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IMPACTS OF FINANCIAL MANAGEMENT ON INNOVATION AND EFFICIENCY OF HIGHER EDUCATION IN VIETNAM

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ABSTRACT

Facing the requirements of existence and development, Vietnamese universities have applied many strategic policies, including innovating financial management to attract different financial resources. There is still a lack of quantitative studies examining the role of financial management in the innovation and performance of higher education, and so the objective of this study is to explore the relationship between financial management on innovation and the implementation of higher education in this country. This study was conducted through a cross-sectional survey using a purposive sampling technique (n=200). The structural equation modeling technique is applied to test the research hypotheses. Research results show that the factors of financial management include organization liquidity, ability to control the finances; the financial literacy of employees has a positive and significant relationship with innovation in financial management. The innovation in financial management factor has a positive and significant relationship with innovation in higher education. Still, there is no evidence of the impact of innovation in higher education on higher education performance. The results of this study imply that higher education policymakers in Vietnam need to revise the financial policy of higher education.

INTRODUCTION

Since the Vietnamese Government approved the development of a private university system in 1988 until now, the number of universities has been increasing day by day. By 2021, Vietnam will have 237 universities, including 172 public universities, 60 private universities, and five universities with 100% foreign ownership. The competition for resources between public and private universities is fierce in response to the current requirement to improve the quality of higher education in Vietnam (Hung & Dung, 2020). Facing the needs

for existence and development, universities in Vietnam are applying many strategic policies, including attracting financial resources (Tan & Hoa, 2018). Finance is an essential resource to promote the development of education, including higher education. Financial management in universities plays a vital role in affecting the quality of higher education, staff salaries, and university competitiveness. In Vietnam, to improve the quality of higher education, the Government of Vietnam has passed Resolution 77/NQ-CP on autonomous universities. (Government of Vietnam, 2014). Law on Higher Education Amended and Supplemented in 2018 (Vietnam National Assembly, 2018) and Decree No99/2019/ND-CP (Vietnamese Government, 2019) have enhanced autonomy for universities, including financial management. It has led to the implementation of a financial management mechanism that has helped schools manage and use the state budget economically and effectively actively; increase non-budget revenue through diversification of non-business activities, joint ventures, and associates (Nguyen Thi Thuy, 2021).

The quality of financial management in higher education in Vietnam has changed markedly, but it has not been effective. In which the attention is on public universities, which are invested by the government in initial facilities, but most of which have reached the point of deterioration, needed renovation, repair, or new investment, and need a lot of financial resources (Pham Xuan Quy, 2020). Financial management is one of the aspects of university autonomy including revenue sources, operating costs, strategic planning, resource allocation, and financial management (Bui Quang Hung et al., 2021).

Against an increasingly fair higher education, competition has given universities greater autonomy. With the constant expansion of investment in education, the financial departments of the universities face a risk between financial risk and financial management, excessive lending accounts, and more. Pose an essential obstacle to optimal resource replenishment and degrade the efficiency of financial regulators (Dan Xia & Guo -Liang Du, 2019). However, many studies show that, despite the improvements in recent years, the Vietnamese education system still has many shortcomings and deviates from becoming a well-educated human resource system. Competitive ability. If not fixed system education, you cannot participate in global competition. The current year's source of noise for the education system does not mean improving the quality of education (Pham Xuan Quy, 2020). How to effectively examine risk in key co-management that leverages the financial management power of universities is a recipe for the changing requirements of higher education in Vietnam (Hung & Dung). 2020). Changing management resources of universities is an important content of universities. It is also solid security for the regular operation of universities (Dan Xia & Guo-Liang Du, 2019), which plays a critical role in building new capacities of enterprises. Financial management components for a recent change, three parts: payment, control, and financial literacy, have significant explanatory implications for new evolution (Illmeyer et al., 2017).

Financial management has a significant role in the innovation and quality improvement of higher education. It manifests itself in many aspects, such as the ability to independently make decisions about loans in financial markets,

decide how to generate revenue such as tuition fees, teaching contracts, research contracts, and other activities that create different sources of income. Therefore, the university has the authority to allocate financial resources, have a compensation policy, and retain profits (Jongbloed, 2000). Innovation in financial management makes more flexible through budget structure, freedom to change revenue structure, right to maintain and control other income, self-determination spending, having its surplus distribution mechanism, deciding on salary and equipment procurement for the organization (Kohtamäki, 2009).

