Information Systems and Economics (2024)
Clausius Scientific Press, Canada

DOI: 10.23977/infse.2024.050306
ISSN 2523-6407 Vol. 5 Num. 3

Factors Affecting Online Financial Management Ability among College Students in Guangzhou

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Keywords: Online financial management ability, College students, Data analysis

Abstract: The objective of this study is to explore the development of financial management skills among college students in the field of Internet technology by examining their online financial management abilities. Drawing from a holistic viewpoint encompassing financial management, finance, pedagogy, statistics, and related fields, it is imperative for college students to possess a range of online financial management competencies. These competencies should encompass an understanding of online financial management principles, ethical considerations in online financial practices, knowledge of online financial management concepts, and the ability to effectively execute online financial transactions. Additionally, the implementation of a comprehensive financial risk management system across the entire network is crucial. The author administered a questionnaire survey at multiple colleges and universities in Conghua District, Guangdong Province. The survey was designed based on several theoretical frameworks, including Cognitive Learning Theory (CLT), Perceived Risk Theory, Financial Management Theory, Quality Development Theory, and Platform Economic Theory. The survey items inside the questionnaire, together with their corresponding scores, are organized and assessed. The data illustrates the present condition of college students' proficiency in online financial management concepts, ethical considerations, knowledge, execution capabilities, and risk control pertaining to online financial management.

1. Introduction

In the contemporary day, the pervasive dissemination of the Internet has rendered it imperative for college students to possess online financial management capabilities in order to thrive and succeed as a distinct cohort engaged in financial management. In contrast to conventional methods of financial management, the utilization of online financial management tools by college students exhibits contemporary attributes including transparency, equilibrium between consumption, savings, and income, accumulation of experiential knowledge, and the ability to distinguish between various financial strategies. The proficiency in online financial management skills has a significant impact on the everyday life and academic performance of college students. Furthermore, it is closely associated with the psychological well-being and personal development of college students. Additionally, the level of online financial management skill is linked to the overall competence and effectiveness of college students. The college years present a fantastic opportunity for engaging in the study of online financial management, thereby facilitating a crucial period for the acquisition of online financial education. Researchers have shifted their focus towards strategies for enhancing college students' online money management skills and financial literacy.

Financial management is a broad economic behaviour that requires financial planners to understand accounting, finance, consumer science, psychology, law, and computer science, as well as decision-making, execution, analysis, and management abilities(Zhai Huimin,2021)*[1]*. As a result, college students who participate in online financial management activities can broaden their financial knowledge and improve their financial management skills. The process also entails constantly improving the general quality and talents of college students. China's institutions, parents, and society still have a lot of work to do in building college students' online financial management capabilities, and there is plenty of room for improvement.

The ability to manage money in a network is a concentrated manifestation of a person's financial management ability as well as a focused reflection of that person's economic viability. College students, as a distinct financial management group, are unable to live and develop if they do not have the ability to manage their financial resources through networks, owing to the rapid expansion of the Internet today. When compared to traditional financial management systems, college students' online financial management has current characteristics such as openness, a balance between consumption and savings and revenue, experience accumulation, and differentiating oneself(Fan Qunpeng,2020)*[2]*.

The research issue of this study pertains to the online financial management ability, specifically focusing on the investigation of the development of financial management skills among college students within the context of the Internet. Drawing from a holistic viewpoint encompassing financial management, finance, pedagogy, statistics, and related fields, it is imperative for college students to possess a range of online financial management competencies. These competencies encompass a firm grasp of online financial management principles, a strong ethical foundation in online financial practices, a comprehensive understanding of online financial management concepts, and the ability to effectively execute online financial strategies. Additionally, the implementation of a comprehensive financial risk management system across the entire network is crucial. The author performed a questionnaire survey in Conghua District, Guangdong Province, at various colleges and institutions, as described in the "Questionnaire on the Status Quo of College Students' Online Financial Management Ability." The survey items inside the questionnaire, together with their corresponding scores for each question, are organized and assessed. The data illustrates the present condition of college students' proficiency in online financial management concepts, ethics, knowledge, execution power, and risk control.

