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FINANCIAL LITERACY AMONGST AFRICAN GENERATION Y STUDENTS: AN EMPIRICAL ANALYSIS OF SELECTED DEMOGRAPIC FACTORS

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─Abstract─

The entire spectrum of society, including Generation Y, face the challenge of managing their personal finances in uncertain economic, financial and political times. This challenge highlights the importance of being equipped with the necessary financial literacy to make informed financial decisions. Financial illiteracy is a global phenomenon that has become a topical issue. As a result, there has been a steady increase in the body of knowledge that pertains to the importance and benefits of financial literacy and the consequences of financial illiteracy. This study investigates differences in the significantly sized black Generation Y (hereafter referred to as African Generation Y) student cohort's financial literacy in terms of selected demographic factors, namely gender, year and field of study respectively, within the South African context. Following a descriptive research design and a quantitative research approach, data were collected from a convenience sample of 385 African students registered at two Gauteng based public South African university campuses. Multiple-choice questions, relating to general financial knowledge, saving, spending and debt, were used to test the students' financial literacy. Data analysis included descriptive statistics, an independent-samples t-test and one-way analysis of variance (ANOVA). The findings suggest that African Generation Y students may be categorised as having a relatively low level of financial literacy and that the sample's financial literacy did not differ much in terms of gender. The findings of this study is likely to inform policymakers, educators, universities and financial institutions on the most effective strategies to employ for implementation with regards to differing financial literacy levels.

Key Words: African Generation Y students, financial literacy, gender differences, field and year of study differences, South Africa

JEL Classification: B16, D14, D81, G00, M21.

1. INTRODUCTION AND BACKGROUND

Finance is a fundamental element of human society, in one way or another, since the beginning of civilisation. Finance is considered the cornerstone of prosperity and security that builds confidence and knowledge in individuals' lives and any country as a whole. Financial literacy is the main platform for financial inclusion and the foundation for equitable and sustainable socio-economic development (The Banking Association South Africa, 2017). As such, research on individuals' financial literacy is increasingly gaining attention (Al-Tamimi & Kalli, 2009) from several distinct groups, including community interest organisations, financial institutions, government agencies, policymakers (Roberts, Struwig & Gordon, 2014) and educational institutions. This interest may also be the result of the growing recognition that financial literacy have noteworthy implications on how effectively individuals manage their personal finances (Chen & Volpe, 1998), particularly in uncertain and complex economic, political and financial times (Aprea, Wuttke, Breuer, Koh, Davies, Greimel-Fuhrmann & Lopus, 2016). Compelling consumer issues such as low savings, high consumer debt levels and predatory lending add to the sense of urgency surrounding financial literacy (Braunstein & Welch, 2002). Financial risks such as currency depreciation and escalating interest rates as well as uncertainty in the labour market (Shim, Xioa, Barber & Lyons, 2009) influence individuals' financial future and wellbeing. To recognise, understand and adequately address these risks, make informed financial decisions and secure financial security at retirement, it is important that individuals are equipped with the necessary financial literacy (Swart, 2012).

The ability to effectively manage and deal with everyday life financial affairs is commonly subsumed under the concept of financial literacy (Aprea et al., 2016). The literature provides multiple definitions of financial literacy. The wide array of definitions are ascribed to scholars differing on what financial literacy entails (Huston, 2010). The general concept of financial literacy revolves around an individual's capacity to comprehend issues related to personal finance and their ability to make educated judgements and sound decisions about the use and

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management of their financial resources (Roberts, Struwig, Gordon, Viljoen & Wentzel, 2012). Financial literacy is also described as a combination of attitude, skill, awareness, behaviour and knowledge that an individual needs to possess to make effective financial decisions and eventually attain individual financial freedom (Atkinson & Messy, 2012). The Organisation for Economic Co-operation and Development (OECD) defines financial literacy in terms of three aspects that an individual need to acquire to be considered financially literate, namely skills and knowledge concerning financial opportunities and risks, the capability to recognise resources that will provide support and assistance with complicated financial issues and the ability to take effective actions to enhance economic wellbeing (OECD, 2005). In 2014, the OECD broadened this definition, defining financial literacy as the understanding and knowledge of financial risks and concepts, and the confidence, motivation and skills to apply such understanding and knowledge to make well-informed decisions across a wide range of financial contexts, enhance the financial security of individuals and society and to permit economic life participation (OECD, 2014). While there is no international definitional consensus concerning the concept and definition of financial literacy, the need for financial literacy cannot be overstated.

