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## Article

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## BANKING & FINANCE | RESEARCH ARTICLE

# A conceptual model of financial well-being for south african investors

Zandri Dickason-Koekemoer<sup>1\*</sup> and Suné Ferreira<sup>1</sup>

**Abstract:** The satisfaction an individual experience with his or her financial position refers to financial well-being. Financial well-being can also be related to financial distress as its subjective indicator. The level of financial well-being may influence the financial decisions of investors and may vary according to their demographics. The aim of this study is to determine the level of financial well-being of investors and whether demographic variables play an influential role in investment decisions. The results from the study indicated that a significant difference exists between the financial well-being of male and female investors. Male investors were more likely to have an average or high financial well-being compared with female investors. A significant difference was also found between the financial well-being among different age categories. Older investors were more likely to have a low financial well-being compared to investors between the ages of 16 to 24.

**Subjects:** Decision Analysis; Statistics for Business, Finance & Economics; Investment & Securities

**Keywords:** demographics; financial well-being; South Africa; investors

**Subjects:** J11; G17; G24

## 1. Introduction

Investments remain a contributing factor to the South African economy, associated with an individual's wealth. Investors are exposed on a daily basis to harsh economic conditions that

## ABOUT THE AUTHOR

Dr Zandri Dickason-Koekemoer and Dr Sune Ferreira specialise in financial risk management having obtained their PhD degrees in this field. Their main focus area is on financial risk tolerance, depositor behaviour, investor behaviour, behavioural finance, and the financial well-being of investors. These researchers have already published several articles in accredited journals regarding this field of interest.

## PUBLIC INTEREST STATEMENT

Perceived financial well-being is regarded as the perception of an individual's financial position. Low financial well-being is experienced where current income is not able to meet all financial needs, while high financial well-being represents freedom for short-term and long-term financial planning. Investors generally make financial decisions based on their level of financial well-being. The demographic characteristics of an investor can vary and have an influence on the investor's financial well-being. A significant difference exists between male and female investors regarding their financial well-being. The financial well-being of male investors is generally higher than for female investors. Moreover, the higher annual income per investor, the higher financial well-being for that investor. Therefore, investment companies can use this study to better position themselves in the market.

makes appropriate investment decisions challenging (Lai, 2016). Investment decisions can be based on the financial well-being status of investors. The level of satisfaction an individual experience with his or her financial situation refers to financial well-being (Prawitz et al., 2006). Moreover, financial well-being can also be related to financial distress as its subjective indicator (Prawitz et al., 2006). As a result, financial distress represents the lowest level of financial well-being whereas little to no financial distress represents high levels of financial well-being. Moreover, an individual's willingness to take on financial risk can be influenced by financial distress or financial well-being (Gutter & Copur, 2011). Therefore, the financial risk an individual is willing to tolerate based on their financial well-being level can potentially have an impact on the subjective well-being of an individual (Diener & Biswas-Diener, 2002).

Financial well-being, which represents an individual's financial status, is classified into three categories: (i) low financial well-being, (ii) average financial well-being, and (iii) high financial well-being (Prawitz et al., 2006). According to the Consumer Financial Protection Bureau (2017) low financial well-being exacerbates a state whereby the income that is generated which may not be fully able to meet current and ongoing financial investment obligations. Whereas, investors with an average financial well-being have the ability to meet required current and future financial obligations with not much pressure compared to low financial well-being investors (Prendergast, Blackmore, Kempson, Russell, & Kutin, 2018). High financial well-being is characterised as investors who are financially secure and are more than capable of meeting current and future financial obligations (Organisation for Economic Co-operation and Development [OECD], 2017).

Budgeting and saving are representative drivers to understanding how investors in South Africa position themselves financially, furthermore, taking into consideration demographics such as (i) gender, (ii) age, (iii) ethnicity, (iv) marital status, (v) education level, (vi) and annual income (Gutter & Copur, 2011). The likelihood that financial well-being can be directly influenced by demographics, identifies the discrepancy as to how financial stability has been perceived in South Africa throughout the years. It may lay a foundation to substantiate standpoints that will be adequate not only now but through progressive research. The core purpose of this study is to analyse the risk profiles of South African investors attributed by financial well-being.

In addition, this study significantly works cohesively with demographic factors as it is essential to gain perspective on how financial standings based on an investor's demographical background will differ. Such diversity in all the demographic factors provide a unique measure of having a comprehensive idea of assortment (Donnelly, Iyer, & Howell, 2012). A study conducted by Furnham and Cheng (2017) concluded that age, gender, locus of control and income are significantly correlated with financial well-being. Moreover, Gutter and Copur (2011) emphasised that gender, education and marital status are correlated with financial well-being. Porter and Graham (1993) concluded that marital status is a significant predictor of financial well-being.

