

INFLUENCE OF MATERIALISM AND STATUS CONSUMPTION ON SOUTH AFRICAN GENERATION Y STUDENTS' ATTITUDE TOWARDS MONEY AND CREDIT, AND CREDIT INTENTIONS

Dr PJ van Schalkwyk

North-West University

E-mail: Vanschalkwyk.schalk@nwu.ac.za

Orcid ID: orcid.org/0000-0002-6800-4978

Prof Ayesha Lian Bevan-Dye

North-West University (Vaal Triangle Campus), South Africa

E-mail: Ayesha.Bevandye@nwu.ac.za/ayeshabevandye@gmail.com

Orcid ID: orcid.org/0000-00003-2146-4763

—Abstract —

As part of Generation Y, university students are often of particular interest to marketers targeting the Youth in that a tertiary qualification is generally synonymous with a high future earning potential. This student segment is also highly coveted by credit providers and, in South Africa, there are indications that they are increasingly being targeted with credit products. Unfortunately, research indicates that up to 50 percent of credit-active 18 to 26 year-old consumers are battling to pay their debts. This makes it important to understand how students' attitudes and values influence their current and future credit use. As such, this study aimed to determine the influence of materialism and status consumption on South African Generation Y students' attitude towards money and credit, and credit intentions. Data were collected using a self-reporting questionnaire from a convenience sample of 630 Generation Y students registered at four higher education campuses. Data analysis comprised exploratory and confirmatory factor analysis, reliability and construct validity analysis, and path analysis. Confirmatory factor analysis affirmed a five-factor model, which exhibited internal-consistency and composite reliability, construct validity and acceptable model fit. The results of the subsequent path analysis infer that Generation Y

students' materialism and status consumption tendencies are significant predictors of their attitude towards money, which, in turn, is a significant predictor of their attitude towards credit and future credit intentions. The findings suggest that materialistic and status consumption tendencies, together with a love for money contribute to Generation Y students' positive attitude towards credit and fosters their future credit usage intentions. Whilst this is no doubt good news for credit providers, it is incumbent upon Government, higher education institutions and, indeed, credit providers to educate the Youth concerning the responsible use of credit.

Key Words: Credit attitudes, credit intentions, Generation Y, money attitudes, materialism, status consumption

JEL Classification: M31.

1. INTRODUCTION

As part of Generation Y, university students are often of particular interest to marketers targeting the Youth in that a tertiary qualification is generally synonymous with a high future earning potential (Bevan-Dye & Surujlal, 2011). This student segment is also highly coveted by credit providers and, in South Africa, there are indications that they are increasingly being targeted with credit products (Enca, 2013). Unfortunately, research indicates that up to 50 percent of credit-active 18 to 26 year-old consumers are battling to pay their debts (Student Village, 2017). Over-indebtedness leads to personal financial problems and even bankruptcy, which have negative economic consequences to society at large (Baum, 2017). This makes it important to understand how students' attitudes and values influence their current and future credit use. As such, the purpose of this study was twofold. First, the study sought to ascertain whether South African Generation Y students' credit usage intentions is a five-factor model comprising materialism and status consumption tendencies, attitude towards money, attitude towards credit and credit intentions. Secondly, the study sought to determine the influence of materialism and status consumption tendencies on South African Generation Y university students' attitude towards money and credit, and consequent credit intentions. The study focused specifically on university students as the target population because as the intellectual elite of their generation they typically lead social movements

(Gerasimova & Mokichev, 2015) and play an important role as trendsetters amongst the wider Generation Y (Bevan-Dye & Akpojivi, 2016), thereby influencing their consumption trends, including their credit consumption trends.

2. LITERATURE REVIEW

The increased availability of credit in South Africa fuelled the extraordinary rise of the middle class and thereby drove economic growth, which peaked around 2008 (Nzukuma, 2017). Thereafter, credit growth did not stop when the economy experienced a downturn with unsecured lending growing by 5 percent year on year by the end of April 2018, while real gross domestic product (GDP) growth was closer to 1 percent (Absa, 2018; Lamprecht, 2018).