Every economic agent, impacting a country's economy, has an interest to see improved levels of financial literacy. From a micro-economic point of view, individuals and business owners with higher and improved levels of financial literacy are less likely to take financial actions that are detrimental to them and their businesses, such as taking on expensive loans, saving inadequately and budgeting and planning finances ineffectively (Miller, Godfrey, Levesque & Stark, 2009). At a macro-economic level, a more financially literate society is associated with higher savings in the country and a more stabilised financial system (Klapper, Lusardi & Panos, 2012). Other factors that highlight the need for financial literacy include the deregulation of financial markets, easier access to credit and the increase in competition among financial service and product providers for greater market share and individuals' money (Beal & Delpachitra, 2003). Furthermore, financial markets are becoming more sophisticated and financial service providers are increasingly using more aggressive marketing tactics to market their financial products and services, making it difficult for individuals to weigh the risks of the many technical financial instruments offered for saving and borrowing. In addition, with life expectancy on the rise, individuals

enjoy longer years of retirement, which highlights the importance of having a sound pension plan (OECD, 2006). Hence, based on the foregoing discussion, one can argue that financial literacy is important for the individual, society as a whole and a country's economy. Without adequate financial literacy, individuals, society and economies are faced with distressing negative consequences.

Financial literacy directly implicates the manner in which individuals from all spheres of society earn, manage and spend their financial resources. A lack of financial literacy negatively influences an individual's day-to-day financial management and capability to accumulate money for long-term investments and goals, such as purchasing assets, funding higher education or saving for retirement. Such financial illiteracy leads to behaviours that make individuals susceptible to severe financial crises (Braunstein & Welch, 2002). Other consequences of financial illiteracy include mounting individual debt, the overuse of credit cards, irresponsible overspending, using personal loans for careless consumption, investing in unwise high-risk investments, committing to untrustworthy get-rich-quick schemes and being unable to identify suitable financial products and services that meets an individuals' needs (Beal & Delpachitra, 2003). From a macro-economic perspective, societal and economic stability largely rests on the collective financial wellbeing of its citizens, including their financial literacy. Financially illiterate individuals compromise market operations and competitive forces as these individuals hinder the creation of more competitive and efficient markets (Braunstein & Welch, 2002). In addition, financial illiteracy impairs business cycles, deceases the value of a currency, and leads to inflation and a greater variation in income and wealth distribution (Mandell & Klein, 2009). Financial institutions and other service providers alike also face the danger of higher-than-expected financial losses and an unfavourable financial standing as a result of financial illiteracy (Symanowitz, 2006). Given the negative consequences of financially illiteracy, individuals are encouraged to educate themselves on financial issues to reap the benefits associated with being financially literate.

Financially literate individuals benefit from sound financial record keeping (Borden et al., 2008), higher retirement savings while avoiding high debt levels (OECD, 2006), a higher degree of personal wealth and less financial stress (Van Nieuwenhuyzen, 2009). Moreover, individuals who are financially literate are in a position to challenge financial service and product providers to introduce services

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and products that truly address their needs, which, in turn, is likely to stimulate investment levels. Furthermore, a financially literate society help ensure that the financial services sector make a real contribution to poverty alleviation and economic growth (OECD, 2006). In addition, higher levels of financial literacy benefit the economy in terms of more efficient functioning of markets, improved social cohesion, a reduction in social and economic exclusion, an increase in spending power, competitiveness and innovation, as well as a decrease in loan defaults (Bailey, 2005). Despite the benefits associated with being financially literate, the findings of financial literacy studies suggest that financial illiteracy is a global phenomenon and not an isolated problem.