## 2. Literature review

A large and growing body of literature has captured the development of the global economy through radical demographic expansion and enhanced economic growth supported by continuous streams of investment transactions throughout the world (Karras, 2009). Financial hardship namely low income, income reduction, and unemployment (retrenchment) can be pivotal role-players that increase the negative effect of financial decisions. This aspect will translate to transferal emotional instability such as depression, distress and lack of interactive relations (Shim, Xiao, Barber, & Lyons, 2009). Shim et al. (2009) trace the development of existing interactions in connection to financial well-being along with expected life achievements. In a country such as South Africa, the financial differences between rural and urban participants can have an influence on investment choices (Bollman & Reimer, 2009). Financial well-being will be associated with psychological adjustment, physical health and life satisfaction when an individual move from different points of progression according to the investor life cycle (Reilly & Brown, 2012). In relation

to the investor life cycle, as suggested by Reilly and Brown (2012), financial means are attributed to the phase in which an investor is at a given period in time.

Previous studies by Kahneman and Krueger (2006) and Hofferth (2006) provide insight concerning the nature of financial well-being, suggesting that financial well-being can be influenced by demographic variables. However, the relationship between financial well-being and economic development are highly correlated (Sacks, Stevenson, & Wolfers, 2010). A financially sound investor is likely to have accumulated wealth through the appropriate use of money by means of saving and investments (Atkinson & Messy, 2012). The theory of lifespan development directs the process of assessing how individual progress throughout their lifespan and monitoring the manner in which decisions are made, which provide an indication of behavioural patterns (Haanpää, 2007). Investors choose to undertake different measures to invest. Basic economic models such as mixed, market, command, and traditional systems indicate that investors are highly attentive to establishing fundamental beliefs about forthcoming payoff in terms of their invested resources (Huberman, 2001).

Banks provide financial management support, which could be described as measures to assist individuals/investors to be financially wise in making monetary based decisions. These means may or may not be sufficient to enhance financial well-being (Guo, Arnould, Gruen, & Tang, 2013). When the required knowledge is being effectively applied, financial constraints may be kept to a minimum (Lippman, Moore, & McIntosh, 2011). Economic hardship in South Africa will possibly prevail, which will hinder the chances of investors to increase their wealth and input resources (monies) for investing (Shim et al., 2009). Previous research suggests that people may be prone to minimal investment activities due to lack of motivation or immense pressure, which is the result of limited financial resources (Mandell & Klein, 2007).

One of the features of this study is recognised through the understanding of the magnitude of demographic factors such as age, gender, ethnicity, income, marital status, education, and religion previously recorded by Voorhees and Zhou (2000). The financial modelling theory will be effective to clarify whether investors will be able to take the plunge and manage the opportunity costs to achieve the desired objective (Grable, 1997). To further substantiate, personal investment theory is derived from another theory of motivation. Signifying the values of social, independence, and self-reliance components to facilitate the willingness to invest (McInerney, 2008). These demographic determinants are defined as diverse index variables used to characterise individual stature of a population sample, thus referring to the South African investor. A popular body of literature has investigated that the use of heuristic demographics can provide the accurate disclosure to enable the division of the population from various hierarchy positioning such as high, average, and low categories (Grable, 1997). Since South Africa is the region focused on, the rising population growth provides a unique set of demographical profiles to be utilised (Woronkiewicz, 2013).

In order to advocate the use of demographics, individuals, families, and couples have diverse ways to respond towards monetary related activities. Different age categories namely silent generation (50+), Post-millennials (16–24), Millennials (25–34), and Generation X (35–49) exhibit various measures of financial engagement (Markert, 2004).

An argument is made in reference to Grable's work, implying that age in this context is inversely related to financial standing of individual investors (Grable, 1997). Substantiating that the older age group is considerably stable financially than the younger age group. Women were considered to be at higher risk and low financial well-being (Fonseca, Mullen, Zamarro, & Zissimopoulos, 2012). Key financial products such as retirement plans, investment choices and loan services along with other instruments play a significant role as to which demographic factors accommodate each other. Demographic factors also relate to senior citizens, as they also take part in the investment life cycle (Coall & Hertwig, 2010).

### 3. Methodology

The following sections within the methodology represent the research approach and instrument used, the sample size, formulated hypothesis and statistical analysis.

#### 3.1. Research instrument

The financial well-being (FWB) scale measures an individual's subjective financial state. This scale measures financial well-being ranging from overwhelming financial distress/lowest level of financial well-being to no financial distress/highest level of financial well-being (Prawitz et al., 2006). The research instrument for this study was established through an online questionnaire distributed to individual participants (investors). The financial well-being scale can be used through a standard or abbreviated scale. The standard scale administers precise and clear changes to a participant's response to financial well-being with eight items. The financial well-being scale score is a standardised number ranging from 0 and 10 (Consumer Financial Protection Bureau, 2015). Investors were classified into three categories according to their financial well-being namely low financial well-being (0–3.9), average financial well-being (4–6.9), and high financial well-being (7–10) (Consumer Financial Protection Bureau, 2017).

#### 3.2. Research sample selection

South Africa is the target population for this study consisting of participants (investors) within the borders of South Africa due to the country's large inequality in terms of income, wealth and well-being. An investment company from South Africa provided permission to access their client data base in order to collect the relevant data for this study. A simple random sample was selected to construct the data since participants of the population could be nominated at random, whereby each participant has an equal chance to be selected. Participants of this study voluntarily took part in completing an online questionnaire that resulted in a random sample of 600 participants ( $n = 600$ ).