2. Literature review

The theories utilized in this study are Cognitive Learning Theory (CLT), Perceived Risk Theory, Financial Management Theory, Quality Development Theory, and Platform Economic Theory.

According to the theory of platform economics, a platform refers to a tangible or intangible environment that enables customers to engage in transactions. Economic entities that offer such trading platforms generate revenue by attracting customers to utilize their platform for transaction purposes and derive financial gains from this activity. The concept of the long tail serves as a foundational principle for the notion of the platform economy. Online financial platforms that utilize network technology have minimal marginal costs and significant marginal advantages when compared to conventional financial management platforms. According to Zhou Junrong (2020)*[3]*, online financial management possesses a trait that allows it to cater to the long-tail market of traditional financial management.

In this study, college students' online financial management behavior essentially reflects the content of many economists' financial innovation theories. Detailed explanation is as follows: First, various P2P platforms provide financial products for college students to participate in financial management. This is to seek financial companies' best interests and actively promote financial products and make these products reach the demand side of college students, which reflects Silber's theory of constraint-induced financial innovation. Second, in order to survive or maximize profits, some P2P platforms skirt around some reasonable legal requirements and entice college students to participate in them through false propaganda or enticing advertisements. Kane's evasive financial innovation theory states that the "system" engages in financial management behavior that exceeds its own prevention and control capabilities. Furthermore, when college students are managing their finances, if they notice that the actual influencing factors are about to change, they will act in their own best interests and make some reasonable and sensible decisions. This is in accordance with the rational expectations theory proposed by economists John Muth and Lucas. Finally, participation in financial management by college students is essentially the main demand for the appreciation and preservation of existing funds, which is a concrete manifestation of Green and Heywood's wealth growth theory. Many financial innovation theories are embodied in college students' online financial management in this research.

3. Data collection and processing

There are fundamental distinctions between secondary and primary data in terms of their value, the type of the data, the process of data collecting, the source of the data, the associated costs, the time required for collection, and the availability of the data. Primary data is defined as the collection of information that is obtained firsthand by the researcher, without any intermediaries or prior utilization. Data is gathered by a diverse range of procedures, encompassing surveys, observations, experiments, questionnaires, and personal interviews, among other techniques. In contrast to secondary data, which has been previously acquired by another individual or entity, primary data refers to information that is collected firsthand by the researcher. These resources are frequently encountered in a wide variety of publications, databases curated by organizations, books, scholarly journals, and comparable sources. Secondary data collection is a method that offers cost-effectiveness and time efficiency. The acquisition of secondary data generally incurs cheaper expenses in comparison to the costs connected with primary data collecting, albeit necessitating a purchase (Boslaugh, 2007).

The categorization of data gathering methods is commonly divided into two basic categories: qualitative and quantitative. Quantitative approaches pertain to the examination and statistical analysis of numerical data, while qualitative methods center on intangible variables that lack quantifiable or statistical analysis (Sekeran and Bougie, 2013; Kumar et al., 2013). This study utilized an easy sampling technique in terms of sampling methods.

The content design of this survey questionnaire emphasizes several key areas, namely: baseline situation, financial idea, financial ethics, financial knowledge, financial execution, financial risk control, and online financial management competence. The fundamental data encompasses the gender of the students and their academic performance.

Sampling is an indispensable procedure that is crucial for maximizing the accuracy and comprehensiveness of research data collection. Hence, it is imperative to accurately delineate the target population of a research endeavor. The term "population" denotes the complete assemblage of individuals, occurrences, or entities that are the focus of investigation by the researcher (Sekaran & Bougie, 2016). The selection of an appropriate population for study is crucial as it influences the accuracy of the samples and enables the accurate extrapolation of research findings in accordance with the research questions (Awang & Ariffin, 2012).