In the context of the decisive innovation of higher education in Vietnam today, there is undoubtedly an impact on financial management because university finance is an essential component of higher education. The financial management of universities also has more standardized and standardized institutional guarantees. The financial management of universities also needs to keep up with the times, the constant changes in economic development, and the form of the state to adjust promptly, update, and improve the systems. The management system is suitable for the characteristics of the university, ensuring the consistency of the internal control system among different departments and units of the university (Dan Xia & Guo-Liang Du, 2019). Quantitative studies on the financial role of higher education in Vietnam are still lacking. Therefore the objective of this study is to examine the impact of financial management on innovation and quality improvement of higher education in Vietnam to fill in the theoretical gaps and add to the evidence of previous research. The results of this study are the basis for educational policymakers and educational managers to adjust financial management policies for Vietnam universities in the future.

LITERATURE REVIEWS

Financial Management in Higher Education

In the competitive higher education market, the financial management pressures associated with innovation have become an important factor for the survival and development of higher education. Financial management in this regard is playing an important role in enhancing the innovation capacity of organizations, including universities (Illmeyer et al., 2017). For the innovation process to go smoothly, the basic but most important aspect is adequate financial control, in terms of financial planning, and terms of liquidity management as well (Kozubikova, Homolka, & Kristalas, 2017; Belas & Sopkova, 2016; Kljucnikov, KozuWkova, & Sopkova, 2017). Management innovation as the most important factor has become potentially important in an integrated way with financial management if the university intends to become a leading institution even in a competitive market increasing (Hausman, & Johnston, 2014; Schrage, 2013; Lauzikas et al., 2017). This requires the financial management of universities to develop in a more scientific, standardized, and effective direction (Liang, 2019). However, in many developing countries, the financial management of universities still has many shortcomings, universities rely heavily on internal rather than external sources of income. As a result, universities face great financial difficulties to support their activities, that is, income from scientific research activities, weak teaching activities, anomalies of government aid, and weakness in investment strategy (Liang & Lulu, 2019).

The weak financial flows in the higher education system are government, local communities, and households (Akinkugbe, 2000). The irrationality in financial management requires households to compensate, learners require a compromise on the quality of education (Kanaan et al., 2011).

Studies show that today's universities are often more concerned with revenue and profit margins than keeping financial and liquidity goals as primary goals (Upadhaya, Munir, & Blount, 2014; Frame & White, 2014). The increasingly competitive market requires organizations, including universities, to be thoughtful enough to achieve the maximum level of competitive advantage in their respective industries (Hristov & Reynolds, 2015). In this context, attention has been drawn to investigating the challenges of university funding in the context of the financial crisis, and concerns about financing and preserving the quality of education. (Akinkugbe, 2000; Kanaan et al., 2011; Moladovan et al., 2012). Non-governmental organizations, private enterprises, and corporations, as well as foreign aid, are the main sources of additional capital for the higher education system (Akinkugbe, 2000). It is also a fact that in many countries higher education is heavily subsidized by the government leading to inequality of educational opportunities in the education system (Akinkugbe, 2000). The capital sources of higher education institutions and their effective management affect the operation of the whole system. Therefore, the pressure of increasingly effective financial management is the basis for ensuring the development level of education and science for the economic development of a country (Kasradze, Antia, & Gulua, 2019).

Financial Autonomy of The University

In Vietnam, financial management is one of the autonomous mechanisms of public service providers. It is a mechanism by which providers are empowered to make their own decisions and take responsibility for revenues and expenditures within the framework prescribed by law (Vietnamese Government, 2021). A financially autonomous entity can be understood as a separate and separable entity with funding from some of its income, expenses, and assets (Ashby,1966; Frazier,1997). Financial management competence represents an organization's ability to make and implement decisions regarding income, expenses, and benefits without prior authorization from the competent authority or is not the focus of government financial management (Clark, 1983). Financial management can support adaptation strategies where staffing, resource allocation, and the creation of new organizational forms are critical to responsiveness (Sporn, 1999; Vught, 1994 & 1988). Strengthening the autonomy of higher education institutions, including financial management, is a policy issue in many countries, and the independence of universities has increased in practice (Gor-nitzka & Maassen, 2000; Gumport & Sporn, 1999). Financial management of universities manifests itself through relationships in an increasingly complex environment that includes government agencies and businesses and a growing range of stakeholders. (Maassen, 2000; Neave, 2002). Autonomy is a change in the authority structure in higher education institutions (Gumport & Sporn, 1999), where the higher education service must be apolitical, or in other words, authoritative neutral. Politics and administration must be considered separate elements of governance (Kaufman, 1956).