#### 3.3. Hypothesis

The following hypotheses were formulated and are aligned with the primary objective of this study, which is to analyse the influence of demographic factors on the financial well-being of South African investors.

*Null hypothesis 1 ( $H^0$ ): mean FWB of male = mean FWB of female*

*Null hypothesis 2 ( $H^0$ ): mean FWB of race 1 = mean FBW of race 2*

*Null hypothesis 3 ( $H^0$ ): mean FWB of age 1 = mean FWB of age 2*

*Null hypothesis 4 ( $H^0$ ): mean FWB of marital status 1 = mean FWB of marital status 2*

*Null hypothesis 5 ( $H^0$ ): mean FWB of annual income 1 = mean FWB of annual income 2*

The hypotheses mentioned above suggest that there is no variation with regard to the demographic factors and the financial well-being of South African investors.

#### 3.4. Statistical analysis

The data analysis involves the use of a multinomial logistic regression. This regression was used to analyse the demographic factors that influence the financial well-being of investors. The multinomial model can be defined as follows:

$$P_{ij} = \frac{\exp(B_j X_i)}{1 + \sum_{j=1}^4 \exp(B_j X_i)} \text{ for } j = 1, 2, 3 \quad (1)$$

Where  $X_i$  is the vector for the independent variables representing the demographic variables for each  $i^{\text{th}}$  investor's financial well-being.  $B_j$  represents the vector for the regression estimates for each alternative  $j$  financial well-being level. The base category for each of the explanatory

variables are assumed to have a coefficient of zero when used as the reference group. The base category was chosen as follows:

$$P_i = \frac{1}{X_i} = \frac{\exp(B_j X_i)}{1 + \sum_{j=1}^4 \exp(B_j X_i)} \quad (2)$$

The probability of investors falling into one of the other financial well-being categories can be calculated as follows:

$$P_i (j = mx) = \frac{\exp(B_j X_i)}{1 + \sum_{j=1}^4 \exp(B_j X_i)} \text{ where } m > 1 \quad (3)$$

Therefore, the multinomial regression model determines investor's level of financial well-being according to their demographics can be defined as follows:

$$P_{ij} = \ln(p_{ij}) = B_0 + B_1 X_{1i} + B_2 X_{2i} + B_3 X_{3i} + \dots + B_n X_{ni} + \epsilon \quad (4)$$

$P_i$  is the probability that investors might fall into any of the three financial well-being categories being, (1) low financial well-being (2) average financial well-being and (3) high financial well-being.

The variable  $B_0$  gives the constant  $X_1, X_2, X_3$ , which are the estimated variables (coefficients), while the  $\epsilon_i$  embodies the error term. For this study, five explanatory variables were created;  $x_1$  **GEN** was directed as the gender of investors (1 = males, 0 = females);  $x_2$  **AGE** indicates the appropriate age category for each investor (1 = 16–24, 2 = 25–34, 3 = 35–49, 4 = 50+);  $x_3$  **ETH** shows the ethnicity groups of the investors (1 = African, 2 = White, 3 = Coloured, 4 = Asian/other);  $x_4$  **MAR** indicates the marital status of each investor (1 = single-staying alone, 2 = single-stay with parents, 3 = not married-staying together 4 = married, 5 = no longer married);  $x_5$  **INC** shows the annual income levels of investors (1 = less than R99 999, 2 = R100 000–R199 999, 3 = R200 000–R299 999, 4 = R300 000–R399 999, 5 = R400 000–R499 999, 6 = R500 000–R599 999, 7 = R600 000–R699 999, 8 = R700 000–R799 999, 9 = R800 000–R899 999, 10 = R900 000–R999 999, 11 = more than R1 000 000).

## 4. Empirical results and discussion

### 4.1. Descriptive statistic

Table 1 indicates the descriptive analysis of both the dependent and independent variables.

The mean of financial well-being is 1.81, which indicates that investors have a low financial well-being. The standard deviation for financial well-being is 0.75667, which indicates a small scale in the variability average in the financial well-being status of investors. Financial well-being for South African investors is skewed to the left (positively skewed), suggesting that a median that is less than the mean. In addition, the kurtosis (platykurtic, negative), indicates that financial well-being is not concentrated around the mean. Based on the above tabulation, gender, age and marital status have a negative kurtosis. Demographic factors namely ethnicity and annual income, all

**Table 1. Descriptive statistics**

|                | Mean | Std  | Skewness | Kurtosis |
|----------------|------|------|----------|----------|
| Gender         | 1.57 | 0.50 | −0.278   | −1.93    |
| FWB            | 1.81 | 0.76 | 0.33     | −1.19    |
| Age            | 3.14 | 0.81 | −0.58    | −0.46    |
| Ethnicity      | 2.10 | 0.80 | 0.94     | 0.86     |
| Marital status | 3.31 | 1.30 | −0.82    | −0.67    |
| Annual income  | 4.26 | 2.75 | 0.95     | 0.12     |

have a positive kurtosis. Gender, age and marital status are negatively skewed and all other demographics are skewed to the right (positively).

#### 4.2. Investor financial well-being according to all demographics

Table 2 demonstrates a cross-tabulation of investors' financial well-being according to all demographic factors (gender, age, ethnicity, marital status, level of education, annual income).