South Africans are renowned as big spenders, living on credit and not saving enough for the future (Thomas, 2015). Almost 25 million South Africans, eight million more than the total number of employed people in South Africa, are credit-active and seven out of ten middle-class consumers claimed that they are financially distressed with household debt close to R1.7 trillion (Ferreira, 2017; Enca, 2017).

In consumer behaviour literature, well-established models, including the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975), the theory of planned behaviour (TPB) (Ajzen, 1991) indicate that the most proximal cause of behaviour is behavioural intention. Behaviour intentions towards credit usage relates to the intention to incur debt, whether it be applying for a loan, a credit card, vehicle financing, a retail store card or a mortgage (Chan, Chau & Chan, 2012). Both the TRA and TPB propose that individuals' attitude towards a given behaviour represents a salient predictor of their behavioural intentions (Ajzen, 1991; Fishbein & Ajzen, 1975). Where credit was once frowned upon, by the 1980s, children were growing up in an environment where 'charge it' was the consumer motto. This helped foster a 'charge now, pay later' attitude amongst Generation Y (Braunsberger, Lucas & Roach, 2005). Attitude towards credit has been empirically proven to be a more important predictor of debt than socio-demographic factors or disposable income (Livingstone & Lunt, 1992). Interestingly, Davies and Lea (1995) argue that whilst a tolerant attitude towards debt may cause people to incur debt, it is

equally possible that having to incur debt out of necessity may lead to individuals developing a more tolerant attitude towards debt.

The literature highlights that there are several factors that are associated with having a positive attitude towards credit use, including materialism (Yeniaras, 2016; Khare, 2014), status consumption (Yeniaras, 2016; Pettit & Sivanathan, 2011) and attitude towards money (Harnish, Bridges, Natarajan, Gump & Carson, 2018; Robb & Sharpe, 2009; Phau & Woo, 2008)

Materialism generally refers to “the importance a consumer attaches to worldly possessions” (Richins & Dawson, 1990). South Africa is a very materialistic society and recent studies found that not only are the South African youth more materialistic than older generations (Duh, 2014) but also more materialistic than young adults from a selected European sample (Duh, Benmoyal-Bouzaglo, Moschis, & Smaoui, 2014). This may be explained in part since people with lower socioeconomic status or who grow up feeling disadvantaged, escape feelings of inadequacy by embracing materialistic values and goals (Kim, Callan, Gheorghiu & Matthews, 2017; Watson, 2015). Khare (2014) linked overspending and people borrowing money to acquire material possessions to an increase in materialism. Closely associated with materialism, Eastman, Goldsmith and Flynn (1999) define status consumption as “the motivational process by which individuals strive to improve their social standing through the conspicuous consumption of consumer products that confer and symbolise status both for the individual and surrounding significant others”. Status consumption tendencies are positively linked to a tolerant attitude towards debt (Yeniaras, 2016; Pettit & Sivanathan, 2011) and consumers often incur debt to finance these displays of status (Chipp, Kleyn & Manzi, 2011). Similarly, research has found that people who have a more positive attitude towards money and credit are more inclined to buy on credit and incur debt (Pereira & Coelho, 2019; Harnish *et al.*, 2018; Norvilitis & Mao, 2013; Robb & Sharpe, 2009; Phau & Woo, 2008). This love of money reflects a person’s attitude towards money in terms of its representation of success and achievement and as a motivator (Tang & Chiu, 2003).

3. METHODOLOGY

The research design that guided the study was that of the descriptive research design, where the single cross-sectional sampling approach was used.

3.1. Sampling method and data collection

For the study, the target population was specified as Generation Y university students between the ages of 18 and 26 years, registered at four public South African higher education institution (HEIs) campuses. These campuses included two from a traditional university, one from a university of technology and one from a comprehensive university. Using the mall-intercept survey approach, fieldworkers distributed 700 questionnaires across these four campuses to a convenience sample of students who, upon approach, volunteered to participate in the study.

