

## Financial Innovation and Financial Performance in Financial Institutions in Uganda

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**Abstract:** This study investigates the influence of financial innovation on financial performance in financial institutions in Uganda during 2008-2014. Financial innovation dimensions examined included product innovation, process innovation, client mix innovation, distribution channel innovation and innovation culture. Financial performance was measured using ROA and ROE. To accomplish the research objectives, the quantitative research method (questionnaire and secondary data) was adopted. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20 in which correlation and multiple regression analyzes were performed. Results showed that the relationship between financial innovation and financial performance is positive ( $r = 0.1397$ ,  $p = 0.0514$ ).

**Keywords:** Financial innovation, product innovation, process innovation, client mix innovation, distribution channel innovation, innovation culture, financial performance, financial institutions

### INTRODUCTION

The dominant feature of the modern financial system is a high pace of innovations [1]. Following the recent global financial crisis, various scholars have accused financial innovation of being complicit in fuelling financial firms' crises [2, 3]. Besides, it also clearly appears that its effects have generally been very positive globally. Innovation relates to new products and services, production methods and procedures, production technologies, as well as administrative changes [4]. In this regard, financial innovation is a process that results in new products, methods of production, and forms of business organization [1, 5, 6]. Being the focus of any new developments in the financial system, financial innovation is relevant and an important topic worthy of research attention given its role in economic development and firm performance [1, 5, 7]. The application of innovations increases the competitiveness of a business entity and creates value for its owners and other stakeholders [1].

Evidence from other parts of the world indicates that scholarship rarely analyzes dynamics of innovation in the financial services sector [5, 8-12]. This is perhaps surprising for three reasons. First, the focus of innovation was on traditional technological innovations in manufacturing as introduced by Joseph Schumpeter in 1934 [1]. However, approaches to technological innovations have been adapted to specific features of financial innovations in accordance with the OECD categorization in 2005 and are now applicable to other organizations, including financial institutions [1].

Second, researchers argue that financial innovation in the financial sector is little understood and look at financial institutions as different and given [13]. Third, notwithstanding the importance of financial innovation as a major driver of the financial system, researchers have difficulty in effectively assessing it in the financial sector where Frame & White, [6] advocate for more research in this untitled area.

In East Africa, very few studies have recently been done on the relationship between financial innovation and financial performance [14-16]. Nyathira & Mwangi, [14] indicated that financial innovation indeed contributes to and is positively correlated with profitability in the banking sector in Kenya.

Uganda is not a leader but a promising country in terms of engagement in innovations (99th in general ranking) in the Global Innovation Index 2016 which ranks 125 countries/economies in terms of their innovation capabilities and results. The financial services industry is one of the most innovative sectors in the Ugandan economy. For instance, in the last decade, innovations in ICT have revolutionized the financial sector resulting in novel delivery channels for new or improved financial and insurance products and services such as automated teller machines (ATMs), cell phone banking and brokerage, PC banking, and internet banking, debit card, credit card, money transfer services (e.g., western union, money gram) and mobile banking [17-18]. However, to the best of our knowledge, there is still no work done on the influence

of financial innovation on firm performance in financial institutions.

This paper makes two contributions. First, this is the first study to investigate financial innovation and financial performance in Uganda. Second, we contribute to the financial innovation literature by deepening into the dimensions of financial innovation to establish how each influences financial performance.

The paper is organized as follows: Section 2 summarizes the relevant literature and explains the derivation of the four research hypotheses. The methodology and data of the survey on a sample of 39 firms in Uganda are presented in section 3. The findings are presented in section 4. Conclusion and recommendations are offered for further research and practitioners in section 5.