Table 2 divides financial well-being into three categories namely low, average and high financial well-being. Gender indicates a high Pearson chi-square value of 53.96 with a p-value <0.01, which indicated a variation in the statistical outcome of financial well-being for male and female investors. When examining the age category, a low Pearson chi-square value of 3.13 with a significant p-value ( $p < 0.010$ ) was found.

As seen in Figure 1, the results further reveal that 44.8 per cent majority of male investors have average financial well-being, while female investors only had 34.9 per cent with average financial well-being. Furthermore, females with low and high financial well-being accounted for 50.4 per cent and 14.7 per cent respectively, while males with low and high financial well-being accounted for 26.3 per cent and 29.0 per cent respectively.

With this category, investors aged 25–34 will experience the highest level of low financial well-being, 16–24 age group has the majority (60%) in the average financial well-being category and 50+ age group (31.1%) in the highest level of financial well-being. While the 35–49 age group is highly positioned in the low financial well-being (49.2%) as indicated in Figure 2.

In terms of ethnicity, this category had a low Pearson chi-square of 11.25 with a p-value smaller than 0.05. In terms of Coloured investors, 53.7 per cent experience low financial well-being as seen in Figure 3.

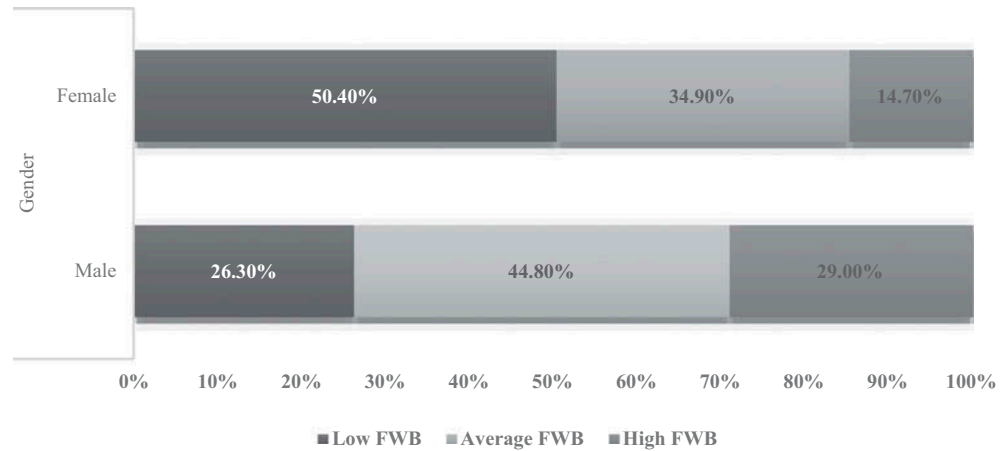
**Table 2. Cross-tabulation of investors' financial well-being**

| Variable       | Category/Demographic          | Low FWB | Average FWB | High FWB | Pearson chi-square |
|----------------|-------------------------------|---------|-------------|----------|--------------------|
| Gender         | Male                          | 26.3%   | 44.8%       | 29.0%    | 0.000*<br>(53.96)  |
|                | Female                        | 50.4%   | 34.9%       | 14.7%    |                    |
| Age            | 16–24                         | 33.3%   | 60.0%       | 6.7%     | 0.000*<br>(3.13)   |
|                | 25–34                         | 51.8%   | 30.9%       | 17.3%    |                    |
|                | 35–49                         | 49.2%   | 37.5%       | 13.3%    |                    |
|                | 50+                           | 25.5%   | 43.4%       | 31.1%    |                    |
| Ethnicity      | African                       | 46.3%   | 38.9%       | 14.8%    | 0.022**<br>(11.25) |
|                | White                         | 35.3%   | 40.1%       | 24.6%    |                    |
|                | Coloured                      | 53.7%   | 37.0%       | 9.3%     |                    |
|                | Indian/Asian                  | 46.4%   | 35.7%       | 17.9%    |                    |
| Marital status | Single (living alone)         | 43.5%   | 38.3%       | 18.3%    | 0.324<br>(6.88)    |
|                | Single (living with parents)  | 51.5%   | 39.4%       | 9.1%     |                    |
|                | Not married (living together) | 45.5%   | 34.8%       | 19.7%    |                    |
|                | Married                       | 35.2%   | 41.4%       | 23.4%    |                    |
|                | No longer married             | 46.2%   | 33.8%       | 20.0%    |                    |
| Income p.a.    | Less than R99 999             | 62.5%   | 31.3%       | 6.3%     | 0.000*<br>(2.50)   |
|                | R100 000–R199 999             | 49.5%   | 36.2%       | 14.3%    |                    |
|                | R200 000–R299 999             | 51.4%   | 37.4%       | 11.2%    |                    |
|                | R300 000–R399 999             | 31.2%   | 45.2%       | 23.7%    |                    |
|                | R400 000–R499 999             | 43.4%   | 32.1%       | 24.5%    |                    |
|                | R500 000–R599 999             | 17.0%   | 48.9%       | 34.0%    |                    |
|                | R600 000–R699 999             | 31.0%   | 51.7%       | 17.2%    |                    |
|                | R700 000–R799 999             | 29.6%   | 44.4%       | 25.9%    |                    |
|                | R800 000–R899 999             | 8.3%    | 41.7%       | 50.0%    |                    |
|                | R900 000–R999 999             | 6.3%    | 50.0%       | 43.8%    |                    |
|                | More than R1 000 000          | 12.9%   | 32.3%       | 54.8%    |                    |