3.2. Research instrument

A self-reporting questionnaire, which include a section requesting demographic data and a section containing scales from published studies, was used to gather the required data. Materialistic tendencies were measured using the six-item version of the materialism scale developed by Richins and Dawson (1992). Status consumption tendencies were measured using four items from the scale developed by Eastman, Goldsmith and Flynn (1999) and attitude towards money was measured using four items harvested from the scale developed by Tang and Chiu (2003). Attitude towards credit was measured using items harvested from the attitude towards debt scale developed by Davies and Lea (1995). The items used to measure credit usage intentions were derived from the scale published by Chan *et al.*, (2012). A six-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (6) was used to record responses to these 25 scaled items.

3.3. Ethical considerations

Before finalising the questionnaire for data collection, it was submitted to the Ethics Committee of the Faculty of Economic Sciences and Information Technology, North-West University (Vaal Triangle Campus). Ethical clearance was subsequently granted with

the ethics clearance number - ECONIT-2016-113. In addition, all responses are reported in aggregate and participation in the study was strictly voluntary.

3.4. Data analysis

The data were analysed using the IBM Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Versions 25 for Windows. Data analysis procedures included exploratory factor analysis (EFA), collinearity diagnostics, confirmatory factor analysis, internal-consistency and composite reliability, and construct validity analysis, and path analysis. Exploratory principle axis factor analysis using promax rotation was conducted to identify and eliminate any items that cross-loaded or had communality values lower than 0.3 from the confirmatory measurement model analysis (Pallant, 2010). Collinearity diagnostics were run to check for any multi-collinearity issues, where tolerance values less than 0.10 and an average variance inflation factor (VIF) greater than 10 suggest problems (Field, 2009). Reliability was assessed by computing the Cronbach alpha (α) and composite reliability (CR) values, both of which need to be above 0.70 (Malhotra, 2010). A matrix of Pearson's Product-Moment correlation coefficients was constructed to test the nomological validity of the latent factors planned for inclusion in the measurement model. Concluding nomological validity requires that the relationship between the pairs of factors be statistically significant and in the theorised direction (Hair, Black, Babin & Anderson, 2010). Convergent validity requires for standardised factor loading estimates in the confirmatory measurement model and for the average variance extracted (AVE) values of the latent factors to equal or exceed 0.50, while discriminant validity necessitates that the square root of those AVE values exceed their respective correlation coefficients in the measurement model (Hair *et al.*, 2010; Malhotra, 2010). Confirmatory and path analysis were run using the maximum likelihood method, where the level of statistical significance was set at $p \leq 0.01$. For the confirmatory factor and path analysis, the model fit indices computed included the goodness-of-fit index (GFI), the incremental-fit index (IFI), the Tucker-Lewis index (TLI), the standardised root mean square residual (SRMR) and the root mean square error of approximation (RMSEA), where GFI, IFI and TLI values above 0.90,

together with SRMR and RMSEA values below 0.08 are indicative of acceptable model fit (Van de Schoot, Lugtig & Hox, 2012).

4. RESULTS

Following the fieldwork, 630 completed questionnaires were returned; that is, fieldwork yielded a 90 percent response rate. A description of the sample is outlined in Table 1.

Table 1: Sample description

Age	Percent (%)	Gender	Percent (%)	Institution	Percent (%)	Province of origin	Percent (%)
18	4.6	Male	43.0	Traditional A	16.2	Gauteng	41.0
19	11.8	Female	57.0	Traditional B	26.4	Limpopo	10.5
20	21.6			Comprehensive	36.6	North West	30.0
21	24.1			UoT	19.8	Free State	4.9
22	18.1					Easter Cape	3.7
23	10.2					Mpumalanga	5.1
24	5.0					Kwazulu-Natal	3.2
25	2.7					Northern Cape	1.4
26	1.9					Western Cape	0.2

Concerning the age categories outlined in Table 1, while each of the ten age categories specified in the target population was represented, the majority of the participants (63.8%) were 20, 21 and 22 year olds. Similarly, whilst the sample included participants originating from each of South Africa's nine provinces, the sample was more heavily represented by individuals from Gauteng (41%) and North West (30%). In terms of gender, the sample included more female (57%) than male participants (43%). Concerning the type of HEI that participants indicated being registered at, 42.6 percent were registered at the traditional university (Traditional A & B), 36.6 percent at the comprehensive university (Comprehensive) and 19.8 percent at the university of technology (UoT).