Financial management in higher education is essentially a reduction in public spending on higher education and a growing acceptance of the business role of the university in society (Gumport, 2001). Financial management helps universities access the market with flexibility, compatibility, and regulation (Peters, 2001). University financial management is part of a wave of autonomy by public sector institutions, which has led to a loss of government control over their operations. To limit the adverse effects of university financial management, governments require increased accountability of public institutions, including public universities (Peters, 2001).

Innovation In Higher Education

Innovation is a crucial determinant of organizational performance, including universities (Odumeru, 2013). It is the process of taking creative ideas and turning them into valuable products or methods of work. It is not the same as an invention which these authors describe as the process of developing new ideas (Robbins & Coulter, 2006). In an increasingly volatile business environment, universities must put in place innovative systems and procedures to ensure desired outcomes for the benefit of all stakeholders. Innovate to respond and adapt to changes in your landscape environment (Damanpour et al., 2009). Higher education as a way of doing business has more and more research groups in recent years have looked at how innovation contributes to better business performance (Zahra & Covin, 1995; Camiso´n & Lo´pez, 2010; Alipour & Karimi, 2011; Rubera & Kirca, 2012). In this sense, innovation is defined as the generation of new knowledge and ideas to facilitate new business outcomes improve internal business processes and structures, and create market-oriented products and services (Plessis, 2007).

Innovation in higher education is the transformation of university-owned knowledge into products and processes, as well as significant changes in existing educational processes and products to introduce them to the market (Damanpour, 1991; Camiso´n & Fore´s, 2010; Molina & Martı´nez, 2010). Researchers have concluded innovation in higher education is a competitive factor (Ungerman, Dedkova &, Gurinova, 2018). As in other fields, innovation in higher education includes administrative and technical innovation that encompasses potentially disparate decision-making processes, and together they represent the introduced changes. In a variety of activities within an organization (Daft, 1978). Organizational innovation is related to organizational structure and administrative processes; they are indirectly related to the essential work activities of an organization and more directly related to the management of that organization (Damanpour & Evan, 1984; Kimberly & Evanisko, 1981; Knight, 1967). Technical innovation is related to the product and the process technology that creates it (Damanpour & Evan, 1984; Knight, 1967).

Performance of higher education

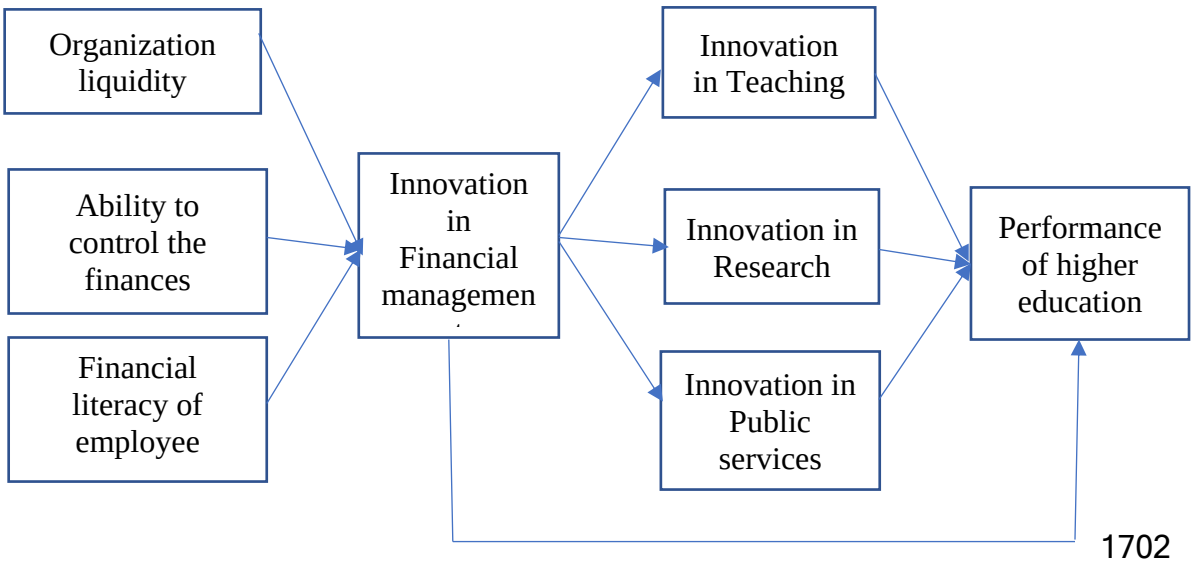
There is little doubt that the modern university is a far cry from the university of the early 90s. The work of academia has changed thanks to a schedule of efficiency and accountability. Modern universities operate in an uncertain and ever-changing world (Cowan, 1985). Higher education performance

