Financial Literacy, Financial Attitude and Financial Well-being of University of Cape Coast Staff During COVID-19 Pandemic

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Abstract
The unprecedented impact of the COVID-19 pandemic on world economies and individuals requires that an investigation be conducted on all facets of life. An important area of concern is financial literacy, financial attitude and financial well-being of individuals which is believed to have altered during the COVID-19 pandemic. Consequently, analyses are performed on university staff who are believed to score high on financial literacy. Therefore, we investigated the relationship between financial literacy and the financial well-being of University Cape Coast staff amid financial attitudes during the COVID-19 pandemic. A well-structured questionnaire was utilised to examine the variables quantitatively and analysed with the aid of the Partial Least Squares Structural Equation Modelling via multiple regression. We reveal that financial attitude has a significant impact on financial well-being. Also, in the presence of financial attitude, the relationship between financial literacy and financial well-being is enhanced. This implies that in times of severe economic shocks, University of Cape Coast staff require a sound financial attitude so that their level of financial literacy can significantly contribute to their financial well-being. We institute that adequate programmes are introduced by interest groups to capture the transformation of their financial attitude to ensure enhanced financial well-being in times of severe economic shocks or crises.
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1. Introduction

The world has witnessed the adverse impact of the COVID-19 pandemic on all facets of life. The pandemic has heightened concerns for major socio-economic and political uncertainties as it directly or indirectly interrupts and hinders all events, activities, and processes about global development (Anand, Mishra, Verma & Taruna, 2021). The impact was even aggravated for developing countries, although developed countries also had their share of this same phenomenon. Most developing countries were not equipped to tackle the unprecedented effect of the pandemic. The unpreparedness of most economies according to Yuesti, Ni and Suryandari (2020) is partly due to lower levels of financial literacy of individuals. Thus, individuals who are less financially literate are mostly prone to immoral formal and informal financial institutions (see, Yuesti, Ni, & Suryandari, 2020; Muñoz-Murillo, Álvarez-Franco & Restrepo-Tobón, 2020) which may minimise their level of livelihood. In this regard, individuals with a low level of financial literacy are susceptible to less ability to take effective and efficient decisions about their finances (Chinen & Endo, 2012).

Financial literacy according to extant literature has a significant impact on financial well-being (see, Joo & Grable, 2004; Adam, Frimpong & Boadu, 2017; Philippas & Avdoulas, 2020). The prior literature that assesses the relationship between financial literacy and financial well-being indicates a positive relationship. This suggests that a high level of financial literacy in individuals improves financial well-being. However, due to the adverse impact of the COVID-19 pandemic, the level of financial literacy of individuals may be distorted. Consequently, the direct contribution of financial literacy towards improving the financial well-being of individuals may not be enhanced.

The concept of financial well-being is a state of being wherein a person can fully meet the current and ongoing obligation, can feel secure in their financial future and can make choices that allow enjoyment in life (OECD, 2018). It comprises four elements: feeling in control of your finances, having the capacity to absorb a financial shock, being on track to achieve financial goals, and having the flexibility to make choices that allow life to be enjoyed (see, Adam, Frimpong & Boadu, 2017). Adam, Frimpong and Boadu (2017) further indicate that people with high levels of financial well-being have the financial freedom to make choices that allow them to enjoy life.

We investigate the influence of financial literacy on financial well-being in the presence of financial attitudes during the COVID-19 pandemic. This is because, as it is established empirically that financial literacy enhances financial well-being, Bhushan and Medury (2014) make it clear that individuals with sound financial attitudes can improve upon their financial literacy level. This is to say, the financial literacy of individuals is properly realised amid a sound financial attitude. Is it always the case that the relationship between financial literacy and financial well-being amidst financial attitude could be heightened even in times of uncertainty? We

seek to address this question in light of the few empirical studies on the aforesaid relationships.

