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Financial Literacy, Financial Decision and Workers' Financial Wellbeing

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Abstract
Background*: Financial literacy and financial decisions are topical issues that require academic scrutiny for workers' financial wellbeing. However, the literature rarely addresses the role of financial decisions to achieve financial wellbeing in the Ghanaian context. This study, therefore, applies the family resource management theory and partial least square structural equation modelling technique to determine the role financial literacy and financial decision play in the financial wellbeing of 290 sampled University of Cape Coast staff. The study revealed that financial literacy firstly influences the financial decisions of workers. Also, the financial decisions of workers have a significant influence on their financial wellbeing. The paper thus suggests that financial decision serves as an intermediary between financial literacy and financial wellbeing. It is therefore recommended that financial literacy and financial decisions should be taken seriously by workers as they substantially contribute to one's financial wellbeing. Specifically, the management of the university should organise training and development programmes that would focus on improving workers' financial decisions.*
Keywords: *Financial Literacy, Financial Decision, Financial Wellbeing*

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I. Introduction

Financial wellbeing, among career, physical environment, and social culture, is one of the psycho-social aspects of life (Rath & Harter, 2010). As such, financial wellbeing has become an important subject to workers, researchers, government, and professionals. The need for financial wellbeing relents on the alleviating prospects it presents to workers to overcome challenges such as health issues, early retirement, unemployment, personal bankruptcies, and others. Zaimah, et al (2013) discovered that worker's financial wellbeing displayed a significant relationship with worker's productivity Consequently, the need for workers to attain financial wellbeing has been arduously advocated by international financial institutions such as the World Bank (The World Bank, 2014). For workers to attain financial wellbeing, the role of financial literacy cannot be undermined. This is because a positive relationship exists between financial literacy and financial wellbeing. Some researchers have therefore recommended that workers should acquire financial literacy in order to enhance their financial wellbeing (see, for example, Taft et al, 2013; Adam et al 2017; Philippas & Avdoulas, 2020).

In the context of higher educational institutions which may be regarded as citadel of knowledge generation and access to such knowledge is expected to be relatively easier, the staff are usually expected to be financially literate to enable them attain financial wellbeing (Yankey, 2016;). It was thus ironic to realise that some staff of the University of Cape Coast (UCC) were victims of the recent financial sector crisis in Ghana that caused the loss of investments with its attendant destabilisation in their financial wellbeing. During the period between 2017 and 2019, the Ghanaian government undertook a clean-up exercise in the financial sector that led to the revocation of license and dissolution of some banking and funds management institutions that were not in good standing. Some of these institutions were operating on Ponzi schemes, became insolvent, and unble to meet the new capital requirement set by the Central Bank of Ghana (Bank of Ghana, 2019; The Securities and Exchange Commission, Ghana, 2019). As a result, some expected financially literate formal sector workers across the country including those working in UCC became victims of clean-up. Some of these workers had made decisions to invest in and save with institutions that promised 10% returns per month. This meant they would reap up to 120% per annum on their investment which may be perceived as an absurdity in financial investment decisions. Larbi (2016) also added that workers were investing in institutions that offered interest rates higher than the risk-free base rate of 24% or 25% per annum offered by government securities.

The victimisation of some staff who are expected to be financially literate (Yankey, 2016;) leaves one to wonder if the mere possession of financial literacy, could result in financial wellbeing. The family resource management theory postulates that individuals make decisions based on what they know, to bring about the desired outcome which in the context of this study, may include financial wellbeing. (Deacon & Firebaugh, 1981). The study applied the family resource management theory to investigate the intermediary role that financial decisions could play between the financial literacy and financial wellbeing nexus of the UCC staff. Specifically, the relationship between financial literacy and financial decision was first explored, after which the relationship between financial decision and financial wellbeing was interrogated

This paper is organised into four sections. The first section provides the background that gives impetus to the study. This is followed by a discussion of literature. in the second section both theoretical and empirical literatures are reviewed. Subsequently, the methodology is being discussed and followed by the results of the study. Not limited to these, the findings are discussed, recommendations are made while the limitations of the study are brought to cognisance.

II. Literature Review

2.1. Family Resource Management Theory

Deacon and Firebaugh (1981) introduced the theory of Family Resource Management as a system-oriented management mechanism where management is "the method of using resources to achieve goals". (Goldsmith, 2005). As developed by Deacon and Firebaugh, the four phases in the Family Resource Management model describe how individuals make financial decisions about their resources to provide them with returns. The stages are inputs, throughputs, outputs, and feedback loop (Figure 2.1).

