accurate measure of the respondents' QoL by only accounting for the domains which they perceived as relevant according to Botha (2021).

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APPENDIX A

SURVEY ON SOUTH AFRICANS' WELLBEING AT WORK AND IN LIFE

Respondent No. _____

Interviewer _____

Province _____

Good morning/afternoon. I am _____ from the University of Cape Town. We are conducting research that looks into the quality of living and quality of work of South Africans. We would like to know what South Africans consider important in having a good life and how possible it is for them to achieve this.

If you or someone living in your household who works and who is willing to assist us, I will be asking the person questions regarding their work, household, health, and other aspects of daily living. This should take no more than 30 minutes.

All information you share with me will be treated confidentially and will only be used for research purposes. We are not recording your name, address or phone number. It will not be possible for us to say which answers were given by which household.

The research is led by Professor Ines Meyer from the Section for Organisational Psychology. If you have any questions you can contact her on ines.meyer@uct.ac.za or 021 650 3829. It is important that you know that you can also stop participating in this study at any point.

Would you be willing to participate in this study?

Yes ☐ **No** ☐

Date of Interview _____**Time Started** _____ **Time Ended**_____

Comments _____

BLOCK 1: SOCIO-DEMOGRAPHIC PROFILE OF THE RESPONDENT

1. What is your age? _____ *(write down age in years)*

2. What is your gender?

Female ☐
Male ☐
Gender variant/Non-conforming ☐
Transgender ☐
Other ☐
Prefer not to say ☐

3. How many family members live in your house? _____

4. How many people do you support with your salary? _____

5. What is the highest level of education that you completed? _____

6. What jobs do you have? Position(s) _____

How long have you been with your employer(s)? *(write down the number of years)*

7. Employer 1 _____
8. Employer 2 _____
9. Employer 3 _____
10. Employer 4 _____
11. Employer 5 _____

Nature of main employment:

12. _____ Permanent _____Contract _____ Project-Based

13. _____ Full-time _____Part-time

14. How many people are employed by your main employer?

_____ less than 10 _____ 10 to 49 _____50 to 149 _____150 to 499 _____ 500 or more

15. Is there an employee union in the workplace?

_____ Yes _____No _____ I don't know

16. Are you a union member? _____ Yes _____ No _____ I don't know

17. Do you get paid **daily**, **weekly**, **fortnightly** or **monthly**? *(circle the applicable one)*

18. If you do not mind sharing, how much income do you get paid into your bank account or in cash? _____

19. How many days did you work in the last month? _____

BLOCK 2: PERCEIVED IMPORTANCE OF SPECIFIC DOMAINS OF LIFE

Now I am going to read a list of things in a person's life that may or may not be important to you to have a good life. For each thing that I will mention, please indicate if this is ***not at all important***, ***not really important***, ***important***, or ***very important***.

Encircle the answer that is true for you:

20. How important is **HOUSING** for you to say that you have a good life? *This refers to having a place that is near your place of work, school, etc.; that it is safe from fire and floods; clean and strong, with electricity, water and toilet facilities.*	Not at all important	Not really important	Important	Very Important
21. How important is **QUALITY OF NEIGHBOURHOOD** for you to say that you have a good life? *This refers to having a safe place to live; where you have good relations with your neighbours.*	Not at all important	Not really important	Important	Very Important
22. How important is **EMPLOYMENT** for you to say that you have a good life? *This refers to having regular, permanent and legal employment; a place to work that gives you adequate pay.*	Not at all important	Not really important	Important	Very Important
23. How important is **QUALITY OF WORKING LIFE** for you to say that you have a good life? *This refers to having a safe place to work; that is suitable to your education, and where you enjoy good relations with your boss and colleagues.*	Not at all important	Not really important	Important	Very Important
24. How important are **SAVINGS, WEALTH AND BELONGINGS** for you to say that you have a good life? *This refers to having your own house, things that you need, savings and being free from debt.*	Not at all important	Not really important	Important	Very Important
25. How important are **SOCIAL RELATIONSHIPS** for you to say that you have a good life? *This refers to being with your (spouse, child/children, friends), and enjoy the love of your relatives and friends.*	Not at all important	Not really important	Important	Very Important
26. How important are **LEISURE AND SPARE TIME ACTIVITIES** for you to say that you have a good life? *This refers to having time for yourself, being able to rest, relax, and have fun with your loved ones.*	Not at all important	Not really important	Important	Very Important