As a point of departure, an EFA was conducted, which resulted in five factors being extracted that explained 49.1 percent of the total variance. However, the results of this first EFA indicated that two items from the materialism scale (“I admire people who own expensive homes, cars and clothes” and “The things I own say a lot about how well I’m doing in life”) and one item from the attitude towards money scale (“I am motivated to work hard for money”) had communalities below 0.30 and, as such, were candidates for deletion. After deleting these three items, EFA was re-run and returned a Kaiser-Meyer-Olkin (KMO) value of 0.866 and a significant Bartlett’s test of sphericity (chi square = 5929.865, 231 dfs, $p \leq 0.01$), thereby indicating the sampling adequacy and factorability of the data (Field, 2009). Table 2 reports on the pattern matrix loadings, communalities, eigenvalues and percentage variance extracted.

Table 2: Exploratory factor analysis

Items	Factors					Communalities
	1	2	3	4	5	
3					.419	.321
4					.451	.310
5					.747	.529
6					.733	.482
7		.813				.643
8		.835				.721
9		.855				.687
10		.760				.596
11				.727		.562
12				.922		.807
13				.577		.382
15			.664			.495
16			.710			.478
17			.720			.552
18			.697			.490
19	.634					.521
20	.694					.530
21	.564					.439
22	.593					.335
23	.812					.614
24	.796					.539
25	.766					.590
Eigenvalues	6.186	3.053	1.763	1.543	1.324	
Percentage variance	26.046	11.915	6.130	4.827	3.913	

As indicated in Table 2, in the second EFA, five factors were again extracted, this time explaining 52.83 percent of the variance. As the sample size exceeded 600, the factor loadings, which all exceeded

0.40, were also statistically significant at $p \leq 0.01$ (Stevens, 2002). Each of the communalities exceeded 0.30, thereby indicating that each item fits well with its respective factor (Pallant, 2010).

Before testing a confirmatory measurement model of these extracted factors, collinearity diagnostics and an assessment of the nomological validity of the proposed model was undertaken. Table 3 reports on the computed Pearson's product-moment correlation coefficients between the pairs of latent factors and the results of the collinearity diagnostics.

Table 3: Correlation matrix and collinearity diagnostics

	1	2	3	4	Tolerance values	VIF values
Materialism					.762	1.312
Status consumption	.384*				.776	1.289
Attitude towards money	.384*	.368*			.783	1.277
Attitude towards credit	.233*	.194*	.223*		.757	1.322
Credit intentions	.251*	.254*	.187*	.467*	.745	1.342

* $p \leq 0.01$

The results reported in Table 3 indicate that there is a statistically significant ($p \leq 0.01$) positive relationship between each of the pairs of latent factors proposed for inclusion in the measurement model, thereby inferring the nomological validity of the model. With tolerance values ranging from 0.745 to 0.783 and an average VIF of 1.308, there are no serious multi-collinearity issues.

Following this, the confirmatory measurement model was run. For model identification purposes, the first loading on each of the five latent factors was fixed at 1.0 (Byrne, 2010). This resulted in 253 distinct sample moments and 54 distinct parameters to be estimated, which resulted in 199 degrees of freedom (df) based on an over-identified model and a chi-square value of 639.717, with a probability level equal to 0.000. Table 4 reports on the estimates for the measurement model, the α , CR, AVE and $\sqrt{\text{AVE}}$ values.