Sampling refers to the systematic procedure of selecting a subset from a larger population, as stated by Kothari and Gav (2014). The selection of a sampling method can be categorized as either a probability or a non-probability approach, contingent upon factors such as the extent of generalization desired for the population, the specific objectives of the study, the time constraints, or the researcher's personal interests (Kumar et al., 2013). According to Alvi (2016), non-random sampling methods encompass simple, systematic, stratified, clustered, and multistage techniques. Similarly, random sampling methods include simple, systematic, stratified, clustered, and multistage approaches. The sample for this study comprises college students residing in the GZ Conghua district.

According to the 2020 report from the GZ Bureau of Statistics, the projected total population of college students in the Conghua district of GZ is approximately 98,000. This figure signifies a substantial sample size. Based on the findings of Krejcie and Morgan (1970), a minimum sample size of 385 is recommended for conducting the survey. The error margin is set at 5% with a confidence level of 95%.

4. Measurement model analysis

4.1 Reliability Analysis and Convergent Validity

The present study used markers such as Cronbach's Alpha and composite validity (Composite Reliability) as primary tools to analyze the internal reliability of the questionnaire. These markers are used to evaluate the level of consistency of the research variables across each measurement item. The Cronbach's coefficient is an appropriate measure for survey research that employs a Likert scale design. The values within the range are limited to a lower limitation of 0 and an upper bound of 1, while the coefficient exhibits a positive association with the reliability of the scale. A higher score of Cronbach's Alpha is suggestive of enhanced research reliability. The scale that has been developed has a heightened degree of reliability.

The present study aimed to assess the dependability of internal consistency and composite reliability. The present study effectively incorporates existing knowledge and seamlessly carries out further inspection and analysis (Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M., 2017)*[4]*. The criteria used to evaluate the satisfactory convergence of the latent variables developed in this study are an average variance extracted (AVE) greater than 0.5 and a composite reliability (CR) exceeding 0.7. The reliability and validity of the scale were evaluated by employing the statistical program SMARTPLS3.0. The findings of the study revealed that the Cronbach's alpha coefficient and the composite reliability coefficient for each variable surpassed the threshold of 0.8, as presented in Table 1. The results of this investigation indicate that the scale suggested herein exhibits robust reliability and validity. Previous investigations have mentioned the works of Bagozzi and Yi (1988) as well as Nunnally and Bernstein (1978).

Table 1: Construct Reliability and Validity

Variable	Cronbach's Alpha	Convergent Reliability	Average Variance Extracted (AVE)
FC	0.890	0.912	0.565
FEA	0.845	0.889	0.616
FK	0.920	0.933	0.581
FRC	0.839	0.886	0.608
Fe	0.864	0.902	0.648
OFMA	0.898	0.925	0.711

4.2 Discriminant Validity

The Fornell-Larcker criterion is a suitable method for evaluating the discriminant validity of the measurement model. The findings are displayed in Table 2. The Fornell-Larcker criterion is utilized in order to calculate the discriminant effect through the computation of the square root of the average extraction variance (AVE) and the assessment of the correlation coefficient between latent variables. When the square root of the average variance extracted (AVE) is more than the correlation coefficient between the latent variables, particularly when the diagonal value is larger than the off-diagonal value, it indicates a significant correlation among the latent variables in the measurement model. Based on the data provided in Table 2, it is evident that the square root of the average variance extracted (AVE) for each variable exceeds the correlation coefficient between variables. This discovery suggests that each variable has discriminant validity. The study model was subjected to a confirmatory factor analysis using the Smart PLS 3.0 software.

Table 2: Fornell-Larcker Criterion

	FC	FE_A	FK	FRC	Fe	OFMA
FC	**0.752**					
FE_A	0.431	**0.785**				
FK	0.419	0.426	**0.762**			
FRC	0.456	0.430	0.341	**0.780**		
Fe	0.398	0.416	0.359	0.369	**0.805**	
OFMA	0.388	0.480	0.377	0.436	0.411	**0.843**