demonstrates that (1) higher education has a significant impact on the formation of specific sustainable competencies that contribute to the development of the creative economy; (2) many creative workers also have a high probability of finding jobs that are not commensurate with their qualifications; (3) the impact of higher education policies does not appear to be uniform in different countries (Yue & Zhao, 2020). University performance is reflected in external quality assessments, including government assessments, accreditation, and university rankings. The internal review includes teaching, research, academic environment, learning quality (Zhou Guangli, 2016). From the learners' perspective, the university's performance is reflected in the learning environment, university administration, student support services, study materials, infrastructure facilities, placement services, and activities - extracurricular activities and financial management (Kaur & Bhalla, 2018).

Management theory indicates that to be effective in this environment requires universities to be highly adaptive in strategic decision-making. The effectiveness of higher education is reflected in a top-down strategic planning process that focuses on efficiency and uses arguments about accountability and quality to drive change that does not work to deal with uncertainty (Cowan, 1985). It is reflected in the university responding more effectively to changing social, demographic, and political forces (Srikanthan & John, 2002). To improve the effectiveness of higher education, universities need to reorient basic work structures and design more innovative institutions. Universities are advised to restructure themselves toward customer service (Bell, 1992). The effectiveness of higher education is reflected in academic freedom and student success, faculty roles and rewards, and the ability to improve society (Gross & Levitt, 1997). Achieving efficiency and effectiveness in higher education depends on public authorities creating the proper framework within which higher education institutions can operate. It is characterized by adequate funding and effective quality assurance policies, among other factors (European Higher Education Area, 2020).

The authors developed a research model based on the literature review, as indicated in Figure 1 below:

Figure 1 The Research Model



HYPOTHESES

The following hypotheses have been developed based on the research model:

H1. There is a significant positive relationship between organization liquidity and Innovation in financial management.

H2. There is a significant positive relationship between ability to control the finances and innovation in financial management.

H3. There is a significant positive relationship between financial literacy of employees and innovation in financial management.

H4. There is a significant positive relationship between innovation in financial management and innovation in teaching.

H5. There is a significant positive relationship between innovation in financial management and innovation in research.

H6. There is a significant positive relationship between innovation in financial management innovation in public services.

H7. There is a significant positive relationship between innovation in teaching and performance of higher education.

H8. There is a significant positive relationship between innovation in research and performance of higher education.

H9. There is a significant positive relationship between innovation in public services and performance of higher education.

H10. There is a significant positive relationship between innovation in financial management and performance of higher education.

RESEARCH METHOD

The research team uses a qualitative method by in-depth interviews with educational researchers, psychologists, and sociologists to adjust the research scale and improve the questionnaire to suit the characteristics of the students. The questionnaire was built based on the results of the research overview and experts' opinions, including two parts. Part 1 to collect information on demographic information of research participants, such as age, gender, education level, and occupation of research participants. Part 2 to collect information about organization liquidity (3 items), ability to control the finances (3 items), Financial literacy of employees (3 items), innovation in Teaching (3 items), innovation in Research (3 items), Innovation in Public services (4 items), Innovation in Financial management four items), and performance of higher education (4 items). We have created a final version after discussion and final agreement between experts. This version was pre-tested on 40 participants selected to represent age, sex, education, and occupation demographics. During the assessment period, participants were asked to complete this final version. The edited version was conducted through a formal survey followed by minor

edits to improve the question structure for better understanding.