2.1.1. Inputs

Inputs, being the first stage of the family resource management model, are the expertise, and resources that the person has at any given time, (Deacon & Firebaugh 1981; Hayhoe et al., 1986). Workers' resources are developed through their interaction with the environment, what they have consciously acquired (education) and accumulated over the years from the works or inheritance. The input the present study will examine is financial knowledge, of UCC workers.

2.1.2. Throughputs

The throughput section is the second stage of the model and is where decisions are taken based on the information, demands, and resources available to the user. The outcomes include planning, execution, decision-making, communication, and resource usage (Goldsmith, 2005). Rice and Tucker, (1986) simply explained throughput as the process by which a person uses his or her resources based on knowledge to meet his or her desired goals. In this study, the throughput was viewed as workers' financial decisions because it represents the use of resources found in the inputs section.

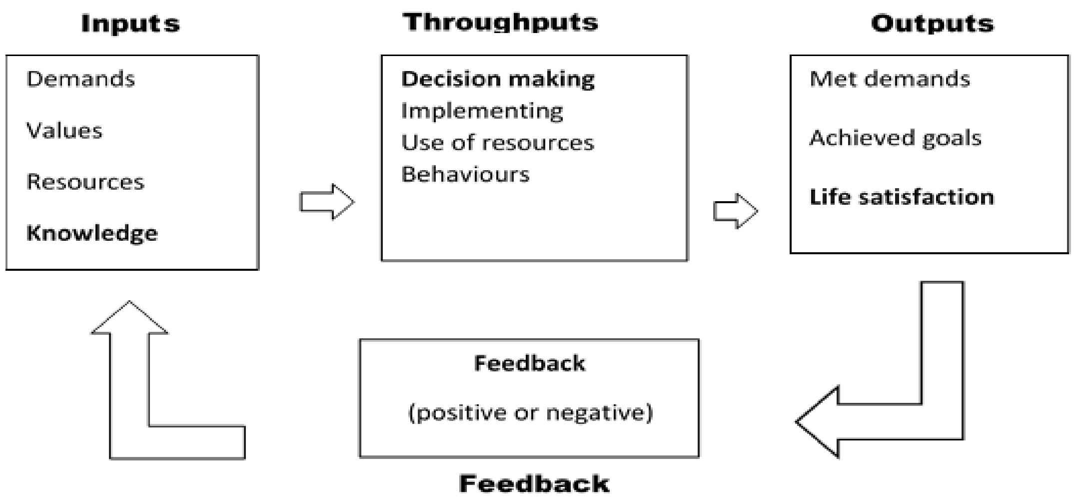

Figure 2.1: Family Resource Management Model

Source: Deacon and Firebaugh (1981)

2.1.3. Outputs

The output is the third stage of the model. Outputs are whether or not the desired objective has been achieved or whether demands have been met. They are the realised result, which is based on the individual's choices. Outputs include demands met, goals accomplished, resources altered and the level of satisfaction with life. As Rice and Tucker (1986) explain, resource inputs enter the system of throughputs and emerge as met goals. According to Deacon and Firebaugh (1981), The output could be the satisfaction or dissatisfaction with the goals that have been met. With respect to this study, Financial Well-Being becomes the output of the decision that has been made.

2.1.4. Feedback

The feedback loop is the final step. In all phases of the resource management system, feedback is constantly used. Feedback occurs when a person's life is imbalanced (Goldsmith, 2005; Hayhoe et al., 2005). This may be due to expectations not being met or targets not being accomplished. By way of improved knowledge or altered mindset, positive or negative feedback re-informs input. The new resources available encourage the process to take place again as the individual uses new resources to execute and make decisions again in hopes of a better performance that will reap financial well-being, (Deacon & Firebaugh, 1981)). A theoretical assumption is made that; people will be in the situation of making a financial decision at every point of their lives whether or not they are financially wellbeing.

2.2. Empirical Review

This section presents the relevant theoretical and empirical literature that undergirds the study. it provides the logical basis for postulating the hypotheses of the study as family resource theory is reviewed together with previous studies that establish relationship between the constructs of the study.