### **LITERATURE REVIEW**

*Businessmen compete with each other largely by policies which directly create uncertainty. Innovation is the chief means of business success.*

*Shackle, 1970, pp. 21-22*

The Organization for Economic Cooperation and Development (OECD, 2005, p. 46) defines innovation as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. While a unique definition can hardly be found for financial innovation, different scholars have variously defined financial innovation using different dimensions [1, 6]. Frame & White [6] define financial innovation as something that reduces costs, reduces risks or provides improved product/service/instruments. This study employs five types of financial innovation closely related with the above dimensions: product innovation, process innovation, client mix innovation, distribution channel innovation and innovation culture.

While the literature on innovation in the manufacturing industry has focused mostly on patents as indicators of innovative activity, gauging innovative activity in the financial sector is more challenging as patents rarely exist. Even the R&D expenditures are typically not collected for financial institutions nor are data on research staff. This lack of data has impeded the rigorous study of financial innovation across countries, Uganda inclusive.

### **Financial Innovation in Financial Institutions in Uganda**

Uganda's financial services sector has evolved from the first commercial bank established in 1906 –

the National Bank of India which later became the Grindlays Bank and is now the Stanbic Bank - to the current 22 commercial banks, three credit institutions, three Microfinance Deposit-taking Institutions (MDIs), insurance companies, money remittance and forex bureaus, 2 security exchanges and a capital market authority. These are in addition to the rapidly growing semi-formal and informal financial sector in the country. The sector has also undergone several policy, legal and regulatory reforms with various degrees of results.

The insurance industry has contributed to and benefited from economic development in Uganda. As competition in insurance markets is intensifying, cost savings and customer retention has become critical, forcing insurers to look for ways to drive sales and customer convenience while keeping costs low and maintaining profitability. These factors are leading to the emergence of additional channels such as call centers, mobile, and web. The Insurance Regulatory Authority (IRA) forecasts that further progress in the insurance industry will be driven by developments of mobile technology, diversification of target markets to increase penetration and innovation of insurance products such as bancassurance, agricultural insurance and oil and gas insurance.

Innovations in ICT revolutionized the financial services sector resulting in distribution and delivery channels for financial products and services such as Automated Teller Machines (ATMs), cell phone banking, PC banking, and internet banking. There were six mobile money service providers as at the end of December 2013 namely; MTN, Airtel/Warid, Uganda Telecom, Orange, M-Cash and EzeeMoney [19]. Furthermore, the number of registered mobile money customers rose to 16.02 million (about 40% of all Ugandans) by March 2014. The economics of mobile money is comprehensively surveyed by Aron [20]. ATM kiosks are now accessible in standalone form in numerous locations, such as parking lots, hotels, hospitals, universities and petrol stations. All of these qualify as a distribution channel for the financial institutions they serve. Social media channels have significant applicability to both the insurance industry and the banking sector and are likely to have a long-term impact on how bankers and insurers gain and react to feedback from the marketplace.

The chronology of these reforms and the broader Economic Reform Program (ERP) adopted by government in the last three decades since 1987 have been a subject of research by various scholars [21-24].

In 1998, Bank of Uganda created the National Payments System Secretariat (NPSS) that embarked on

the modernization of the country's payment system [25]. The modernization process has resulted into the introduction of the electronic cheque clearing system, electronic funds transfer (EFT) and the Real Time Gross Settlement / Uganda National Interbank Settlement (RTGS/UNIS).

### **Financial Innovation Dimensions**

#### ***Product Innovation***

Scholars define product innovation as new products or services introduced to meet external user or market need and are primarily customer driven [26, 27]. Many product innovations in financial services have been subject to detailed review by public regulatory agencies. Regulatory or circumvention rules may raise the barriers to innovation, particularly for younger and inexperienced firms that may find that such rules strain their resources. Such regulatory changes may also serve as incentives for financial innovation, as firms seek to find their way around such constraints [27]. While previous studies examine product innovations in other countries such as Abir and Chokri, [28] in Tunisia, Amit and Roberts, [29] in Australia, Heffernan, Fu & Fu, [30] in the UK, and Nguyen, Phan & Nguyen, in Vietnam, we do not find any such studies in Uganda.