A financial attitude can be defined as a personal inclination towards financial matters. It is the ability to plan and maintain a savings account. Bhushan and Medury (2014) found that to enhance financial literacy among generations, the focus should be on developing favourable financial attitudes among the people of the country. Then only, the real benefits of any financial education programme can be achieved. Ajzen (1991) from the theory of planned behaviour identified that financial attitudes are the outcome of certain behaviour of a decision-maker and the attitude can be entrenched through their economic and non-economic beliefs. Ibrahim and Alqaydi (2013) averred that education can improve personal financial attitudes, thereby reducing dependence on credit cards. Financial attitudes along with financial literacy can also affect financial well-being.

We examine this phenomenon in the context of the University of Cape Coast staff. The University of Cape Coast is a public university in Ghana that was founded in 1962 in response to a critical shortage of highly educated educational personnel. The University of Cape Coast graduates occupy high positions in the state including; Ministers of State, High Commissioners, CEOs, members of Parliaments and the like. This establishes that the University of Cape Coast staff; senior members, senior staff and junior staff contribute greatly to the success of the University. It befits that they need a sound environment and improvement in their financial well-being over time. However, since uncertainty levels intensify at such a pace during shocks and crisis incidents (Packard, Clark, & Klein, 2017) such as the COVID-19 pandemic, the impact of COVID-19 on financial literacy on financial well-being may not be the same across categories of staffs.

The difference in financial literacy level has been found based on demographic variables such as gender, age, income and qualification (Lusardi, Mitchell, & Curto, 2010). Also, a significant gender difference in financial literacy level has been studied by Atkinson and Messy (2012), and Chen and Volpe (1998), where it was found that financial literacy level is generally lower in women than in men. The current study departs from extant literature to include a category of staff as a demographic variable which assumes a substantial characteristic of university staff and is employed in this study as a control variable.

We add up to empirical literature in diverse ways during the COVID-19 pandemic. First, we examine the influence of financial literacy on financial well-being. Second, we determine the impact of Financial Attitude on financial well-being. Third, the moderating role played by financial attitude on the relationship between financial literacy and financial well-being would be assessed. We investigate this phenomenon during the COVID-19 pandemic using the Partial Least Squares Structural Equation Modelling which carefully deals with hidden relationships.

Findings from the study revealed that financial attitude significant impact on financial well-being, but not financial literacy among University of Cape Coast staff. Moreover, in the presence of a well-defined financial attitude, the relationship between financial literacy and financial attitude could be well accentuated.

The following sections provide a brief literature review, methodology and results and discussion. The study ends with conclusions and some implications.

2. Literature Review
2.1. Financial Literacy and Financial well-being
A person's capacity to understand and apply financial matters is referred to as financial literacy (Taft, Hosein, Mehrizi, & Roshan, 2013). Financial literacy, according to Huston (2010), includes awareness, knowledge, and financial instruments, as well as their application in business and personal life. Financial literacy, according to this definition, involves the capacity to balance a bank account, prepare a budget, save for the future, and master debt management skills. A person is said to be financially literate if he or she can manage his or her finances in a changing society, which requires that he or she gain the necessary perception, develop his or her skills in this area, and comprehend the impact of an individual's financial decisions on himself, others, and the environment (Philippas & Avdoulas, 2020). Increased financial knowledge benefits people's personal and professional lives. Financial literacy aids in the reduction of social and psychological pressures as well as the improvement of family welfare in personal life. Financial literacy reduces stress, disease, financial conflicts, child abuse, and family strife (Chu et al. 2017). Higher financial literacy at work leads to increased efficiency and production, as well as a greater understanding of the organization's advantages and improved employee satisfaction (Taft et al., 2013). The most significant benefit of financial literacy education is that it reduces employees' financial issues and encourages them to be responsible for their finances, to improve their overall financial well-being.

The term "well-being" refers to a multi-faceted concept. Individual satisfaction in six areas provides well-being, according to Van Praag et al. (2003): business, finance, home, leisure, health, and the environment. Financial well-being is defined by Adam, Frimpong, and Boadu (2017) as the degree of financial income and assets. Financial well-being is described by Philippas and Avdoulas (2020) as a function of material and spiritual components of one's financial situation, and Chu et al. (2017) defined financial well-being as a person's happiness with his financial situation. Financial well-being, according to Porter (1990), is one's attitude about one's financial situation based on objective factors and judging them against standards.