2.2.1. Financial literacy on Financial Decision

Organisation for Economic Co-operation and Development (OECD, 2005) characterised financial literacy as the combination of the understanding of financial products and concepts by consumers/investors and their ability and trust to appreciate financial risks and opportunities, make informed decisions, know where to go for support, and take other successful steps to enhance their financial well-being. From a deferring perspective, the ability to make use of financial education has been described as financial literacy (Wiener, et al., 2005). According to the latter definition, just possessing the knowledge is not enough to be classified as financially literate. A financially literate person should benefit from the knowledge he or she has accumulated. Remund (2010) also broadly defines Financial literacy as a measure of the degree to which key financial principles are understood and having the capacity and trust to handle personal finances by reasonable, short-term decision-making and sound, long-term financial planning while keeping in mind life events and changing economic circumstances.

Howlett, et al., (2008) studied the role of financial literacy and other factors (Self-Regulation, Future Orientation) in the financial decisions of students in the USA. The study showed that financial literacy plays an instrumental role. They realised that without financial literacy, the other factors are unable to influence the financial decisions of individuals. Janor et al (2016) also performed a study that focused on the influence of financial literacy on investment decisions among respondents in Malaysia and the UK. They found that one's financial literacy relates to his or her investment decision. In Kenya, Mwathi, et al., (2017) performed a similar study on University employees. The study revealed that financial knowledge significantly influences financial decisions and hence the acquisition of more financial knowledge by workers should be pursued. Based on these few empirical findings, the literature suggests that financial literacy has a positive nexus with financial decisions. The empirical review however shows a paucity of empirical evidence from the Ghanaian context. Hence the study proposed the first hypothesis that:

H1: Financial Literacy positively affects Financial Decision

2.2.2. Financial Decision on Financial Wellbeing

According to Mwathi et al (2017) Financial Decision is the financial choice one settles on after a logical thought process of selecting from available options. For this study, financial decision looked at the decision workers have taken with regards to their finances.

A shred of empirical evidence from Arafin (2018) suggests that financial satisfaction may also result from the good financial decisions process from good financial knowledge. Arafin performed a study in Indonesia that explored the influence of financial behaviour as an intervening variable between the financial knowledge and financial satisfaction nexus in the Jakarta Area Workforce. The study explains financial behaviour to be the human behaviour related to financial management. The financial management practices include the decisions individuals have made towards credit management, savings, and investment. The study revealed that financial behaviour mediates the relation between Financial Knowledge and Financial Satisfaction. Also, Halim and Astuti (2015) conducted a study to examine relationships between financial satisfaction and financial solvency, financial behaviour, financial knowledge, risk tolerance, as well as financial stressors. Their study used data obtained from convenience sampling of respondents. The research results suggest that increase in financial knowledge improves financial behaviour to increase financial satisfaction. These findings lead to a logical deduction that, financial decision should be able to influence the financial wellbeing of individual hence the second hypothesis of the study is made as:

H_2: Financial Decisions positively affects Financial Well-Being

III. Methods

3.1. Research Design

The exploratory cross-sectional design was employed because the study sought to examine UCC staff's attainment of financial wellbeing through their Financial Literacy and Financial Decision at a point in time. This design applied the quantitative method because of the need for objectivity in investigating the relationships.

3.2. Population, sampling procedure, and sample size

The target population (1160 workers) consisted of 603 senior staff and 557 junior staff from the university of cape coast. This cohort formed a group of interest to the researchers and a starting point for exploring the phenomenon at hand. The Krejcie and Morgan (1970) sample size specification was applied to determine a sample size of 290. This was to help ensure 5% error margin. Also, the stratified sampling technique was used to proportionately select 149 senior staff and 141 junior staff while the simple random method was used to select the respondents. This technique was employed because it provided fair representation of both staff categories. of the study. Consequently, the self-developed questionnaire drawn from the concepts proposed by other studies was used to collect data from the respondent.

3.3. Measurement of variables

3.3.1. *Financial Well-being*: the study applied the measurement model of Muir, et a., (2017) to measure the financial well-being of the respondents. Their model proposed that financial well-being is a function of being in control of one's finances, meeting expenses, and feeling secure with the finances. From this model, five items were developed on a five-point Likert scale. Respondents indicated whether they agreed or disagreed to the statements provided. The scale ranged from strongly agree (5) to strongly disagree (1).