In international emerging markets, several studies note a lack of financial literacy such as in Indonesia (Amidjono, Brock & Junaidi, 2016), Mexico (Ruiz-Durán, 2016) and Romania (Lacatus, 2016). Indeed, financial illiteracy is a problem in some developed economies as well, including the United Kingdom (Miles, 2004), New Zealand, Korea (Mandell & Klein, 2009), Austria (Greimel-Fuhrmann et al., 2016) and Germany (Frűhauf & Retzmann, 2016). Although some financial literacy studies have been conducted in emerging markets, the vast majority of financial literacy research pertains to individuals in developed countries (Holzmann, 2010). As such, this research area is underrepresented and less understood in emerging economies, including South Africa. Therefore, the purpose of this study is to better understand the financial literacy of the significantly sized black Generation Y (hereafter referred to as African Generation Y) student cohort in the South African context.

In 2016, the Generation Y cohort, defined as individuals born between 1986 and 2005 (Markert, 2004) made up approximately 38 percent of South Africa's total population. Of the 38 percent, nearly 84 percent were African individuals (Statistics South Africa, 2016). As such, the African Generation Y cohort represents an important market segment that is expected to shape the increasingly multifaceted financial and economic environment. Of particular significance is the student portion of this generational cohort. This is because African Generation Y students have the potential to earn high future salaries and hold higher social standings (Bevan-Dye & Surujlal, 2011). In addition, graduating students are expected to have a greater future disposable income and spending power (Bevan-Dye & Akpojivi, 2016). A greater disposable income and spending power necessitates greater financial responsibility and financial literacy to ensure that

future wealth is accumulated and that informed financial decisions are taken, especially in a demanding financial environment. It is also important to develop the financial literacy among younger generations, including African Generation Y students, as they are likely to bear more financial risks in adulthood compared to their parents, particularly in terms of saving, planning for retirement and covering healthcare needs (OECD, 2014). With improved levels of financial literacy, African Generation Y students can make a positive contribution towards a more stable financial and economic environment as well as ensure a more stable financial future for themselves.

2. METHODOLOGY

2.1. Research design

A descriptive research design and quantitative research approach was followed in this study.

2.2. Sample

This study's target population was specified as 18 to 24 year old African Generation Y students, registered at the 26 public higher education institutions (HEIs) in South Africa. The 26 HEIs were narrowed down to a judgement sample of two Gauteng based HEI campuses. Subsequently, a non-probability convenience sample of 500 African students across the two campuses was drawn, which is in the range of other studies alike, such as Jorgensen and Savla (2010) (sample size of 420) and Worthy, Jonkman and Blinn-Pike (2010) (sample size of 450).

2.3. Instrument and data collection

To collect the necessary data, a self-administered survey questionnaire was used. Section A of the questionnaire, requested participants to supply relevant demographic information. In order to assess the sample's financial literacy in general financial knowledge (nine questions), saving (four questions), spending (three questions) and debt (two questions), Section B comprised 18 multiple-choice questions, adapted from the Symanowitz (2006) study. The general financial knowledge questions included questions on topics such as life insurance, investment growth, tax, inflation and budgeting. The saving related questions comprised questions pertaining to retirement savings, saving vehicles, interest on savings and savings growth. Topics such as bank charges on credit cards, sources

of spending and finance charges were covered in the spending related questions. The questions pertaining to debt included questions on issues such as borrowing, credit history and scores. For each question, four possible answers were provided, of which only one was the correct answer. The students were asked to choose only one possible answer. The average of correct responses were calculated for the entire survey as well as for each of the financial literacy dimensions and categorised into three categories, namely relatively high level of financial literacy (average of correct responses greater or equal to 80%), relatively medium level of financial literacy (average of correct responses between 60% and 79%) and relatively low level of financial literacy (average of correct responses less or equal to 59%). This categorisation is in accordance with previous studies (Chen & Volpe, 1998; Volpe, Chen & Pavlicko, 1996). In addition, the questionnaire included a cover letter that outlined the study's purpose and promised that the students' personal information will be protected.