Table 4: Estimates for measurement model

Latent factors	Standardised loading	Error variance	<i>a</i>	CR	AVE	√AVE
Materialism (F1)	.607	.369	.723	.713	.50	.71
	.583	.340				
	.665	.443				
	.621	.386				
Status consumption (F2)	.801	.641	.886	.887	.50	.71
	.851	.724				
	.823	.678				
	.776	.601				
Attitude towards money (F3)	.767	.588	.790	.801	.50	.71
	.867	.752				
	.625	.390				
Attitude towards credit (F4)	.712	.506	.797	.798	.50	.71
	.675	.456				
	.747	.558				
	.685	.470				
Credit intentions (F5)	.712	.527	.871	.854	.50	.71
	.726	.430				
	.656	.317				
	.563	.594				
	.770	.522				
	.723	.585				
Correlations	F1↔F2: .472	F2↔F3: .470	F3↔F4: .290			
	F1↔F3: .483	F2↔F4: .239	F3↔F5: .215			
	F1↔F4: .315	F2↔F5: .288	F4↔F5: .561			
	F1↔F5: .314					

According to the results in Table 4, internal-consistency and composite reliability are evident with the CR and *a* values for each of the latent factors exceeding 0.70. There is also evidence of convergent validity, with the CR values above 0.70 and AVE values equal to 0.50, as well as discriminant validity in that the squared root values of the AVE values exceed their relevant correlation coefficients. The model fit indices computed indicate acceptable model fit, with a GFI of 0.913, an IFI of 0.924, a TLI of 0.911, a SRMR of 0.047 and a RMSEA of 0.059. T

Based on this measurement model, a structural model was specified that theorised that materialism and status consumption tendencies have a direct positive influence on attitude towards money, which, in turn, has a positive influence on attitude towards credit and credit usage intentions. The un-standardised and standardised regression coefficients, standard error estimates and *p*-values estimated by AMOS for the structural model are presented in Table 5.

Table 5: Structural model estimates

Paths	Un-	β	SE	<i>p</i>
	standardised β			
Materialism → Attitude towards money	.53	.38	.086	0.00
Status consumption → Attitude towards money	.26	.25	.054	0.00
Attitude towards money → Attitude towards credit	.28	.32	.043	0.00
Attitude towards credit → Credit intentions	.64	.57	.060	0.00

β : beta coefficient; SE: standardised error; *p*: two-tailed statistical significance

The structural model estimates outlined in Table 5 show that all regression paths tested were positive and statistically significant ($p \leq 0.01$). Materialism ($\beta = 0.38$, $p < 0.01$) and status consumption ($\beta = 0.25$, $p < 0.01$) tendencies are significant positive predictors of Generation Y students' attitude towards money. Generation Y students' attitude towards money is a significant positive predictor of the attitude towards credit ($\beta = 0.32$, $p < 0.01$), which, in turn, is a significant positive predictor of their credit usage intentions ($\beta = 0.57$, $p < 0.01$). The findings support those of previous studies. For example, Khare (2014) indicate materialism being associated with overspending and the incurring of debt, while Chipp *et al.*, (2011) indicate that consumers often use credit to finance their displays of status. Likewise, several studies have noted a link between a love for money and a positive attitude towards credit, and credit usage intentions (Pereira & Coelho, 2019; Harnish *et al.*, 2018; Norvilitis & Mao, 2013). According to the computed squared multiple correlation coefficient (SMC), in combination materialism tendencies, status

consumption tendencies, attitude towards money and attitude towards credit explain 32 percent of the variance in Generation Y students' credit usage intentions.