3.3.2. *Financial Decision*: the study borrowed the concept of financial behaviour by Dew and Xiao (2011) to measure the financial decision of respondents. This was based on the premise that decisions people have over a period of time become their behaviour (Hunjra et al,2012). Again, a five-point Likert scale of five items was used to measure the financial decisions of respondents. Again, Respondents indicated whether they agreed or disagreed to the statements provided. The scale ranged from strongly agree (5) to strongly disagree (1).

3.3.3. *Financial Literacy*: This was measured with 9 questions on savings, investment, and insurance. The question required that the respondent made computations or apply the knowledge to select the correct answer from alternative answers. The items were adapted from the instrument used by Furtuna, (2007) on personal financial literacy.

3.4. Data Analysis

The data collected was examined using exploratory and confirmatory factor analysis in order to validate the items for onward analysis of the hypotheses. This was done by conducting indicator reliability, internal consistency reliability, convergent validity, and discriminant validity tests with the Smart PLS software. Also, with frequencies, percentages, and partial least squared structural equation model was used to analyse the biodata and hypotheses of the study at a significance level of 0.05. The results are presented in tables 1 and 2.

3.5. Ethical Consideration

The study was particular about ethical issues that included confidentiality, consent, and integrity. The anonymity of the respondent was paramount to the study hence respondents were not required to provide any identity. Also, all participants were duly given the freedom to participate or decline participation. Therefore, all respondents partook voluntarily. Finally, to address the issue of integrity the respondents were encouraged to provide truthful answers to the questions they were being asked.

IV. Results

4.1. Demographic Information of Respondents

Results and discussion of preliminary data which identified the background of the respondent such as gender, age, staff status, and level of education are presented in Table 4.1.

The distribution of respondents by gender as shown in Table 1 was made up of 206 males, forming a 71.0% majority. Females, 84 also represented 29.0% distribution. The male majority is consistent with staff distribution of the University. Also, the Majority, 149 (51.4%) of the respondents were senior staff while 141 (48.6%) were the junior staff.

The age distribution of the respondents shows that most 118(40.7%) of the respondents were aged from 31years to 40 years. This was followed by those below 31years 83(28.6%), Also, 62(21.4%) of the respondents were between 41years and 50years

The majority of the respondents 85(29.3%), have a bachelor's degree, followed by 65 respondents (22.4%) who have other academic qualifications. Besides, while 62(21.4%) and 45(15.5%) respondents hold Senior High School Certificate and Post Graduate degrees respectively, only 33(11.4%) respondents hold a Diploma degree. This suggests the likelihood of staff having the ability to be financially literate.

Table 4.1: Demographic Distribution of Respondent

Variable	Subscale	Frequency (F)	Percent (%)
Sex	Male	206	71.0
	Female	84	29.0
Staff Status	Junior Staff	141	48.6
	Senior Staff	149	51.4
Age	Below 31years	83	28.6
	31-34years	118	40.7
	41-50years	62	21.4
	Above 50years	27	9.3
Educational Qualification	Senior High	62	22.4
	Diploma	33	11.4
	Bachelor's Degree	85	29.3
	Postgraduate degree	45	15.5
	Others	65	22.4

Source: Field Work, (2020)

4.2. Outer Model Specifications

The outer model specifications present the reliability and validity analyses of the measures/indicators of the study. these items/indicators were assessed with indicator reliability, internal consistency reliability, convergent validity and discriminant validity.

4.2.1. Indicator Reliability

The outer loadings show the reliability of the indicators used to measure each construct. The results from Table 4.2 shows that all the indicators of constructs in both H_1, and H_2 models met either the acceptance criterion of 0.4 or the preferred criterion of 0.7.

4.2.2. Internal Consistency Reliability

From Table 4.2, the rho_A of all the reflectively measured constructs met the preferred threshold of 0.7 i.e.,0.706 for Financial Decision in the first model and 0.709 in the second model. Financial wellbeing was also measured at 0.817. According to Hair et al (2019), the rho_A statistic gives the best picture, as it falls between Cronbach's alpha (CA) and composite reliability (CR). Hence, the results give assurances of internal consistency reliability in the models.

4.2.3. Convergent Validity

The average variance extracted (AVE) shows the presence of convergent validity in the models. This is because the AVE values (0.507, 0.545 & 0.511) of all the reflectively measured constructs, as presented in Table 4.2, were above the preferred threshold of 0.5.