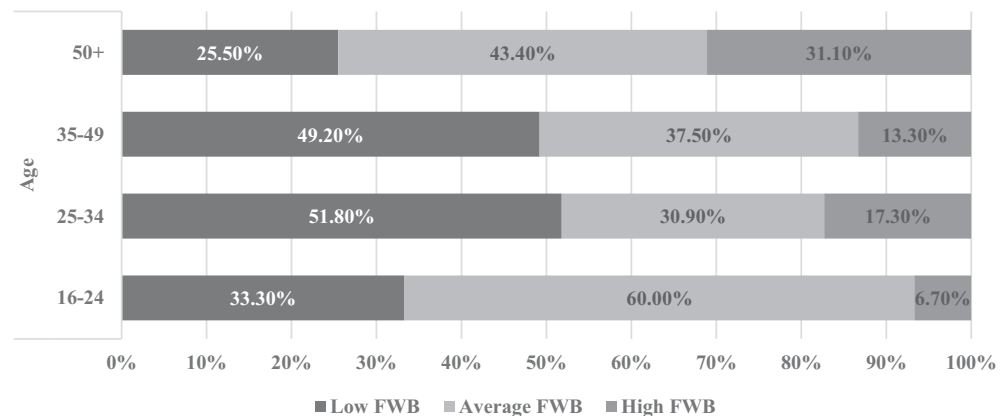
\*Significant at 1% level, \*\*Significant level at 5%, \*\*\*Significant at 10%



**Figure 1. Gender and financial well-being.**



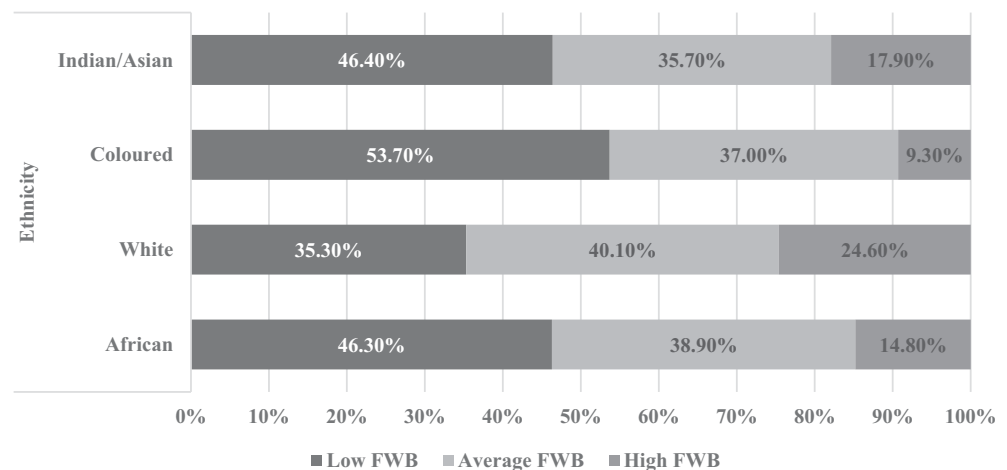
**Figure 2. Financial well-being according to age.**



White investors were found to have an average financial well-being of 40.1 per cent and 24.6 per cent had a high financial well-being. The African and Indian/Asian groups are highly concentrated around the low financial well-being of 46.3 per cent and 46.4 per cent behind the Coloured investors (51.8%).

The marital status also exhibited a low chi-square with a p-value of 0.324, which was not significant at any level. Investors who are single living with parents account for the highest low financial well-being (51.5%) in comparison to other categories. Married investors experienced the

**Figure 3. Financial well-being according to ethnicity.**





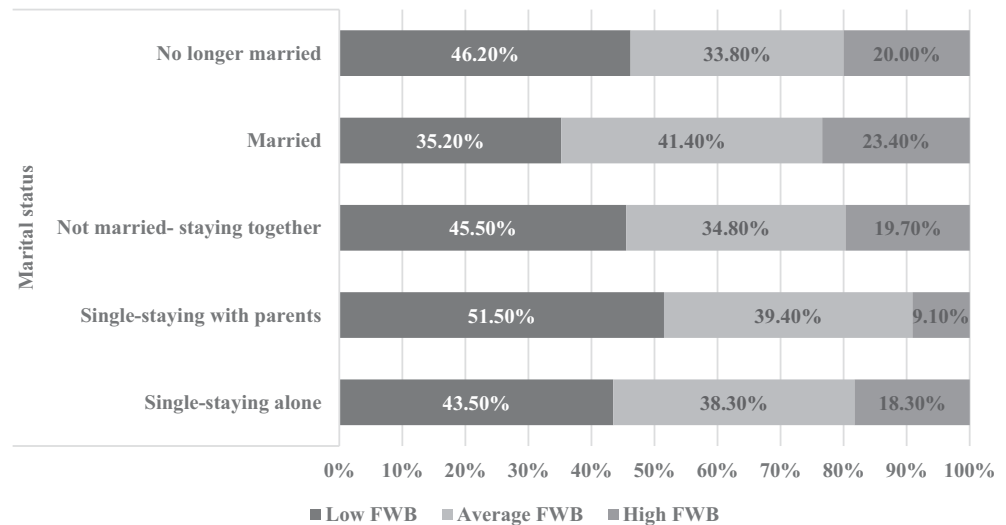
highest levels of average and high financial well-being of 41.4 per cent and 23.4 per cent, respectively (Figure 4).