Although the financial literacy questions used in this study were proven to be reliable and valid in the Symanowitz (2006) study, a pre-test was conducted, where relevant researchers and experts in personal financial management assessed the face and content validity of the questionnaire. A knowledgeable statistician also reviewed the questionnaire to confirm that the questionnaire was suitable for the statistical techniques employed. Thereafter, the questionnaire was subject to pilot testing to assess its effectiveness. A convenience sample of 39 students not included in the sample was used in this regard. Following the results of the pilot test, the questionnaire was distributed to the main sample. After soliciting permission from the lecturers at each of the two HEI campuses telephonically, the questionnaires were distributed by the trained fieldworkers to the students for voluntary completion.

3. RESULTS

From the sample of 500 participants, 385 completed and usable questionnaires were received, which gives the study a 77 percent response rate. The sample's age groups ranged from 18 to 22 years. The sample included more female (62.6%) than male (37.4%) students. In terms of field of study, the majority (53%) of the students studied towards a degree, of which 23.9 percent studied towards a BCom degree, 9.1 percent towards a BSc degree and 17.4 percent towards a BA degree. A total of 2.6 percent of the students indicated that they studied towards a degree,

but did not specify the field of study. Of the total sample, 44.7 percent studied towards a diploma. The sample comprised more Sesotho (31.9%) speaking students, followed by those who speak IsiZulu (13.8%). The majority of the students were in their first year of study (41.8%) and the least in their second year of study (24.4%). The sample included students from eight of South Africa's nine provinces, with majority of the students originating from Gauteng (60.3%). A description of the sample is presented in Table 1.

Table 1: Sample description

Age	Percent (%)	Language	Percent (%)	Province	Percent (%)
18	10.4	Afrikaans	1.6	Eastern Cape	2.6
19	20.5	English	1.8	Free State	7.0
20	24.4	IsiNdebele	0.8	Gauteng	60.3
21	31.2	IsiXhosa	9.1	KwaZulu-Natal	2.1
22	13.5	IsiZulu	13.8	Limpopo	14.0
Gender		Sepedi	10.1	Mpumalanga	5.5
Female	62.6	Sesotho	31.9	Northern Cape	0.8
Male	37.4	Setswana	13.5	North-West	7.0
Field of study		SiSwati	3.4		
BCom	23.9	Tshivenda	4.9		
BSc	9.1	Xitsonga	8.6		
BA	17.4	**Year of study**			
Degree	2.6	1st year	41.8		
Diploma	44.7	2nd year	24.4		
		3rd year	33.8		

Data analysis, using the Statistical Package for Social Sciences (IBM SPSS), Version 24, included descriptive statistics, an independent samples t-test and one-way analysis of variance (ANOVA). On average, the students answered 49.9 percent of all the financial literacy questions correctly. This suggests that, overall, African Generation Y students may be categorised as having a relatively low level of financial literacy. The lowest percent of questions correctly answered were obtained for financial literacy in spending (36.4%), followed by saving (48.4%), debt (50.0%) and general financial knowledge (55.0%). As such, for these financial literacy dimensions, the students may be categorised as having a relatively low level of financial literacy. A summary of these results are reported on in Table 2.

Table 2: Descriptive statistics of African Generation Y students' financial literacy scores and level category

Financial literacy dimension	Average of correct responses	Level of financial literacy category	Ranked order
Spending	36.4%	Relatively low level of financial literacy	1
Saving	48.4%	Relatively low level of financial literacy	2
Debt	50.0%	Relatively low level of financial literacy	3
General financial knowledge	55.0%	Relatively low level of financial literacy	4
Overall	49.9%	Relatively low level of financial literacy	

An independent-samples t-test was conducted to assess whether there was a statistically significant difference between African male and female Generation Y students' financial literacy in spending, saving, debt and general financial knowledge. The results are reported on in Table 3.