27. How important is **PHYSICAL HEALTH** for you to say that you have a good life? *This refers to being free from sickness and disability, being able to exercise regularly, having regular & nutritious food, enough sleep, and a long life.*	Not at all important	Not really important	Important	Very Important
28. How important are **PSYCHOLOGICAL/ MENTAL HEALTH & EMOTIONAL WELLBEING** for you to say that you have a good life? *This refers to giving importance to yourself, having a clear mind, being calm and at peace, and the ability to make decisions yourself. This also refers to being respected by your family and other people; the ability to handle your problems and face changes.*	Not at all important	Not really important	Important	Very Important
29. How important are **RELIGION AND SPIRITUAL LIFE** for you to say that you have a good life? *This refers to having the opportunity to worship, pray, give to the church/synagogue/mosque/temple, and do good to others.*	Not at all important	Not really important	Important	Very Important
30. How important are **INFORMATION AND KNOWLEDGE** for you to say that you have a good life? *This refers to having the ability to read and write, finish school, learn in different ways aside from school (e.g. watching TV or reading the newspaper), study in a good school (if you plan to study again) and being able to use your education.*	Not at all important	Not really important	Important	Very Important
31. How important is **POLITICAL PARTICIPATION** for you to say that you have a good life? *This refers to knowing what is happening in the country, voting in the election, joining community organizations, and being free to express your political opinion.*	Not at all important	Not really important	Important	Very Important
32. How important is **GOVERNMENT PERFORMANCE** for you to say that you have a good life? *This refers to having a country that is peaceful, crime-free, has good public service and stable economy, where citizens are united, and where there everyone has equal access to justice and opportunities.*	Not at all important	Not really important	Important	Very Important

BLOCK 3: PERCEIVED FREEDOM TO ATTAIN SPECIFIC DOMAINS OF LIFE

I have asked you how important certain things are for a good life. Now I would like to ask you how possible it is for you to achieve these. For every point that I will mention, please say if for you it is **completely impossible, almost impossible, quite possible, completely possible**.

Encircle the answer that is true for you

33. How possible is it for you right now to get **HOUSING** that allows you to have a good life? *This refers to having a place that is near your place of work, school, etc.; that it is safe from fire and floods; clean and strong, with electricity, water and toilet facilities.*	Completely impossible	Almost impossible	Quite possible	Completely possible
34. How possible is it for you right now to get the **QUALITY OF NEIGHBOURHOOD** that allows you to have a good life? *This refers to having a safe place to live; where you have good relations with your neighbors.*	Completely impossible	Almost impossible	Quite possible	Completely possible
35. How possible is it for you right now to get **EMPLOYMENT** that allows you to have a good life? *This refers to having regular, permanent and legal employment; a place to work that gives you adequate pay.*	Completely impossible	Almost impossible	Quite possible	Completely possible
36. How possible is it for you right now to get the **QUALITY OF WORKING LIFE** that allows you to have a good life? *This refers to having a safe place to work; that is suitable to your education, and where you enjoy good relations with your boss and colleagues.*	Completely impossible	Almost impossible	Quite possible	Completely possible
37. How possible is it for you right now to get the **SAVINGS, WEALTH AND ASSETS** that allow you to have a good life? *This refers to having your own house, things that you need, savings and being free from debt.*	Completely impossible	Almost impossible	Quite possible	Completely possible
38. How possible is it for you right now to get the **SOCIAL RELATIONSHIPS** that allow you to have a good life? *This refers to being with your spouse, child/children, friends, and enjoy the love of your relatives and friends.*	Completely impossible	Almost impossible	Quite possible	Completely possible
39. How possible is it for you right now to get the **LEISURE AND SPARE TIME ACTIVITIES** that allow you to have a good life? *This refers to having time for yourself, being able to rest, relax, & have fun with your loved ones.*	Completely impossible	Almost impossible	Quite possible	Completely possible