A selection of full-time employment in higher education includes admissions staff, financial_staff, researchers, student affairs staff, training management staff, lecturers. These people best understand the impact of sound financial management on higher education performance. The questionnaire was sent directly to the respondents by the purposeful sampling method. The result was 200 valid votes (100% response rate). Demographic information of study participants (Table 1).

Table 1 Demographic characteristics of survey participants

		Occupation					
		Admissions staff	**Financial_ staff**	**Researchers**	**Student Affairs staff**	**training management staff**	**University _lecturer**
		Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
Gender	female	16.2%	14.3%	14.3%	20.0%	23.8%	11.4%
	male	12.6%	13.7%	21.1%	16.8%	21.1%	14.7%
Age	25-30 years	11.1%	19.4%	13.9%	19.4%	19.4%	16.7%
	31-35 years	22.2%	11.1%	16.7%	11.1%	25.0%	13.9%
	36-40 years	14.3%	17.9%	14.3%	14.3%	35.7%	3.6%
	41-45 years	7.1%	10.7%	32.1%	14.3%	25.0%	10.7%
	46-50 years	17.1%	8.6%	14.3%	25.7%	17.1%	17.1%
	above 50 years	13.5%	16.2%	16.2%	24.3%	16.2%	13.5%
Education	Bachelor	9.4%	15.1%	20.8%	18.9%	22.6%	13.2%
	MA	13.4%	17.9%	14.9%	17.9%	20.9%	14.9%
	PhD	18.8%	10.0%	17.5%	18.8%	23.8%	11.2%

RESEARCH RESULTS

Reliability Analys

Table 2 shows that the Cronbach's Alpha coefficient of all items is more significant than 0.69, so it is sufficient to analyze the following steps (Hair, Black, Babin, & Anderson, 2010). Composite Reliability is reasonable for a structure defined with five to eight items to meet the minimum threshold of 0.80 (Raykov, 1997; Brunner & Süß, 2005). However, in studies in the social sciences, a Composite Reliability level of less than 0.80 is also acceptable (Fornell & Larcker, 1981). Table 2 shows the Composite Reliability of the item O_liquidity = 0.759, AC_finances = 0.698, FL_employees = 0.699, IN_Teaching = 0.703, IN_Research=0.729, IN_Public_services = 0.775, IN_Financial_management = 0.701, and P_higher_education = 0.786. This result is acceptable to analyze the parallel structural equation model (Fornell & Larcker, 1981). Average Variance Extracted acceptance threshold of entries

greater than 0.50 (Hair, Black, Babin, & Anderson, 2010; Cortina, 1993). However, for social science studies, the Acceptance threshold for Average Variance Extracted can be more than 0.50 (Fornell & Larcker, 1981). Table 2 shows the extracted variance of the entries O_liquidity = 0.513, AC_finances = 0.436, FL_employees = 0.437, IN_Teaching = 0.489, IN_Research = 0.473, IN_Public_services = 0.464, IN_Financial_management = 0.373 and P_higher_education = 0.480. This result is still accepted for structural equation modeling (Fornell & Larcker, 1981).

Table 2 Summary of Reliability and Relative Minimum Variables of Scales

Scales	**Number of variables observed**	**Reliability coefficients (Cronbach Alpha)**	**The correlation coefficient of the smallest total variable**	**Composite Reliability (CR)**	**Average Variance Extracted (AVE)**
O_liquidity	3	0.757	0.562	0.759	0.513
AC_finances	3	0.699	0.498	0.698	0.436
FL_employees	3	0.697	0.495	0.699	0.437
IN_Teaching	3	0.705	0.514	0.703	0.489
IN_Research	3	0.729	0.540	0.729	0.473
IN_Public_services	4	0.775	0.545	0.775	0.464
IN_Financial_management	4	0.691	0.381	0.701	0.373
P_higher_education	4	0.794	0.581	0.786	0.480

After testing Cronbach's Alpha, the author uses the Exploratory factor analysis (EFA) method to preliminary evaluate the scales' unidirectional, convergent, and discriminant values. EFA was used by extracting the Principal Components Analysis Factor and Varimax rotation to group factors. With a sample size of 200, the factor loading factors of the observed variables must be greater than 0.5; variables converge on the same factor and are distinguished from other factors. In addition, the Kaiser-Meyer-Olkin coefficient (KMO), which is an index used to consider the adequacy of factor analysis, must be in the range of $0.5 \leq KMO \leq 1$ (Cerny & Kaiser, 1977; Kaiser, 1974; Snedecor, George, Cochran & William, 1989).