Table 4.2: Outer Model Specifications

Hypotheses	Latent Construct	Indicator	Outer Loading	CA	rho_A	CR	AVE
H_1	Financial Literacy	score	1.000	1.00	1.00	1.00	1.00
	Financial Decision	WD15	0.658	0.706	0.717	0.801	0.507
		WD16	0.818				
		WD17	0.786				
		WD19	0.556				
H_2	Financial Well-being	FWB26	0.558	0.735	0.817	0.823	0.545
		FWB27	0.680				
		FWB28	0.873				
		FWB29	0.802				
	Financial Decision	WD15	0.680	0.707	0.709	0.805	0.511

WD16	0.815
WD17	0.736
WD19	0.612

Source: Field Work, (2020)

4.2.4. Discriminant Validity

Hetrotrait-Monotrait Ratios were used to determine the presence of discriminant validity in the models. The results in Table 4.3 shows that the HTMT ratios were significantly lesser than the threshold of 0.9. as the upper and lower limits of the confidence intervals were lesser than 1. This means that discriminant validity was present in the models.

Table 4.3: Hetrotrait-Monotrait Ratios (HTMT)

Hypothesis		HTMT Ratio	Confidence Interval
H_1:	FL <-> FD	0.318	$CI_{0.90}$[0.191-0.456]
H_2	FD <-> FWb	0.577	$CI_{0.90}$[0.405-0.734]

FL=Financial Literacy; FD=Financial Decision; FWb=Financial Well-Being
Source: Field Work, (2020)

4.3. Inner Model Specifications

In this section, the results from the proposed hypotheses tests were presented and analysed. The relationships in the model were assessed and presented according to the rubrics of Hair et al. (2019).

Table 4.4: Hypothesis Testing

Hypotheses	Beta (β)	SD	t-value	P-value	Interpretation
H_1: FL -> FD	0.272***	0.054	5.001	0.000	Significant
H_2: FD -> FWb	0.447***	0.052	8.540	0.000	Significant

FL=Financial Literacy; FD=Financial Decision; FWb=Financial Well-Being SD=Standard Deviation; ∗=p <.05; ∗∗=p <.01; ∗∗∗=p <.001
Source: Field Work, (2020)

Table 5: Coefficient of Determination

Endogenous Variable	R^2	R^2Adj	P-Value
Financial Decision	0.074*	0.071	0.018
Financial Well-being	0.200***	0.197	0.000

∗=p <.05; ∗∗=p <.01; ∗∗∗=p <.001
Source: Field Work, (2020)

The first hypothesis sought to explore the effect of UCC worker's Financial Literacy on their Financial Decisions. The result from the structural equation model shows that Financial Literacy has a statistically significant positive effect on Financial Decisions (β=0.272, p<0.01; Table 4.4, Figure 4.1). This means that the higher one's knowledge in finance, the more likely he or she would take good financial decisions. Therefore, the hypothesis was supported. The coefficient of determination in Table 4.5 shows the predictive power of the model. The result indicates that Financial Literacy significantly explained about 7.4% variations in the Financial Decision (R^2=0.074, R^2Adj=0.071, p=0.018). This means that there are some factors other than Financial Literacy that affect the Financial Decisions of individuals.

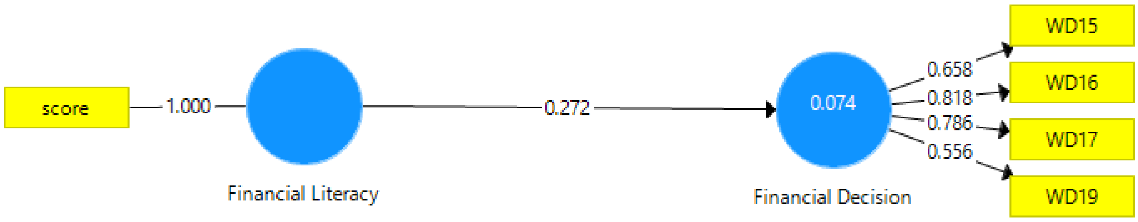

Figure 4.1: Hypothesis One Structural Equation Model
Source: Field Work, (2020)

The second hypothesis evaluates the effect of financial decisions on the worker's Financial Well-Being. Once again, a structural equation model was performed. The results were presented in Table 4.4, Table 4.5, and Figure 4.2. The results show that Financial Decision has a statistically significant positive effect on worker's financial wellbeing (β=0.447, $p<0.01$). this means that one is likely to have Financial Well-Being when they take good Financial Decision. Hence, the better a worker's Financial Decisions, the more likely he or she would be financially well. The model had predictive power as the coefficient of determination (R^2=0.200, R^2Adj=0.197) was significant at 0.001 alpha level. This means that the Financial Decision construct was able to explain about 20% variations in the Financial Well-Being of workers.