40. How possible is it for you right now to get the **PHYSICAL HEALTH** that allows you to have a good life? *This refers to being free from sickness and disability, able to exercise regularly, having regular & nutritious food, enough sleep, and a long life.*	Completely impossible	Almost impossible	Quite possible	Completely possible
41. How possible is it for you right now to get the **PSYCHOLOGICAL/ MENTAL HEALTH & EMOTIONAL WELLBEING** that allow you to have a good life? *This refers to giving importance to yourself, having a clear mind, being calm and at peace, and being ability to decide for yourself. This also refers to being respected by your family and other people; the ability to handle your problems and face changes.*	Completely impossible	Almost impossible	Quite possible	Completely possible
42. How possible is it for you right now to get the **RELIGIOUS AND SPIRITUAL LIFE** that allows you to have a good life? *This refers to having the opportunity to worship, pray, give to the church/synagogue/mosque/temple, and do good to others.*	Completely impossible	Almost impossible	Quite possible	Completely possible
43. How possible is it for you right now to get the **INFORMATION AND KNOWLEDGE** that allow you to have a good life? *This refers to having the ability to read and write, finish school, learn through different ways aside from school (e.g. watching TV or reading the newspaper), study in a good school (if you plan to study again) and being able to use your education.*	Completely impossible	Almost impossible	Quite possible	Completely possible
44. How possible is it for you right now to **PARTICIPATE POLITICALLY** in a way that allows you to have a good life? *This refers to knowing what is happening in the country, voting in the election, joining community organizations, and being free to express your political opinion.*	Completely impossible	Almost impossible	Quite possible	Completely possible
45. How possible is it for you right now to get the **GOVERNMENT PERFORMANCE** that allows you to have a good life? *This refers to having a country that is peaceful, crime-free, has good public service and stable economy, where citizens are united, and where there everyone has equal access to justice and opportunities.*	Completely impossible	Almost impossible	Quite possible	Completely possible

BLOCK 4: ORGANIZATIONAL CITIZENSHIP BEHAVIOURS + TASK PERFORMANCE

Now I would like to ask about your experiences at work. For this part, there will be 6 choices for your answer:

Never, Almost never, Sometimes, Often, Almost always, and **Always**

Encircle the answer that is true for you:

		Never	Almost never	Some-times	Often	Almost always	Always
45.	I help others who have been absent from work.	Never	Almost never	Some-times	Often	Almost always	Always
46.	I help others who have heavy workloads.	Never	Almost never	Some-times	Often	Almost always	Always
47.	I volunteer to assist supervisors with their work.	Never	Almost never	Some-times	Often	Almost always	Always
48.	I take time to listen to co-workers' problems and worries.	Never	Almost never	Some-times	Often	Almost always	Always
49.	I go out of my way to help new employees.	Never	Almost never	Some-times	Often	Almost always	Always
50.	I show concern to my co-workers.	Never	Almost never	Some-times	Often	Almost always	Always
51.	I share information with co-workers.	Never	Almost never	Some-times	Often	Almost always	Always
52.	My attendance at work is better than that of most others.	Never	Almost never	Some-times	Often	Almost always	Always
53.	I give advance notice when I can't come to work.	Never	Almost never	Some-times	Often	Almost always	Always
54.	I take work breaks that are not permitted.	Never	Almost never	Some-times	Often	Almost always	Always