Financial literacy fosters a positive financial mindset that leads to financial security. Financial literacy and financial well-being have a substantial positive relationship, according to the researchers. According to Joo and Grable (2004), increased financial literacy influences financial happiness, which then leads to financial well-being. In parallel with identifying their university students in Greece, Philippas and Avdoulas (2020) conducted a study to investigate the relationship between financial literacy and financial well-being. Male students, students who keep spending records, and students whose fathers are well-educated are all found to be more financially knowledgeable. They also look at the many aspects of financial fragility, and the findings reveal that financially educated students are better prepared to deal with a financial shock. As a result, financial knowledge among university students can be a crucial driver of financial well-being.

In the sequel to the above, we propose a positive relationship between financial literacy and financial well-being
H1: There is a positive relationship between financial literacy and financial well-being.

2.2. Financial attitude and financial well-being
Financial attitude refers to an individual's ability to manage money, his or her interest in gaining financial information, his or her attitude toward spending versus saving, and his or her willingness to take a risk while investing (Haque & Zulfiqar, 2016). One's financial attitude has an impact on one's financial well-being (Haque & Zulfiqar, 2016).

In their study, Haque and Zulfiqar (2016) identify essential components such as financial literacy, financial attitude, financial well-being, and economic empowerment, and then show how financial literacy, financial attitude, and financial well-being affect economic empowerment. Financial literacy, financial attitude, and financial well-being are all positively and significantly associated with economic empowerment, according to the findings of this study. The greater the level of financial knowledge and a favourable financial attitude among women, the better their financial well-being and, as a result, their empowerment. Finally, the findings demonstrated that financial knowledge, a positive financial attitude, and financial well-being are all required for working women to achieve economic empowerment.

As a consequence of the above, we propose a positive relationship between financial attitude and financial well-being.
H2: There is a positive relationship between financial attitude and financial well-being.

2.3. Moderating the role of financial attitude on the relationship between financial literacy and financial well-being
A blatant body of literature has indicated the positive relationship between financial literacy and financial well-being (Joo & Grable, 2004; Adam, Frimpong & Boadu, 2017; Philippas & Avdoulas, 2020), as well as financial attitude and financial well-being (Haque & Zulfiqar, 2016). However, individuals with high financial literacy may not have sound financial well-being, due to a surge in global household debt as a percentage of disposable income (Alsemgeest, 2015). This indicates that individuals are in a more dire financial position currently than they were before. Also, it is not necessarily the poor that are most indebted as shown in the study of Betti et al. (2007). The question is whether financial literacy supports financial well-being or otherwise, especially in times of severe economic shocks. As provided by Borden et al. (2008), financial literacy commences by introducing education that would enable individuals to become financially literate, which would change financial attitudes and behaviours, to subsequently improve their financial well-being. This becomes a step in examining the contribution of financial literacy to financial well-being in the presence of the financial attitude of the individual. The following hypothesis is therefore formulated.
H3: Financial attitude positively interacts with the relationship between financial literacy and financial well-being.

3. Methodology
3.1. Research design
The study adopts an explanatory research design to examine relationships between the study variables. For this reason, the data is analysed quantitatively to achieve the purpose of the study.

3.2. Population and Sample
The target population for this study include all University of Cape Coast Staff during the time the research was conducted. They are made up of Senior Members, Senior Staff and Junior Staff. Currently, there are about 4,965 University of Cape Coast Staff comprising 978 senior members, 1,444 senior staff and 2,543 junior staff. This targeted population is selected because they belong to diverse income groups, and may contribute to the significant influences as well as differences in COVID-19 impact on the level of their financial literacy and financial well-being amidst financial attitude.

Based on the target population, the sampling frame is determined. The representativeness of the sample determination was guided by Adam's (2020) minimum sample size determination table with a 50% proportion, a margin of error of 5% and an expected non-response rate of 10%. Therefore, using a target population of 4,965 University of Cape Coast Staff, the minimum sample size from Adam's (2020) minimum sample size determination table is 357. We, therefore, chose a little above this minimum sample and arrived at a 371 sample size, and eventually used it for the analysis of the study.