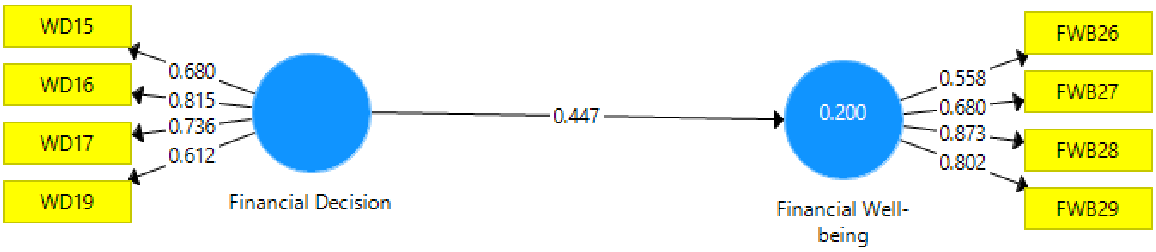

Figure.4.2: Hypothesis Two Structural Equation Model
Source: Field Work, (2020)

V. Discussion

The first hypothesis tested the relationship between financial literacy and financial decision. It was not surprising to identify that financial literacy influences financial decision of the staff. This was because of the supporting position of the extant empirical evidence (Howlett et al, 2008; Janor et al 2016; Mwathi et al, 2017). More so the fact that financial literacy explains about only 8% variations in the financial decisions of UCC staff buttresses the position of the family resource theory as several other factors need to come together to determine the decisions an individual would make. In terms of financial decision, other factors may include one's financial attitude (ie personal characteristics), income level (ie available resources), and others. Consequently, it is recommended that, for UCC staff and workers by large, to improve their financial decisions, they should commit to improving their literacy in finance as it can inform the decision one would take to some extent.

The second hypothesis also revealed that financial decision significantly and positively influenced the financial wellbeing of workers in UCC also affirms the position of the empirical literature. Consistent with this finding, Arafin (2018), as well as Halim and Astuti (2015), also discovered a positive association between financial decisions and financial wellbeing and financial satisfaction. This finding unsurprisingly, supported the claims of the family resource theory that the decisions one has taken, together with other factors would influence the achievement of one's goals (the financial wellbeing of UCC workers). Once again, the fact that financial literacy explains about 20% variation in financial wellbeing suggests that to have utmost financial wellbeing, workers should not only improve financial decisions but other relevant factors.

VI. Conclusion and Implications

The study sought to investigate the roles of financial literacy and financial decision in the attainment of financial wellbeing. The evidence from the study supports the initial stance that financial literacy is not necessarily a straightforward influencer of financial wellbeing. When the right decisions have not been made, financial wellbeing may be difficult to attain despite the level of financial literacy one may have. It is implied from the findings of the study that financial decision seems to play an intermediary role between financial literacy and financial wellbeing.

As such, it is recommended that workers (especially UCC workers) should be determined to acquire financial knowledge that will improve their literacy in finance. This enhanced literacy would contribute to the quality of financial decisions and consequently result in improved financial wellbeing. This study finally suggests that the management of the university should organise training and development programmes that would focus on improving the financial decisions of workers. It can do so in collaboration with the executives of senior and junior staff associations.

VII. Limitation and Suggestion for Future Studies

The study is subjected to some limitations and so must be applied with some considerations. The construct included in the study does not encompass all the constructs proposed in the theory of family resource management. However, this was done to meet the specific focus of this study. Also, the use of staff from only UCC somewhat undermines a national generalisation of the findings but the use of such rigorous statistics such as PLS-SEM provides some validity and reliability for the finding. This finding should be treated as preliminary in other settings until other studies replicate the findings.

Future studies could therefore focus on encompassing all the constructs involved in theory as well as looking beyond only one institution. Different institutions across the public and private sectors could be included to improve the generalisation of the findings.

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