55.	I spend much time with personal phone conversations.	Never	Almost never	Some-times	Often	Almost always	Always
56.	I complain about unimportant things at work.	Never	Almost never	Some-times	Often	Almost always	Always
57.	I follow unwritten rules to maintain order at work.	Never	Almost never	Some-times	Often	Almost always	Always
58.	I only put minimal effort into my current job because I really feel that I'm wasting my time at work.	Never	Almost never	Some-times	Often	Almost always	Always
59.	I don't know why I'm doing this work; it's pointless work.	Never	Almost never	Some-times	Often	Almost always	Always
60.	I put a great deal of effort into my current job because I have fun doing my work.	Never	Almost never	Some-times	Often	Almost always	Always
61.	I put a great deal of effort into my current job because what I do in my work is interesting.	Never	Almost never	Some-times	Often	Almost always	Always
62.	I do little work in my current job because I don't think this work is worth putting a great deal of effort into.	Never	Almost never	Some-times	Often	Almost always	Always
63.	I put a great deal of effort into my current job because the work I do is interesting.	Never	Almost never	Some-times	Often	Almost always	Always
64.	Overall, I am content with my work.	Never	Almost never	Some-times	Often	Almost always	Always
65.	I am content with the important aspects of my job.	Never	Almost never	Some-times	Often	Almost always	Always
66.	I like the work that I do in my job.	Never	Almost never	Some-times	Often	Almost always	Always

BLOCK 5: EMPOWERMENT

In this section of the survey, we will use a different scale to almost every question.

67. Empowerment at work means you feel you **have some control over how you do your work**, and in workplace decisions that directly affect you personally. On a scale from 0 to 10 how 'empowered' do you feel at work in general? 0 means not empowered at all, 10 means completely empowered

*(*Please indicate *how empowered you feel. 10 is full empowerment and 0 is zero.)*

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐

68. I am satisfied with my job in general.	Never	Almost never	Some-times	Often	Almost always	Always
69. I am satisfied with my pay.	Never	Almost never	Some-times	Often	Almost always	Always
70. My work makes me feel proud.	Never	Almost never	Some-times	Often	Almost always	Always
71. I am stressed.	Never	Almost never	Some-times	Often	Almost always	Always
72. I am physically well.	Never	Almost never	Some-times	Often	Almost always	Always
73. I am satisfied with life in general.	Never	Almost never	Some-times	Often	Almost always	Always

74. Overall, how fair would you say your pay is?	Very Unfair	Unfair	Quite Unfair	Neither Unfair nor Fair	Quite Fair	Fair	Very Fair

Do you think your wage is a 'fair rate'…?

75. For the job	Yes	No	Don't Know
76. Compared to your effort?	Yes	No	Don't Know
77. Compared to your qualifications	Yes	No	Don't Know
78. Compared to similar jobs elsewhere	Yes	No	Don't Know
79. Compared to <u>your direct supervisor</u> in your organization	Yes	No	Don't Know

80. Does your pay provide enough for your basic needs?	Yes	No
81. Does your income exceed what you consider to be your basic needs (e.g., enable you to have some savings, to enjoy some leisure activities, to enjoy the occasional treat)?	Yes	No

82. Do you feel that your employment income contributes not only to your own life but also to others in your household (parents, dependents)?	Yes	No	Not Applicable

BLOCK 6: LIVING ARRANGEMENTS

To finish, just a few more questions about your household.

83. What best describes your living arrangements?

- Rent home (formal structure) ☐
- Rent home (informal structure) ☐
- Home owner (formal structure, **with bond**) ☐
- Hone owner (informal structure, **with bond**) ☐
- Home owner (formal structure, **bond free**) ☐
- Home owner (informal structure, **bond free**) ☐

84. How many people live in your household?

1 ☐ 2 ☐ 3 ☐ 4 ☐

5 ☐ 6 or more ☐

85. How many children live in the household?

1 ☐ 2 ☐ 3 ☐ 4 ☐

5 ☐ 6 or more ☐

86. What is the total number of (working) incomes in your household?

1 ☐ 2 ☐ 3 ☐ 4 ☐

5 ☐ 6 or more ☐

87. How many of these incomes are full-time?

1 ☐ 2 ☐ 3 ☐ 4 ☐

5 ☐ 6 or more ☐

88. How many other dependent adults live in your household?

1 ☐ 2 ☐ 3 ☐ 4 ☐

5 ☐ 6 or more ☐

We are planning to update this research every year.
Are you willing to participate in this research again?

Yes ☐ No ☐

If **yes**, please provide us with a phone number which we can contact you on:

_____

This is the end of the survey. Thank you very much.

(To the Interviewer: Indicate TIME ENDED on the first page.)