Based on the purpose of the study, the probability sampling technique is deemed appropriate and would be employed for the current study. The appropriate sampling technique to be employed is the proportionate stratified random sampling technique. This sampling technique is best for warranting that most divisions of the population are represented (Iram, Iqbal, Qazi & Saleem, 2021). The sample size would be proportionately allocated to the 3 main divisions of staff. This would be done to ensure equal representation of each subgroup considered for the study. Table 2 depicts a reasonable proportion of the sample size among the categories of staff.

Table 1: Sampling

Category	Population	Sample
Senior Members	978	73
Senior Staff	2444	108
Junior Staff	2543	190
Total	4965	371

The questionnaires were initially pretested with twenty-five (25) staff and changes were made to some of the questions. The final approved questions were administered through the use of a structured questionnaire to the University of Cape Coast staff for one month. The topic of the questionnaire gained the interest of the staff and went viral and received over 400 respondents we carefully extracted the 371 based on their responses while meeting the representativeness of the sample.

3.3. Data and Data Collection:

The study employed a questionnaire consisting of four sections of which the first section elicited demographic indicators such as Gender, Age, income, Religiosity, Education and Category of staff. The financial literacy and financial well-being constructs were measured on an index form. Responses on financial literacy were scored out of 10 points whereas that of financial well-being were ascertained with a maximum score of 100. The financial attitude construct was measured using thirteen (13) items on a five-point Likert scale. The items on the questionnaire were obtained from two main sources. Specifically, financial literacy and financial attitude constructs were obtained from Organization for Economic Cooperation and Development (2018) whereas the financial well-being construct was gleaned from Bureau (2015).

The questionnaires were initially pretested with twenty-five (25) University staff and changes were made to some of the questions. The final approved questions were printed and administered over a period of three months.

3.4. Data Estimation

For this study, the data collected was coded and classified to find out patterns and common issues within the data. After a cursory inspection, the study employed structural equation modelling (SEM) to examine relationships among the research variables. SEM considers the element between each latent construct and observed indicators. SEM is a blend of two statistical methods of factor analysis and path analysis into one broad statistical method (Barrett, 2007; Tuffour, Amoako & Amartey, 2020). Sarwoko, Surachman and Djumilah (2013) explained that SEM consists of two parts; the first measurement relates to the observed variable with the latent variable through confirmatory factor analysis and the structural part establishes the relationship between the latent variables with regression simultaneously. Given the above, a two-stage analysis was performed using the Smart Partial Least Square (PLS) 3.0 software.

4. Results and Discussion
4.1. Preliminary Statistics of Variables
4.1.1. Demographics

Table 2 provides descriptive statistics of demographics for staff of the University of Cape Coast. We present a brief description of six important demographic variables. They include – Gender, Age, income, Religiosity, Education and Category of staff. As provided in Table 2, it can be seen that there are about 33.2% more males than females. Most respondents are between the ages of 31 and 50 years, and a large Christianity-represented sample. The most dominating income level is 1000 and below suggesting that there are more representations by Junior staff due to their high population within the University. However, due to the high intellectual capacity of the University of Cape Coast staff, most staff have either attained higher degrees or have professional qualifications. The outcome of the demography makes it interesting to assess the financial literacy, financial

attitude and financial well-being of the University of Cape Coast staff during the COVID-19 pandemic in light of other demographic influences.

Table 2: Distribution of demographics

Category	Frequency	Percent	Category	Frequency	Percent
Gender			**Age**		
Male	247	66.6	20-30	87	23.5
Female	124	33.4	31-40	144	38.8
Income			41-50	110	29.6
1000 and Below	161	43.4	51-60	30	8.1
1001-2000	54	14.6	**Religiosity**		
2001-3000	52	14.0	Christian	313	84.4
30001-4000	36	9.7	Muslim	55	14.8
Above 4000	68	18.3	Other	3	0.8
Education			**Category of Staff**		
Diploma/HND	43	11.6	Junior Staff	190	51.2
Bachelor	68	18.3	Senior Staff	108	29.1
Postgraduate	106	28.6	Senior Member	73	19.7
Professional qualification	154	41.5			

4.1.2. Constructs

The PLS-SEM outcome begins with an evaluation of the model to determine its fitness by evaluating the reliability of the construct, reliability of the indicator, convergent validity, and validity of discriminants (Nitzl, 2016). Using composite reliability, construction reliability was tested. The findings of Table 3 shows that all constructs have composite reliability (CR) above the 0.7 threshold, an indication that the constructs are robust (Straub, 1989). A cursory glance at the item loadings from Table 3 also suggested that the minimum cut-off of 0.5 for the indicator was accurate (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). The entire indicator loaded above 0.7.