The analysis results in Table 3 show that all factor loading coefficients of the observed variables are greater than 0.5; Bartlett test with Sig meaning. = 0.000 with KMO coefficient = 0.873. All items in the EFA analysis were extracted into eight factors with Eigenvalues greater than one and Cumulative variance percent = 63.661%. Thus, the research model consisting of 2 independent and six dependent variables is used for multivariable analysis.

Table 3 Exploratory factor analysis

Rotated Component Matrix[a]								
	Component							
	1	2	3	4	5	6	7	8
P_higher_education1	.752							
P_higher_education2	.744							
P_higher_education4	.729							
P_higher_education3	.709							
IN_Public_services3		.769						
IN_Public_services1		.704						
IN_Public_services4		.670						
IN_Public_services2		.669						
O_liquidity3			.817					
O_liquidity2			.732					
O_liquidity1			.669					
IN_Teaching1				.799				
IN_Teaching3				.656				
IN_Teaching2				.642				
IN_Financial_management1					.784			
IN_Financial_management4					.761			
IN_Financial_management2					.605			
IN_Financial_management3								
IN_Research2						.775		
IN_Research3						.739		
IN_Research1						.692		
FL_employees1							.783	
FL_employees3							.732	
FL_employees2							.674	
AC_finances1								.751
AC_finances3								.749
AC_finances2								.635
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.								
a. Rotation converged in 7 iterations.								

Structural Equation Modeling

Structural equation modeling (SEM) is an extension of the general linear model (GLM) that allows the researcher to test a set of regression equations simultaneously. The SEM model combines all techniques such as multivariate

regression, factor analysis, and correlation analysis between factors to allow us to examine the complex relationship in the model. Unlike other statistical methods that only estimate the partial relationship of each pair of factors in the classical model, SEM allows to simultaneously assess the elements in the overall model and evaluate the relationship. Causality between latent constructs across indices that combine both measures and structure of the theoretical model, measure stable (recursive) and non-recursive relationships, measure direct effects direct and indirect, including measurement error and residual correlation. The SEM model allows the flexibility to find the most suitable model among the proposed models (Crowley & Fan, 1997; Kline, 2011; Nachtigall, Kroehne, Funke, & Steyer, 2003; Raykov & Marcoulides, 2006; Ullman, 2006; Widaman & Thompson, 2003).

The suitability of the SEM model is necessary to carry out Chi-Square ($\chi 2$) testing, Root-Mean-Square Error of Approximation (RMSEA) (Browne & Cudeck, 1993), standardized-root-mean square residual (SRMR) procedures. Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973) and Comparative Fit Index (CFI) (Bentler, 1990) suggested that a good fitting model should have values of CFI and TLI $\geq .90$, RMSEA and SRMR $\leq .08$ (Browne & Cudeck, 1993; Byrne, 1989; Hu & Bentler, 1999; Kline, 2011).