Table 3: Gender differences in African Generation Y students' financial literacy

Financial literacy dimension	Male Mean N=144	Male Std. Dev.	Female Mean N=241	Female Std. Dev.	t-value	Sig.
Spending	1.028	0.852	1.129	0.901	-1.084	0.279
Saving	1.903	0.985	1.959	0.921	-0.560	0.576
Debt	0.993	0.780	1.004	0.698	-0.144	0.885
General financial knowledge	5.000	1.794	4.925	1.585	0.426	0.671

* Statistically significant at $p < 0.05$

As is evident in Table 3, there was no significant difference found between African male and female Generation Y students' financial literacy. This suggests that African male and female Generation Y students' financial literacy in spending, saving, debt and general financial knowledge are similar. In order to ascertain whether there was a significant difference between African Generation Y students' financial literacy scores and different demographic profiles, namely their year of study and field of study, One-way ANOVA was undertaken. Table 4 reports on the differences in African Generation Y students' financial literacy in terms of their year of study.

Table 4: Differences in African Generation Y students' financial literacy in terms of year of study

Financial literacy dimension		Sum of Squares	df	Mean Square	F	Sig.
Spending	Between Groups	10.189	2	5.095	6.719	0.001*
	Within Groups	289.629	382	0.758		
	Total	299.818	384			
Saving	Between Groups	4.017	2	2.008	2.267	0.105
	Within Groups	338.487	382	0.886		
	Total	342.504	384			
Debt	Between Groups	10.181	2	5.090	10.032	0.001*
	Within Groups	193.819	382	0.507		
	Total	204.000	384			
General financial knowledge	Between Groups	9.820	2	4.910	1.781	0.170
	Within Groups	1053.338	382	2.757		
	Total	1063.158	384			

* Statistically significant at $p < 0.05$

As indicated in Table 4, there was no statistically significant difference between the first-, second- and third year African Generation Y students' financial literacy in saving ($p = 0.105 > 0.05$) and general financial knowledge ($p = 0.170 > 0.05$). However, a statistically significant difference at the $p < 0.05$ level, was found between the first-, second- and third year African Generation Y students' financial literacy scores in spending ($p = 0.001 < 0.05$) and in debt ($p = 0.001 < 0.05$). Using the *post hoc* comparisons, the Tukey HSD test revealed that the mean score for financial literacy in spending of the first- (M = 0.95, SD = 0.81) and second year students (M = 1.02, SD = 0.89) was significantly different than the third year students (M = 1.32, SD = 0.93). Similarly, the mean score for financial literacy in debt of the first- (M = 0.82, SD = 0.69) and second year students (M = 1.07 =, SD = 0.72) was significantly different than the third year students (M = 1.18, SD = 0.73). This suggest that the third year students have a higher level of financial literacy in managing spending and debt compared to the first- and second year students. This may be because senior students have more experience in making financial decisions and managing their personal finances, and have accumulated more knowledge in the field of finance during their years of study. In Table 5, differences in African Generation Y students' financial literacy in terms of field of study are presented. Note that those students who did not specify the degree towards which they are studying were excluded from this analysis.

Table 5: Differences in African Generation Y students' financial literacy in terms of field of study

Financial literacy dimension		Sum of Squares	df	Mean Square	F	Sig.
Spending	Between Groups	18.288	3	6.096	8.279	0.001*
	Within Groups	266.557	362	0.736		
	Total	284.844	365			
Saving	Between Groups	8.399	3	2.800	3.218	0.023*
	Within Groups	314.901	362	0.870		
	Total	323.301	365			
Debt	Between Groups	6.377	3	2.126	4.037	0.008*
	Within Groups	190.599	362	0.527		
	Total	196.975	365			
General financial knowledge	Between Groups	42.319	3	14.106	5.339	0.001*
	Within Groups	956.547	362	2.642		
	Total	998.866	365			