5. CONCLUSION

The aim of this study was to confirm South African Generation Y students' credit usage intentions as a five-factor model and to ascertain the influence of materialism and status consumption tendencies on their attitude towards money and credit, and consequent credit intentions. The findings confirm a five-factor model that exhibits good model fit, composite and internal-consistency reliability, as well as nomological, convergent and discriminant validity. Furthermore, the findings of this study suggest that Generation Y students' materialism and status consumption tendencies are significant predictors of their attitude towards money, which, in turn, is a significant predictor of their attitude towards credit and future credit intentions. The findings suggest that materialistic and status consumption tendencies, together with a love for money contribute to Generation Y students' positive attitude towards credit and fosters their future credit usage intentions. After the Great Recession economies recovered and a worldwide debt boom followed due in part to low-interest rates. Despite warnings from governments and economists, this growth continues unabated. This may in part be because modern consumers are much more positively disposed towards credit than in the past and children have also grown up seeing their parents using credit. This, in turn, has normalised credit use among many of the youth. This has led to many students accruing debt and becoming overindebted before completing their studies and finding employment. Whilst this is no doubt good news for credit providers, it is incumbent upon Government, higher education institutions and, indeed, credit providers to educate the Youth concerning the responsible use of credit and prepare them to make better financial decisions. Furthermore, Generation Y attitudes towards possessions, money and debt will have to be changed to foster an environment in which prudent financial decisions are valued above displays of material wealth.

REFERENCES

Absa. (2018). Credit and mortgage advances 30 May 2018. <http://www.ghostdigest.com/resources/19289>. Accessed 2019/07/12.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.

Baum, S. (2017). Student Debt: Good, Bad, and Misunderstood. *Change: The Magazine of Higher Learning*, 49(3), 60-70.

Bevan-Dye, A.L. & Akpojivi, U. (2016). South African Generation Y students' self-disclosure on Facebook. *South African Journal of Psychology*, 46(1), 114-129.

Bevan-Dye, A.L. & Surujlal, J. (2011). Attitude towards materialism in sport and materialism tendencies amongst black Generation Y students. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD)*, September 2011 (Supplement 1), 43-55.

Braunsberger, K., Lucas, L.A. & Roach, D. (2005). Evaluating the efficacy of credit card regulation. *International Journal of Bank Marketing*, 23, 237–254.

Byrne, B.M. (2010). *Structural equation modelling with AMOS: Basic concepts, applications, and programming*. New York, NY: Routledge.

Chan, S.F., Chau, A.W. & Chan, K.Y. (2012). Financial knowledge and aptitudes: Impacts on college students' well-being. *College Student Journal*, 46, 114–132.

Chipp, K., Kleyn, N., & Manzi, T. (2011). Catch Up and Keep Up: Relative Deprivation and Conspicuous Consumption in an Emerging Market. *Journal of International Consumer Marketing*, 23(2), 117-134.

Davies, E. & Lea, S E.G. (1995). Student attitudes to student debt. *Journal of Economic Psychology*, 16, 663-679.

Duh, H.I. (2014). Application of the human capital life-course theory to understand Generation Y South Africans' money attitudes. *Journal of Economics and Behavioural Studies*, 6(12), 974-985.

Duh, H.I., Benmoyal-Bouzaglo, S., Moschis, G.P. & Smaoui, L. (2014). Examination of young adults' materialism in France and South Africa using two life-course theoretical perspectives. *Journal of Family and Economic Issues*, 36(2), 251–262.

Eastman, J.K., Goldsmith, R.E. & Flynn, L.R. (1999). Status consumption in consumer behaviour: scale development and validation. *Journal of Marketing Theory and Practice*, 7, 41-52.

Enca. (2013). Report indicates spiralling student debt. <https://www.enca.com/money/report-indicates-spiraling-student-debt2014> Accessed 2019/07/12. Accessed 2019/07/12.

Enca. (2017). Middle class is buckling under debt: survey. <http://www.enca.com/money/middle-class-is-buckling-under-debt-survey>. Accessed 2019/07/12.

Ferreira, K. (2017). Analysis: How indebted consumers are stretching SA to its limits. <https://www.businesslive.co.za/bd/economy/2017-09-12-indebted-consumers-on-a-credit-knife-edge/> Accessed 2019/07/12.

Field, A. (2009). *Discovering statistics using SPSS. 3rd ed.* London: Sage.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research.* Reading, MA: Addison-Wesley.