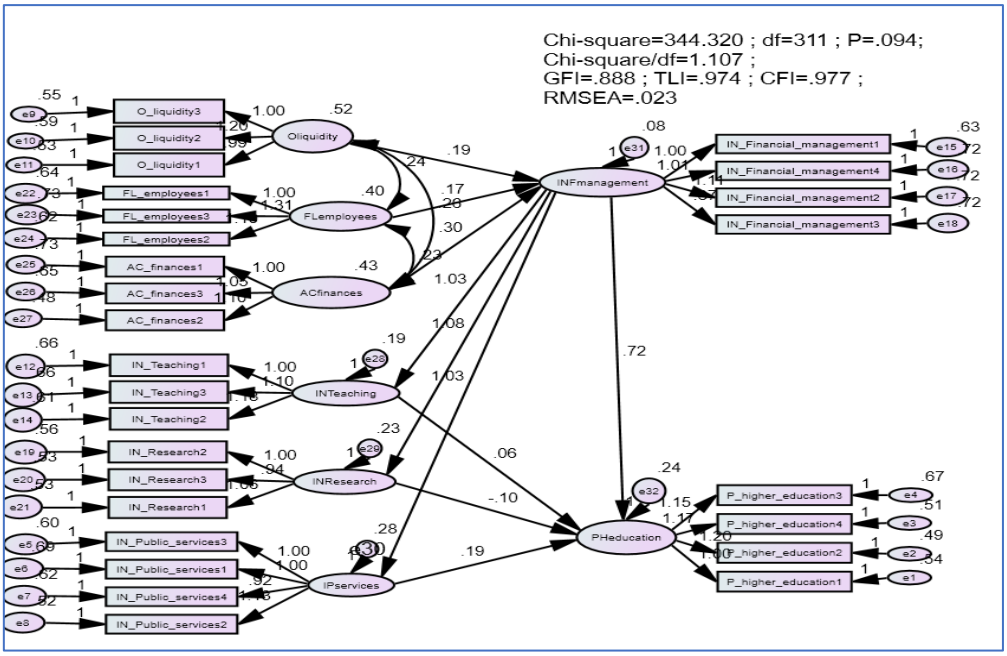


Figure 1 SEM analysis results

The analysis results (Figure 1) show that the model test coefficients satisfy the standard requirements of the SEM model: Chi-square = 344,320; Df = 311; P-value = 0.094 (P-value > 0.05) ; Chi-square/df = 1.107; GIF = 0.977 (GIF>0.9); TLF = 0.974; RMSEA = 0.023 (Browne & Cudeck, 1993; Tucker & Lewis, 1973; Bentler, 1990; Byrne, 1989; Hu & Bentler, 1999; Kline, 2011).

Table 6 Regression Weights

			Estimate	S.E.	C.R.	P	
INFmanagement	<---	Oliquidity	.191	.072	2.631	.009	Accepted
INFmanagement	<---	FLemployees	.169	.086	1.963	.050	Accepted
INFmanagement	<---	ACfinances	.302	.096	3.153	.002	Accepted
INTeaching	<---	INFmanagement	1.032	.207	4.995	***	Accepted
INResearch	<---	INFmanagement	1.075	.205	5.237	***	Accepted
IPservices	<---	INFmanagement	1.033	.206	5.009	***	Accepted
PHeducation	<---	INTeaching	.064	.159	.401	.689	Not accepted
PHeducation	<---	INResearch	-.102	.144	-.706	.480	Not accepted
PHeducation	<---	IPservices	.189	.117	1.619	.106	Not accepted
PHeducation	<---	INFmanagement	.719	.386	1.861	.063	Not accepted

The results of SEM analysis (Table 6) show that the accepted hypotheses include H1, H2, H3, H4, H5, H6. Specifically, the factor 0rganization liquidity has a positive and significant relationship with Innovation in Financial management with regression coefficient β = 0.191 and 95% confidence (p.value = 0.009). The factor of ability to control the finances has a positive and significant relationship to Innovation in financial management with the regression coefficient β = 0.302 and the 95% confidence level (p.value = 0.002). The factor of financial literacy of employees has a positive and significant relationship with Innovation in Financial management with regression coefficient β = 0.169 and 95% confidence (p.value = 0.50). The Innovation in financial management factor has a positive and significant relationship with Innovation in teaching with the regression coefficient β = 1,032 and the 95% confidence level (p.value = 0.00). The factor of Innovation in financial management has a positive and significant relationship with Innovation in research, with the regression coefficient β = 1.075 and a confidence level of 95% (p.value = 0.00). The Innovation in financial management factor has a positive and significant relationship with Innovation in public services with the regression coefficient β = 1,033 and the confidence level of 95% (p.value = 0.00).

Hypotheses that are not accepted include H7, H8, H9, and H10. Specifically, there is no evidence that the innovation in teaching factor does not have a positive and significant relationship with higher education performance because of the 95% confidence level (p.value=0.689>0.05). Similarly, there is no evidence that the factor of innovation in research has a positive and significant relationship with the performance of higher education because of the 95%

confidence level (p.value = 0.480 > 0.05), the relationship between the factors of innovation in public services factor and performance of higher education factor (p.value = 0.106). The relationship between the innovation factor in financial management and the performance of higher education factor with the coefficient β = 0.719 and the 95% confidence level (p.value = 0.068)

DISCUSSION AND CONCLUSIONS

Firstly, the research results (Table 6) show that with 95% confidence, both the organization's liquidity and ability to control employees' financial literacy can explain the innovation in financial management. The most influential factor is the ability to control the finances (β = 0.302), the second is the organizational liquidity factor (β = 0.191), and the last is the financial of employees (β = 0.169). This result is similar to the finding of Illmeyer et al. (2017). These results show that in the context of higher education in Vietnam, aspects of financial management innovation are correlated with each other, notably financial control. It helps the university maximize not only profits but also support growth. Without sound financial management, the university will not innovate.