* Statistically significant at $p < 0.05$

As is evident from Table 5, a statistically significant difference at the $p < 0.05$ level, was found between the African Generation Y students' field of study and their financial literacy score in spending ($p = 0.001 < 0.05$), saving ($p = 0.023 < 0.05$), debt ($p = 0.008 < 0.05$) and general financial knowledge ($p = 0.001 < 0.05$). To identify where the specific variances lay, the Tukey HSD test was performed, using the *post hoc* comparisons. The results revealed that the BCom students' financial literacy in spending (M = 1.45, SD = 0.95), saving (M = 2.13, SD = 1.08), debt (M = 1.18, SD = 0.69) and general financial knowledge (M = 5.36, SD = 1.53) differed from the BA students' financial literacy in spending (M = 0.82, SD = 0.76), saving (M = 1.67, SD = 0.94), debt (M = 0.81, SD = 0.68) and general financial knowledge (M = 4.48, SD = 1.53), as well as from the financial literacy in spending of the BSc students (M = 0.86, SD = 0.85) and the Diploma students (M = 1.09, SD = 0.84). Furthermore, the BSc students' financial literacy in general financial knowledge (M = 5.51, SD = 1.65) differed from those of the BCom students (M = 5.36, SD = 1.53). The students studying towards a BCom degree account for the majority of the variance in all four financial literacy dimensions. This may be attributed to the fact that BCom students learn more about finance related concepts in their curriculum than BA students.

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4. DISCUSSION AND CONCLUSIONS

This study sought to assess African Generation Y students' overall financial literacy and in terms of spending, saving, debt and general financial knowledge. In addition, the study investigated whether the students' financial literacy differed in terms of their gender, year- and field of study. Evidence in the sample suggests that, overall, African Generation Y students have a relatively low level of financial literacy. Similarly, the findings suggest that the students also have a relatively low level of financial literacy in spending, saving, debt and general financial knowledge. These low levels of financial literacy are consistent with the findings of previous studies that focus on the financial literacy of university students (Murphy, 2005; Chen & Volpe, 1998) and to some degree verifies the financial illiteracy problem among university students on a global scale. Furthermore, the findings indicate no significant difference between male and female African Generation Y students' financial literacy. This is in contrast to previous studies (Luksander, Béres, Huzdik & Németh, 2014; Murphy, 2005) that found male students to be more financially literate than their female counterparts.

The results of the study indicate that the students differ in their financial literacy in terms of their year- and field of study. In particular, third year students have a higher level of financial literacy in managing their spending and debt than the first- and second year students. This finding is similar to the findings of Chen and Volpe (2002) who found senior students to be more financially literate than their junior counterparts. While the financial literacy among the BA-, BSc- and Diploma students were found to be similar, the findings indicate that the students studying towards a BCom degree have a higher level of financial literacy in general financial knowledge, saving, spending and debt than those students studying towards a BA degree. In addition, the BCom students have a higher level of financial literacy in spending than the BSc- and Diploma students. These findings support the findings of both the Chen and Volpe (2002) and Luksander et al. (2014) studies who found that business majors (BCom students) have a higher level of financial literacy than non-business majors (BA students).

The findings of this study provide an empirical investigation into the African Generation Y student cohort's financial literacy. Based on the low levels of financial literacy among South African students, which may be ascribed to the little, if any, personal finance content in most degrees, educators should

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incorporate the different aspects of financial management, including spending behaviour, saving, managing debt and general financial knowledge into all curricula in order to empower all students to manage their finances successfully. By implication, African Generation Y students are at risk of making uninformed financial decisions, being overburdened with high debt and spending imprudently, all of which negatively impacts the individual, society and the economy. As such, it is advised that government, universities and policymakers incorporate personal finance content in school and all university degree curricula. In addition, it is recommended that financial institutions promote, develop and implement financial educational and training programmes and make these programmes part of their good governance with respect to their customers, in particular the African student market segment. Furthermore, students should be financially educated on a continuous basis to account for the increasingly complex and ever-changing financial markets and information as well as changing individual needs at different life stages. This life-time and on-going education could be offered through workshops and seminars, or through a financial literacy empowerment office on campus.

This study is not without limitations. First, non-probability convenience sampling was employed to survey the study's participants, which limits the objective assessment of the findings. Secondly, the study's participants were selected from two HEIs. Therefore, the opportunity exists to undertake similar studies on a larger scale.

In conclusion, understanding African Generation Y students' level of financial literacy can help policymakers, educators and financial institutions design effective financial literacy interventions targeted at the young population in South Africa. This is likely to benefit the nation as a whole.

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