Annual income (< R99 999) indicated a majority of 62.5 per cent of investors have a low financial well-being (Figure 5), 51.7 per cent of investors earning between R600 000–R699 999 are perceived as moderately financially stable and 54.8 per cent had a perceived high financial well-being when earning more than R1 000 000.

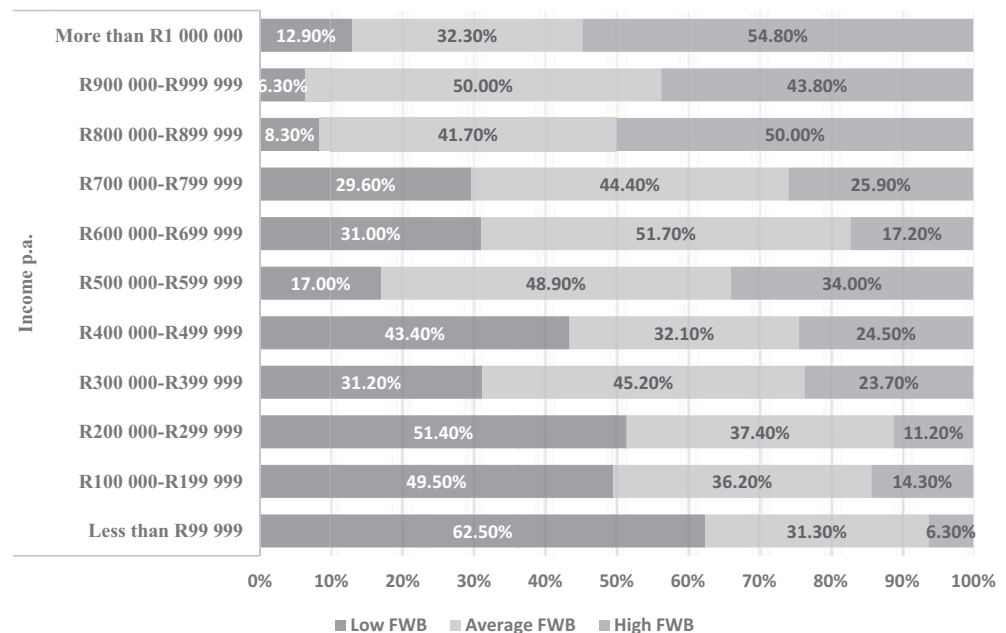
#### 4.3. Multinomial regression results

Table 3 demonstrates the multinomial regression results of the influence of demographical factors on average financial well-being for South African investors. For the multinomial regression of financial well-being, the reference category is low FWB. Table 3 to the Pseudo R-square, which measures the strength of association through the Cox & Snell and McFadden. Both the two