Second, the research results (Table 6) show that in the context of higher education in Vietnam, financial management innovations positively and significantly affect other aspects of university innovation. Such as innovation in teaching, innovation in research, and innovation in public services. This result is similar to the findings of previous studies by Kozubikova, Homolka & Kristalas (2017), Belas & Sopkova (2016), and Kljucnikov et al. (2017). For the innovation process to go smoothly, the fundamental but most crucial aspect is complete financial control in financial planning and liquidity management. It Is similar to the findings of Hausman & Johnston (2014), Schrage (2013), and Lauzikas et al. (2017) that innovation management needs to integrate with financial management if the university is to be a leading institution even in an ever-increasingly competitive market (Hausman, & Johnston, 2014; Schrage, 2013; Lauzikas et al., 2017).

Third, in the context of higher education in Vietnam, innovation in financial management has a positive and significant impact on innovation in teaching, research, and university social services. However, as previous studies have shown, the primary source of revenue for universities in Vietnam is tuition fees. Meanwhile, the proportion of Income from research and technology is tiny. In addition, the revenue ratio from grants and aid from organizations and individuals is still limited for many universities. Therefore, efforts in financial management have not significantly impacted higher education performance. (Hung & Dung, 2020; Tan & Hoa, 2018). Perhaps this leads to no evidence of an effect of innovation in teaching, innovation in research, innovation in public services on the performance of higher education. The relationship between the innovation factor in financial management and the performance of higher education factor with the coefficient β = 0.719 and the 95% confidence level (p.value = 0.068).

Fourth, the results of this study imply that universities in Vietnam need to see that financial management helps universities access the market in a flexible, compatible, and regulated manner (Peters, 2001). In the context of the strong

autonomy of universities in Vietnam, university financial management is a part. To avoid negative impacts, the government requires increased accountability of public institutions, including public universities (Peters, 2001).

Fifth, the research results show that there is a positive and significant relationship between good financial management and innovation in higher education. Therefore, the Vietnamese government needs to create an appropriate legal framework for higher education institutions to operate in order to receive adequate funding and effective quality assurance policies (European Higher Education Area, 2020). It is necessary to remove the mechanism for allocating state budget to universities, which is still average, not associated with the quality requirements of output products according to the market. In the new era, the financial management department at Vietnam university must take service as the starting point, playing a supporting role in financial services to build an important foundation for incubating high-quality talent, inspiring science and technology innovation, promoting the economy (Dan Xia & Guo-Liang Du, 2019). It is also important to realize that the growth of financial resources for the education system from year to year does not automatically mean an increase in the quality of education. It is important to correctly implement and direct the reform strategy and tactics, and optimally distribute financial resources to maximize results. Financial management strategies of higher education institutions need to create sustainable growth. A strong financial management system is a core aspect of an institution's stability and growth. This strategy should aim to transform the education system. It is the mainstay of growth in general, closely linked to overcoming the problems of poverty and unemployment (Kasradze &Tea, 2013, 2014 & 2016).

LIMITATIONS

As with other empirical studies, this study has limitations that should be considered when discussing the results. First, our survey method reflects the subjective perception of the respondents toward the questions being investigated. Subjective data has a number of inherent disadvantages that are hard to avoid in surveys (Pakpour et al., 2014). Our data is collected over a single period so there are certain limitations in the analysis and evaluation of the results (Xin & Zhanyou, 2019). Future research should combine cross-sectional and longitudinal studies. Purposeful sampling has certain limitations and does not adequately reflect demographic characteristics (Lin et al., 2016; Strong et al., 2018). Our survey was conducted in a Vietnamese cultural context and therefore more general statements are needed than could be made by applying the development research model and research conclusions to other countries and cultures (Sun et al., 2012).

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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