5. Structural model analysis

5.1 Direct path analysis

The present study employs the SmartPLS3.0 statistical analysis software to analyze the given data. The partial least squares method (PLS) is utilized for testing purposes. The partial least squares (PLS) approach is classified as a technique within the field of multivariate statistical data analysis. The algorithm seeks to identify the optimal function that closely aligns with a given data set by reducing the squared error. Additionally, it has the capability to conduct regression analysis involving many independent variables and multiple dependent variables. In Partial Least Squares (PLS) analysis, the evaluation of the structural model Please provide the path coefficient estimates and the values for R^2. The path coefficient is a measure that indicates the strength and direction of the relationship between latent variables. The R^2 value quantifies the extent to which exogenous latent variables in the structural model can account for the variation in endogenous latent variables. Additionally, it serves as an indicator of the model's ability to explain the observed data.

In this chapter, a theoretical model is developed to examine and validate the suggested model and assumptions of this study. To conduct the analysis, the study use the visualized Smart PLS 3.0 software for Partial Least Squares (PLS) analysis (Im & Rai, 2008). Additionally, the study utilizes the Bootstrapping =5000 sampling method to calculate the route in the constructed model.

5.2 Moderator analysis

A moderator analysis was performed in order to evaluate potential alterations in the association between exogenous and endogenous variables. The development of a moderator hypothesis that specifically elucidates the anticipated outcomes of interaction conditions is crucial, as opposed to a more generic hypothesis, as highlighted by Ramayah et al. (2018)*[5]*.

The results presented in Table 3 demonstrate a statistically significant link between Fe*grades and OFMA, as indicated by a beta coefficient of 0.174 and a p-value less than 0.05. This finding suggests that academic performance is a significant factor in moderating the relationship between Fe and OFMA, hence providing support for the previously proposed concept.

The results of the regression analysis indicate that there is a statistically significant link between the variable FC*grades and OFMA ($\beta=0.212$, $p<0.05$). The aforementioned discovery implies that grades have a significant influence on the regulation of the link between FC and OFMA, hence providing support for the previously posited idea.

The statistical study conducted on the correlation between FE_A grades and OFMA ($\beta=0.056$, $p>0.05$) indicates that there is not a statistically significant positive impact. This suggests that there is no evidence to support the notion that grades have a positive regulatory impact between FE_A and OFMA, hence undermining the premise of such an effect.

The findings derived from the statistical analysis suggest that there exists a significant positive impact of the variable "grades" on the association between "FK" and "OFMA". The obtained beta coefficient ($\beta=0.072$) indicates the presence of a positive regulatory effect. Furthermore, the obtained p-value ($p<0.05$) provides evidence of statistical significance for this observed effect. Thus, the hypothesis pertaining to the association between these variables is corroborated.

The examination of the association between FRC (Factor of Relational Capacity) and OFMA (Overall Financial Management Ability), as demonstrated by the regression model FRC*grades -> OFMA ($\beta=0.055$, $p<0.05$), demonstrates a statistically significant and favorable impact. This discovery indicates that grades exert a regulatory influence on the association between FRC and OFMA, hence providing support for the idea.

Table 3: The Moderating Effect Of Grades

Path	β	STDEV	T	p
Fe*grades -> OFMA	0.174	0.032	5.422	0.000
FC*grades -> OFMA	0.212	0.037	5.790	0.000
FE_A*grades -> OFMA	0.056	0.033	1.678	0.093
FK*grades -> OFMA	0.072	0.031	2.319	0.020
FRC*grades-> OFMA	0.055	0.031	1.756	0.079