To show convergent validity for a construct, Fornell and Larcker (1981) suggested an extracted minimum average variance (AVE) of 0.5. This is true of all structures of this study; the minimum AVE is 0.5. The variables have a convergent validity as indicated by Hair, Sarstedt, Hopkins, and Kuppelwieser (2014) with AVE above 0.50.

Table 3: Diagnostics of indicators

Variable	Loading	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
FA		0.889	0.909	0.915	0.642
FA1	0.786				
FA2	0.781				
FA4	0.746				
FA5	0.874				
FA6	0.821				
FA7	0.795				
FA*FIN_LIT	0.793	1.000	1.000	1.000	1.000
FIN_LIT	1.000	1.000	1.000	1.000	1.000
FNWB	1.000	1.000	1.000	1.000	1.000
Junior Staff	1.000	1.000	1.000	1.000	1.000
Senior Staff	1.000	1.000	1.000	1.000	1.000

Note: FA, FIN_LIT and FNWB denote Financial Attitude, Financial literacy and Financial Well-being respectively

4.1.3. Discriminant Validity

We present the Fornell-Larcker criterion as a more conservative approach to evaluating discriminant validity in addition to cross-loading in Table 4 (see, Hair, Hult, Ringle & Sarstedt. 2016). The criterion for assessing the discriminant validity according to Fornell-Larcker (1981) is – the square roots of the AVE of each construct should be higher than the correlations of that construct with all other constructs. The outcome offered in Table 5 shows that the figures in boldface are higher than other correlation values among the latent variables. This can be observed from both vertical and horizontal glances. This suggests that the condition for discriminant validity has been accomplished.

Table 4: Fornell-Larcker Criterion

	FA	FA*FIN_LIT	FIN_LIT	FNWB	Junior_S	Senior_Staff
FA	0.801					
FA*FIN_LIT	-0.035	1.000				
FIN_LIT	0.532	0.027	1.000			
FNWB	0.332	0.242	0.254	1.000		
Junior Staff	-0.382	0.025	-0.472	-0.046	1.000	
Senior Staff	0.399	0.057	0.552	0.251	-0.657	1.000

In assessing multicollinearity within the latent variables, we present the outer variance inflation factor (VIF) in Table 5. There is a clear indication that all the outer values achieved a VIF of less than 5 which is considered ideal by Hair et al (2014).

Table 5: Outer VIF Values

Latent Variables	VIF
FA1	1.959
FA2	2.015
FA4	2.019
FA5	2.906
FA6	2.460
FA7	2.102
FIN_LIT	1.000
FIN_LIT * FA	1.000
FNWB	1.000
Junior Staff	1.000
Senior Staff	1.000

Having satisfied the situations of construct and indicator reliability as well as the convergent and discriminant validity, the research hypotheses are tested. This task was fulfilled by evaluating the direction and strength using the coefficient (β), p-values depicting the level of significance through 5000 bootstraps, a measure of multicollinearity among the constructs using VIF, coefficient of determination (adjusted R-Squared), and effect size ($f2$). As posited by Hair et al (2014), "collinearity diagnostic is first examined to ensure that the path coefficients are free from bias and reduce significant levels of collinearity among the predictor constructs".

The outcomes of the VIF from Table 6 show that the paths are devoid of multicollinearity with a maximum VIF of 2.052, which is below the threshold of 5 as suggested by Hair et al (2014). From Table 6, the predictor variables; financial attitude, the moderating role of FA between FinLit and FWB, FinLit and the two control dummy variables (Junior staff and Senior staff) explain about 21% of the variations in financial well-being and are considered to be very weak by Cohen (1988). All the variables considered for this study are statistically significant as per the t-statistic (*p*-values), except financial literacy. The effect size measure presented in Table 6 shows that FA ($f2 = 0.081$), the moderating role of FA between FinLit and FWB ($f2 = 0.067$), FinLit ($f2 = 0.004$), Junior staff ($f2 = 0.047$) and Senior staff ($f2 = 0.039$) all have a small effect, as per Cohen's f^2.