Gerasimova, V. & Mokichev, S. (2015). The university as a center of concentration of knowledge and reproduction of the intellectual elite. *Procedia - Social and Behavioral Sciences*, 191, 2618 – 2621.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective. 7th ed.* Upper Saddle River, NJ: Pearson.

Harnish, R.J., Bridges, K.R., Natarajan, R., Gump, J.T. & Carson, A.E. (2018). The impact of money attitudes and global life satisfaction on the maladaptive pursuit of consumption. *Psychology and Marketing*, 35, 189–196.

Khare, A. (2014). Money attitudes, materialism, and compulsiveness: Scale development and validation. *Journal of Global Marketing*, 27, 30 – 45.

Kim, H., Callan, M.J., Gheorghiu, A.I. & Matthews, W.J. (2017). Social comparison, personal relative deprivation, and materialism. *British Journal of Social Psychology*, 56, 373–392.

Lamprecht, I. (2018). Why economic growth continues to disappoint. <https://www.moneyweb.co.za/news/economy/why-economic-growth-continues-to-disappoint/>. Accessed 2019/07/12.

Livingstone, S.M. & Lunt, P.K. (1992). Predicting personal debt and debt repayment: Psychological, social and economic determinants. *Journal of Economic Psychology*, 13(1), 111-134.

Malhotra, N.K. (2010). *Marketing research: An applied orientation*. 6th ed. Upper Saddle River, NJ: Pearson.

Norvilitis, J.M. & Mao, Y. (2013). Attitudes towards credit and finances among college students in China and the United States. *International Journal of Psychology*, 48(3), 389–398.

Nzukuma, K. (2017). Everyone knows how Gordhan feels. <https://m.fin24.com/Budget/Budget-and-Economy/everyone-knows-how-gordhan-feels-20170307>. Accessed 2019/07/12.

Pallant, J. (2010). *SPSS survival manual*. 4th Ed. New York, NY: McGraw-Hill.

Pereira, M.C. & Coelho, F. (2019). Mindfulness, money attitudes, and credit. *Journal of Consumer Affairs*, 53(2), 424–454

Pettit, N. C, & Sivanathan, N. (2011). The plastic trap: Self threat drives credit usage and status consumption. *Social Psychological and Personality Science*, 2(2), 146–153.

Phau, I. & Woo, C. (2008). Understanding compulsive buying tendencies among young Australians: the roles of money attitude and credit card usage. *Journal of Marketing Intelligence and Planning*, 26(5), 441-60.

Richins, M.L. & Dawson, S. (1990). Measuring material values: A preliminary report of scale development. *Advances in Consumer Research*, 17, 169-175.

Richins, M.L. & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19 (3), 303–316.

Robb, C.A. & Sharpe, D.L. (2009). Effect of personal financial knowledge on college students' credit card behaviour. *Journal of Financial Counselling and Planning*, 20, 25–43.

Stevens, J. (2002). *Applied multivariate statistics for the social sciences. 4th ed.* Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Student Village. (2017). Student spend report 2017: Brand generation buying experiences. <https://studentvillage.co.za/student-marketing/student-spend-report-2017-brand-generation-buying-experiences-2/>. Accessed 2019/07/12.

Tang, T.L.P. & Chiu, R.K. (2003). Income, money ethic, pay satisfaction, commitment, and unethical behavior: Is the love of money the root of evil for Hong Kong managers? *Journal of Business Ethics*, 46(1), 13–30.

Thomas, S. (2015). Household savings: A growing crisis. <http://www.financialmail.co.za/moneyinvesting/2015/07/30/household-savings-a-growing-crisis>. Accessed 2019/07/12.

Van de Schoot, R., Lugtig, P., & Hox, J. (2012). A checklist for testing measurement invariance. *European Journal of Developmental Psychology*, 9, 486–492.

Watson, D.C. (2015). Materialism and the five-factor model of personality: A facet-level analysis. *North American Journal of Psychology*, 17(1), 133-150.

Yeniaras, V. (2016). Unpacking the relationship between materialism, status consumption and attitude to debt. *Journal of Islamic Marketing*, 7(2), 232–247.