6. Discussion

6.1 Theoretical Implication

The objective of this study is to conduct a complete examination and in-depth analysis of the online financial management proficiency among college students, along with the various elements that impact it. The aim of this study is to make a valuable contribution to the current body of research in this particular sector, with the ultimate goal of fostering the development and improvement of online financial management skills among college students. The scholarly literature has thoroughly examined the emergence of Internet finance and its effects on traditional personal online financial management. This research has been conducted considering many historical and practical factors. A wide range of study methods have been utilized, leading to the emergence of several theoretical frameworks. However, the current study conducted in China regarding the online financial management capabilities of college students, namely in the realm of online financial management, is rather scarce in terms of quantity and need improvement in terms of quality. The existing body of scholarly research pertaining to the advancement of online financial management skills primarily concentrates on elementary schools, middle schools, and adults. However, there is a noticeable lack of emphasis on the growth of online financial management capabilities specifically tailored for college students.Many scholars frequently do study that only scratches the surface when examining the significance, worth, and strategies for addressing college students' online financial management skills, without thoroughly exploring the underlying framework of such abilities. The exploration of the notable distinctions between online financial management and traditional financial management is a topic that has received limited attention, and there is a lack of comprehensive research on the factors that impact college students' capacity to effectively manage their finances through online platforms.

Therefore, the researcher has chosen "Online Financial Management Ability" as the central focus of inquiry. This supplement becomes advantageous in augmenting prior research endeavour, hence enhancing the scope of investigation within the domain of online financial management. Furthermore, it contributes to the enrichment of fundamental knowledge and theoretical frameworks pertaining to online financial management.The objective of this study is to investigate the progress of college students' online money management abilities inside the framework of the Internet. In order to accomplish this objective, a particular path analysis methodology has been utilized, which incorporates five distinct variables: Financial idea, financial ethics, Financial knowledge, Financial execution, and Financial risk control. This study aims to examine and analyse the various characteristics and factors that influence college students' engagement in online finance. By doing so, it seeks to gain a comprehensive understanding of the current state and impact of college students' involvement in online finance. Building upon this understanding, the study aims to propose practical recommendations and insights that can contribute to the positive development of college students as well as the advancement of online finance. The maintenance of colleges and universities and societal stability is significantly influenced by the promotion of healthy development.Furthermore, grades have been incorporated as a moderating variable. This study is centred on college students who are now live in Conghua District, located in Guangzhou City, within the province of Guangdong. The chosen research methodology involves the administration of a questionnaire survey, which is intended to enhance the credibility and reliability of the gathered data. The comprehensive examination of college students' online financial management proficiency encompasses the application of several theories derived from the domains of online financial management, finance, pedagogy, sociology, and statistics. The incorporation of a multidisciplinary approach in research has been identified as advantageous in improving the effectiveness of interventions designed to enhance the online financial management skills of college students. This study possesses the capacity to augment empirical research within the discipline and provide a vital contribution towards comprehending the influence of online financial development on the welfare of university students. The objective of this study is to present empirical evidence that supports the aforementioned link.

6.2 Practical Implications

This study aims to contribute to the progress and enhancement of college students' proficiency in managing their finances online. The research results have noteworthy practical significance for the relevant parties.

Based on the results, a positive association has been observed between financial concepts and the proficiency of college students in online financial management. Through participation in online education on financial management concepts, students are afforded the chance to cultivate a robust psychological framework encompassing various aspects such as independent financial management, rational financial management, scientific financial management, moderate financial management, risk control, and the pursuit of rational earnings. This facilitates their ability to gain a precise comprehension of online financial management.

Based on the results, a significant association has been observed between financial ethics and the aptitude to effectively handle online financial management among college students. Through the cultivation of ethical practices in the realm of online financial management, students have the opportunity to gain the essential skills required to appreciate the complex interrelationships among various concepts, including philanthropy, reaping benefits, work, self-reliance, and other associated facets. It is advisable to refrain from seeking personal fulfillment and embracing mistaken moral convictions, instead placing emphasis on developing values such as diligence, smart financial habits, self-reliance, a strong sense of responsibility, and a dedication to integrity.

A positive association has been observed between the level of financial understanding and the skill in managing money online among college students. Various forms of online financial management can be observed, such as online consumption and online investing, each characterized by distinct characteristics and related financial requirements. By enrolling in Internet-based financial management courses provided by educational institutions, college students can develop a comprehensive comprehension and expertise in the unique characteristics of diverse financial management products. This educational endeavour facilitates the acquisition of information in the field of online financial management, helping students to make well-informed judgement when choosing appropriate financial management instruments that align with their specific circumstances. As a result, this procedure enables the cultivation of responsible online financial management practices among college students.