Table 6: Summary of results and diagnostics

Variables	Parameters	Std. Error	T-values (*sig*)	$Adj.R^2$	f^2	VIF
FA	0.301	0.050	5.992(0.000)	0.214	0.081	1.449
FA*FIN_LIT	0.290	0.060	4.863(0.000)	0.214	0.067	1.014
FIN_LIT	0.074	0.070	1.064(0.288)	0.214	0.004	1.749
Junior Staff	0.261	0.070	3.704(0.000)	0.214	0.047	1.848
Senior Staff	0.248	0.091	2.719(0.007)	0.214	0.039	2.052

4.2. Main Results

Figure 1 provides a detailed relationship between the study's constructs to execute the research objectives. Specifically, it assesses the influence of financial literacy and financial attitude on financial well-being in times of the COVID-19 pandemic. Due to the possible influence of demographic features on financial well-being, we

control for categories of staff which is an important indicator for assessing the staff of University of Cape Coast. The categories of staff at the University of Cape Coast include – Senior members, Senior staff and Junior staff. To avoid the dummy variable trap, we present the impact of Junior and Senior staff on financial well-being. The senior members' category was finally expunged from the analysis due to its insignificant impact within the model and constitutes the smallest portion of the University of Cape Coast staff.

From Figure 1, it can be seen that financial attitude has a positive significant impact on financial well-being, but financial literacy. Thus, the relationship between financial attitudes is supported by a positive and significant path coefficient (β=0.301, *p-value* < 0.01). Also, financial attitude moderates the relationship between financial literacy and financial well-being. This suggests that in the presence of a sound financial attitude in times of crisis, the relationship between financial literacy and financial well-being can be enhanced. The category of staff utilised in this study – Senior staff and Junior staff, also have a significant positive impact on financial well-being during the COVID-19 pandemic. This implies that during the COVID-19 pandemic, the financial well-being of individuals responds positively to the level of financial attitude, and being either senior staff or junior staff.