**Figure 4. Financial well-being according to marital status.**



**Figure 5. Financial well-being according to income.**



**Table 3. Multinomial regression of investors financial well-being**

| Variable                            | Category/Demographic           | Beta                | Std. error | Wald  | Df | Sig     | Expo(B) |
|-------------------------------------|--------------------------------|---------------------|------------|-------|----|---------|---------|
| <b>Average financial well-being</b> |                                |                     |            |       |    |         |         |
| Intercept                           |                                | 0.5                 | 0.76       | 0.35  | 1  | 0.56    |         |
| Gender                              | Male                           |                     |            |       | 1  |         |         |
|                                     | Female (Ref. group)            | 0.740 <sup>b</sup>  | 0.21       | 12.15 | 0  | 0.00*   | 2.10    |
| Age                                 | 16–24                          | 0.71                | 0.63       | 1.2   | 1  | 0.27    | 2.02    |
|                                     | 25–34                          | –0.86               | 0.33       | 6.96  | 1  | 0.01*   | 0.42    |
|                                     | 35–49                          | –0.770 <sup>b</sup> | 0.24       | 10.30 | 1  | 0.00*   | 0.47    |
|                                     | 50+ (Ref. group)               |                     |            |       | 0  |         |         |
| Ethnicity                           | African                        | 0.45                | 0.41       | 1.25  | 1  | 0.26    | 1.57    |
|                                     | White                          | 0.39                | 0.35       | 1.20  | 1  | 0.27    | 1.47    |
|                                     | Coloured                       | 0.200 <sup>b</sup>  | 0.45       | 0.13  | 1  | 0.66    | 1.22    |
|                                     | Indian/Asian (Ref. group)      |                     |            |       | 0  |         |         |
| Marital status                      | Single-staying alone           | 0.30                | 0.39       | 0.61  | 1  | 0.44    | 1.35    |
|                                     | Single- staying with parents   | 0.55                | 0.53       | 1.06  | 1  | 0.30    | 1.73    |
|                                     | Not married- staying together  | 0.10                | 0.43       | 0.05  | 1  | 0.82    | 1.10    |
|                                     | Married                        | 0.320 <sup>b</sup>  | 0.33       | 0.94  | 1  | 0.33    | 1.38    |
|                                     | No longer married (Ref. group) |                     |            |       | 0  |         |         |
| Income p.a.                         | Less than R99 999              | –1.65               | 0.67       | 6.03  | 1  | 0.01**  | 0.19    |
|                                     | R100 000–R200 000              | –1.13               | 0.65       | 2.99  | 1  | 0.08*** | 0.33    |
|                                     | R200 000–R300 000              | –1.10               | 0.65       | 2.89  | 1  | 0.09*** | 0.33    |
|                                     | R300 000–R400 000              | –0.49               | 0.66       | 0.55  | 1  | 0.46    | 0.61    |
|                                     | R400 000–R500 000              | –1.17               | 0.69       | 2.84  | 1  | 0.09*** | 0.31    |
|                                     | R500 000–R600 000              | 0.23                | 0.74       | 0.10  | 1  | 0.76    | 1.26    |
|                                     | R600 000–R700 000              | –0.54               | 0.75       | 0.53  | 1  | 0.47    | 0.58    |
|                                     | R700 000–R800 000              | –0.64               | 0.77       | 0.69  | 1  | 0.41    | 0.53    |
|                                     | R800 000–R900 000              | 0.51                | 1.26       | 0.16  | 1  | 0.69    | 1.66    |
|                                     | R900 000–R999 999              | 1.340 <sup>b</sup>  | 1.24       | 1.18  | 1  | 0.28    | 3.83    |
|                                     | Above R1 000 000 (Ref. group)  |                     |            |       | 0  |         |         |
| <b>High financial well-being</b>    |                                |                     |            |       |    |         |         |
| Intercept                           |                                | 1.03                | 0.83       | 1.55  | 1  | 0.21    |         |
| Gender                              | Male                           |                     |            |       | 1  |         |         |
|                                     | Female (Ref. group)            | 1.010 <sup>b</sup>  | 0.27       | 14.20 | 0  | 0.00*   | 2.75    |

(Continued)

**Table 3. (Continued)**

| Variable                   | Category/Demographic           | Beta                | Std. error | Wald           | Df | Sig    | Expo(B) |
|----------------------------|--------------------------------|---------------------|------------|----------------|----|--------|---------|
| Age                        | 16-24                          | -0.53               | 1.18       | 0.20           | 1  | 0.65   | 0.59    |
|                            | 25-34                          | -0.80               | 0.40       | 3.89           | 1  | 0.05** | 0.45    |
|                            | 35-49                          | -1.400 <sup>b</sup> | 0.30       | 21.23          | 1  | 0.00*  | 0.25    |
|                            | 50+ (Ref. group)               |                     |            |                | 0  |        |         |
| Ethnicity                  | African                        | 0.32                | 0.55       | 0.35           | 1  | 0.56   | 1.38    |
|                            | White                          | 0.58                | 0.46       | 1.61           | 1  | 0.21   | 1.79    |
|                            | Coloured                       | -0.260 <sup>b</sup> | 0.68       | 0.14           | 1  | 0.71   | 0.77    |
|                            | Indian/Asian (Ref. group)      |                     |            |                | 0  |        |         |
| Marital status             | Single-staying alone           | 0.17                | 0.50       | 0.11           | 1  | 0.74   | 1.18    |
|                            | Single- staying with parents   | 0.15                | 0.80       | 0.04           | 1  | 0.85   | 1.16    |
|                            | Not married- staying together  | 0.12                | 0.54       | 0.05           | 1  | 0.82   | 1.13    |
|                            | Married                        | 0.160 <sup>b</sup>  | 0.42       | 0.14           | 1  | 0.71   | 1.17    |
|                            | No longer married (Ref. group) |                     |            |                | 0  |        |         |
| Income p.a.                | Less than R99 999              | -3.68               | 0.78       | 22.57          | 1  | 0.00*  | 0.03    |
|                            | R100 000-R200 000              | -2.48               | 0.67       | 13.68          | 1  | 0.00*  | 0.08    |
|                            | R200 000-R300 000              | -2.74               | 0.68       | 16.25          | 1  | 0.00*  | 0.07    |
|                            | R300 000-R400 000              | -1.63               | 0.66       | 6.06           | 1  | 0.01*  | 0.20    |
|                            | R400 000-R500 000              | -1.87               | 0.70       | 7.20           | 1  | 0.01*  | 0.15    |
|                            | R500 000-R600 000              | -0.62               | 0.75       | 0.69           | 1  | 0.41   | 0.54    |
|                            | R600 000-R700 000              | -2.23               | 0.83       | 7.20           | 1  | 0.01*  | 0.11    |
|                            | R700 000-R800 000              | -1.72               | 0.80       | 4.66           | 1  | 0.03** | 0.18    |
|                            | R800 000-R900 000              | 0.14                | 1.25       | 0.01           | 1  | 0.91   | 1.15    |
|                            | R900 000-R999 999              | 0.870 <sup>b</sup>  | 1.25       | 0.48           | 1  | 0.49   | 2.38    |
|                            | Above R1 000 000 (Ref. group)  |                     |            |                | 0  |        |         |
| -2 Log likelihood 945. 604 |                                |                     |            | p-value 0.000  |    |        |         |
| Cox & Snell 0.237          |                                |                     |            | McFadden 0.127 |    |        |         |
| Nagelkerke 0.269           |                                |                     |            |                |    |        |         |