A positive association has been shown between financial performance and the level of competence in online financial management among college students. In the context of online financial management allocation, it is advisable to include personal daily consumption and learning consumption as strategies to fulfill routine consumption requirements. The successful implementation of this integration necessitates the incorporation of online financial management information, expertise, and skills, with an evaluation of risk preference and risk tolerance. Through the implementation of moderate investment strategies, individuals have the potential to significantly augment their comprehension and expertise in the realm of online financial management. The concept of investing in experiential activities and acknowledging the value appreciation of assets is supported. A positive link has been established between the ability to manage financial risk and the proficiency in online financial management among college students. Given the complex and captivating nature of the financial environment, it is crucial for college students to augment their competence in the realm of online financial risk management. This requires individuals to keep a calm and focused mindset, carefully choose appropriate financial management tools, and strategically diversify their financial assets. The notion of financial risk involves a range of principles, including the practise of adhering to a budget, engaging in diversification of financial assets, implementing effective online financial management strategies for portfolios, and undertaking measures to mitigate risk.

The field of financial innovation is currently experiencing substantial expansion and advancement from a market perspective. It is expected that in the foreseeable future, there would be an increase in competition, resulting in an inevitable pattern of market segmentation. It is anticipated that there would be an increase in the availability of internet-based financial wealth management products designed to cater to various demographic groups. Without a doubt, the group of individuals enrolled in higher education institutions represents a significant population that deserves the attention and concentration of financial organizations.

In recent years, there has been a notable expansion in the field of Internet-based financial management. Nevertheless, it is important to acknowledge that the market for Internet-based financial management services specifically designed for college students is currently in its early developmental phase. The presence of the current gap not only indicates a delay in the market, but also implies the existence of several prospective chances. College students have a crucial and influential role in setting the trajectory of future economic and social advancements. The continuous advancement of internet financial products and services should be customized to meet the unique needs of college students, while also considering the different attributes of this population in the current day. Therefore, we need to contribute to the advancement and facilitation of substantial growth and positive development in the field of online finance.

The main aim of this study is to improve the overall comprehension and awareness among educational institutions, families, and society as a whole on the issue of college students' competence in online financial management. The main objective of this program is to enhance the current state of online financial management within the college student population. The objective is to facilitate the comprehensive development of individuals, foster their inclusion in the economic domain, empower them in making informed life decisions, and expedite the enhancement of their proficiency in online financial management. The rapid pace of innovation in the field of reform yields novel and distinctive concepts and methodologies aimed at enhancing the online financial management capabilities of college students. Moreover, it makes substantial contributions to the advancement and evolution of digital financial goods, hence shedding insight on emerging market patterns.

7. Conclusion

This study provides a thorough examination of the level of online financial management skills among college students residing in the GZ Conghua district. This study investigates five primary attributes, namely financial concept, financial ethics, financial knowledge, financial execution, and financial risk control. Moreover, this research further examines the moderating influence of academic grades. The primary objective of this study is to examine and analyse the inherent patterns in the development of college students' online financial management skills. Engaging in such activities will provide a valuable contribution to the diversification of study subjects in the domain of financial management, foster a more comprehensive comprehension of the research field, and strengthen the fundamental knowledge and theoretical framework of online financial management.

Moreover, this study aligns with the prevailing trajectory in China that emphasizes the promotion of extensive innovation and entrepreneurship, with significant efforts to promote structural shifts on the supply side. The acquisition of proficient online financial management skills by college students is a crucial competency that offers significant support and facilitation for their entrepreneurial and inventive endeavors. Furthermore, it expedites the rate of innovation in the realm of educational reform pertaining to enhancing the online financial management proficiencies of university students. Furthermore, this study offers novel concepts and approaches for higher education establishments to effectively develop their online financial management competencies. The active engagement of college students within online financial market communities plays a crucial role in promoting the growth and advancement of digital financial products. Additionally, it serves as a valuable tool for creating ideas and providing references.

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