Findings obtained from this study contradict those of Joo and Grable (2004), Adam, Frimpong and Boadu (2017), and Philippas and Avdoulas (2020) who found a significant positive relationship between financial literacy and financial well-being. This is due to the unpreparedness of most economies and individuals during the COVID-19 pandemic (Yuesti, Ni & Suryandari, 2020), with individuals facing lower levels of financial literacy. Thus, individuals who are less financially literate are mostly prone to immoral formal and informal financial institutions (see, Yuesti, Ni, & Suryandari, 2020; Muñoz-Murillo, Álvarez-Franco & Restrepo-Tobón, 2020) which may not significantly contribute to their level of livelihood. In this regard, individuals with a low level of financial literacy are susceptible to less ability to take effective and efficient decisions about their finances. However, when individuals can develop a sound financial attitude, they are likely to increase their financial well-being which is in line with the study of Haque and Zulfiqar (2016). The study provides that due to the unpreparedness of most individuals during the COVID-19 pandemic, the level of financial literacy was not enough to contribute to financial well-being. Nonetheless, in the presence of financial attitude, the relationship between financial literacy and well-being was realized, partly highlighting the finding of Bhushan and Medury (2014).
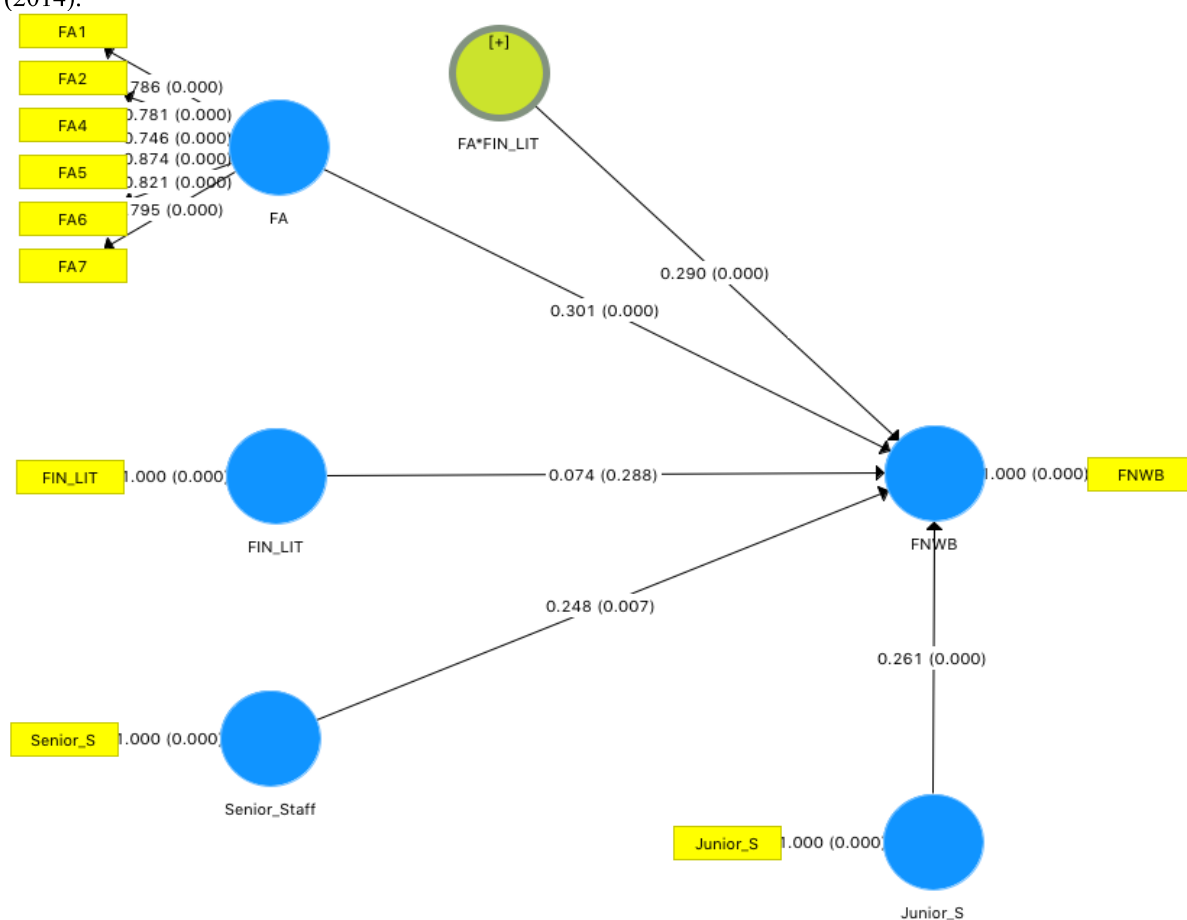

Figure 1: Path Coefficients and Significance

5. Conclusion

We investigated the relationship between financial literacy and the financial well-being of University Cape Coast staff amid financial attitudes during the COVID-19 pandemic. A well-structured questionnaire was utilised to examine the variables quantitatively and analysed with the aid of PLS-SEM. We contributed to literature in many ways. First, we examined the influence of financial literacy on financial well-being. Second, we determined the impact of financial attitude on financial well-being. Third, the moderating role played by financial attitude on the relationship between financial literacy and financial well-being was assessed.

We revealed that financial attitude has a significant impact on financial well-being. Also, in the presence of financial attitude, the relationship between financial literacy and financial well-being can be enhanced. This implies that in times of severe economic shocks, University of Cape Coast staff require a sound financial attitude so that their level of financial literacy can significantly contribute to their financial well-being. In other words, during the COVID-19 pandemic, the level of financial literacy of the University of Cape Coast staff was high but contributed insignificantly to improving their financial well-being. However, individuals who can develop their financial attitude are most likely to improve their financial well-being. We recommend that adequate programmes should be introduced by interest groups to capture the transformation of staff's financial attitude to augment the contribution of financial literacy to financial well-being in times of severe economic shocks or crises.

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