\*Significant at 1% level, \*\*Significant level at 5%, \*\*\*Significant at 10%

features of the Pseudo R-square (Cox & Snell and McFadden) are 0.237 and 0.127, respectively. The Nagelkerke indicated in Table 3, suggests that the model explains 0.269 (26.9%) of the variation in the financial well-being of investors. The reference group of each independent variable is denoted as 0<sup>b</sup>. Table 3 illustrates the average financial well-being of investors among the various demographics as low financial well-being as the reference category (intercept) with a p-value of 0.21. For the financial well-being models, average financial well-being (0.000), and high financial well-being (0.000), a significant difference for gender was found at 1 per cent. The dominant sign for gender was positive indicating that male investors are less likely to be in the reference category—low financial well-being.

When considering age, age group 16–24 has a positive coefficient (0.71). Meaning that investors in that age group are more likely to have an average financial well-being. However, the p-value was not significant at any level. Age groups 25–34 and 35–49 had negative coefficients of –0.86 and –0.77. This indicates that investors categorised between the two age groups are less likely to have average or high financial well-being. Whereby the age group 25–43 is 58 per cent less likely to have high financial well-being and the age group 35–49 is 53 per cent less likely to have high financial well-being. This is substantiated by work provided by Grable (1997) whereby young investors are prone to be less financially stable given the investor life cycle (Reilly & Brown, 2012). In contrary, older investors are highly stable financially given that their investor life cycle phase (spending/gifting phase) by which at this point social security is covered and money has been accumulated throughout the years (Reilly & Brown, 2012).

In terms of ethnicity, Asian is the reference group (coefficient = 0), while African (0.45), White (0.39), and Coloured (0.20) had positive coefficient that ranges from low to medium effect. While all the p-values for African (0.26), White (0.27), and Coloured (0.66) are not significant at any level. For the model, high financial well-being, the ethnic group Coloured had a negative coefficient indicating that Coloured investors are more likely to have a low financial well-being than high financial well-being when compared to other ethnic groups. Indicating no statistically significant difference between the ethnicity of investors and their level of financial well-being.

Marital status showed similar results to the ethnicity of investors. The dominant sign for both average financial well-being and high financial well-being for marriage status were positive, indicating that investors are more likely to have an average or high financial well-being. The p-values ( $p > 0.01$ ) also suggest that the marital status of an investor does not influence their financial well-being significantly. Hence, the null hypothesis was concluded.

The majority of annual incomes have medium to large negative coefficients which were evident for income levels less than R99 999 (–1.65), R100 000–R199 999 (–1.13), R200 000–R299 999 (–1.10), R300 000–R399 999 (–0.49), R400 000–R499 999 (–1.17), R600 000–R699 999 (–0.54), and R700 000–R799 999 (0.64). The odds ratio for these income classifications are as followed: <R99 999 (0.19–1), R100 000–R199 999 (0.33–1), R200 000–R299 999 (0.33–1), R300 000–R399 999 (0.61–1), R400 000–R499 999 (0.31–1), R600 000–R699 999 (0.58–1), and R700 000–R799 999 (0.53–1). This proposes that investors who fall in these groups are less likely to have above average or high financial well-being in comparison to other investors in the R500 000–R599 999 (0.23), R 800 000–R899 999 (0.51), and R900 000–R999 999 (1.34) groups. The p-value for less than R99 999 (0.01), R100 000–R199 999 (0.08), R200 000–R399 999 (0.09) and R400 000–R499 999 (0.09) groups are significant at 5 per cent and 10 per cent significance level, thus the null hypothesis can be concluded.

## 5. Conclusion

Financial well-being measured by demographic factors are a relatively new spectrum to consider, however, its contribution towards how investment companies can better position themselves in the market will be significant. With this, investment companies can measure their scales not only locally but through global competition and try to improve consumer product lines

made available. The primary objective of this study was to determine whether demographic factors influence investors' perceived financial well-being. The presented findings provide mixed results as to whether there is a relationship between the dependent and independent variables, as investors are keen on accumulating wealth and with multiple dimensions of demographic outcomes. The results of the study indicated that a significant difference exists between the financial well-being of male and female investors. Male investors were more likely to have an average or high financial well-being compared to female investors. A significant difference was also found between the financial well-being among different age categories. Older investors were more likely to have a low financial well-being compared to investors between the ages of 16–24. Income levels also influenced the level of financial well-being where lower annual income groups experienced lower levels of financial well-being. The study is only limited to the database of a single investment company therefore; multiple companies need to be targeted as a means to expand the sample size for future research.

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