#### ***Process Innovation***

Scholars have defined process innovation as new elements (input materials, task specification, workflow mechanisms and equipment) introduced into the organization's production operations so as to render a service [26, 27]. According to Tsuma *et al.*, [16], process innovation is the implementation of a new or significantly improved production or delivery method (including significant changes in techniques, equipment and/or software). Process innovations have an internal focus, seek to develop new capabilities, competencies or routines and are primarily efficiency driven [27] i.e. process innovations change or improve the way organizations perform. Process improvements are typified by new means of delivering securities, processing transactions, or pricing transactions and results into lowering of transaction costs. Scholars suggest that process innovations will likely continue to be very important for performance because without excellence in process innovations, other innovations will be impossible to implement [16].

#### ***Client Mix Innovation***

One of the biggest business challenges for any organization is client mix defined by how many of what kind of client or customer to have. In this perspective, a successful strategic decision by organizations regarding their client mix depends upon matching a targeted client or customer segment with well-priced products. One of the key aspects of many service activities is the high involvement of the client in the consumption of the

final service. Financial services firms face a lot of choices in terms of the clientele they wish to attract. Some firms position themselves as wholesale by focusing primarily on commercial and industrial customers, and others shape themselves as consumer or retail by emphasizing individual consumers. This dichotomy between wholesale and retail clientele is fundamental to any analysis of firm strategy [31] since the nature of skills and resources associated with each type of operation differs significantly. On the one hand, servicing a large consumer clientele might necessitate higher levels of expenditures for branch operations and processing costs, given the large volume of transactions that are likely to be encountered. On the other hand, wholesale clientele requires fairly high levels of core capital, a sophisticated sales force, and a much larger battery of financial analysts for evaluating creditworthiness [31]. While financial services firms have innovated in this area in Uganda, there is paucity of research that has examined the impact of client mix innovation on firm performance.

#### ***Distribution Channels***

Coughlan *et al.* [32] defined a distribution channel as a set of independent organizations taking part in the process of ensuring that a product or service is available for use or consumption. While as retail customers used to interact with banks and insurers only face-to-face and usually in a branch or office and sometimes through third party brokers, today they also interact over the phone, through an ATM or via the internet, effectively communicating directly with the back office of the financial institution [33]. Thus, a variety of distribution channels are currently used in the financial services sector. This study focuses on the demand perspective of distribution channels. One factor that leads to the adoption of an innovation is how widespread it is. This is particularly the case as changes in demographic, economic and social factors alter consumers' preferred distribution channels. Hyvönen & Tuominen [34] claim that the changing business environment has recently challenged many firms to seek out new methods to achieve sustainable performance through distribution channels. According to Kotler & Keller [35], distribution affects sales, since if the product is not available, it cannot be sold. While there is extant research on distribution channels and performance, there is paucity of research on how distribution channels affect financial performance in the financial sector.

#### ***Innovation Culture***

Innovation culture is a frequently used and yet insufficiently defined concept [36]. According to Losane, [37], innovation culture is the organization's ability to define, implement and develop new products and processes regularly, making it organization's daily

life. Gandotra, [38] defines it as culture that makes innovation a daily way of life. Thus, innovation culture is a totality of people's expressions, their past, and their current beliefs, ideas, and behaviors. The necessity of innovation is now universally accepted, but beyond their enthusiasm for bright ideas, most managers know that to be successful over the long term they have to develop a strong innovation culture.

Reviewing literature on innovation culture, Losane, [37] provides a profile of innovation culture using five determinants: values, strategy, structure, behavior and communication and leadership. So far, to the best of our knowledge, there has been no empirical research of innovation culture in Uganda. In addition, this study addresses calls for determining whether firms with strong innovative culture show better performance [37].

### **Performance Measures**

Following Okiro, Aduda & Omoro, (2015), this study uses return on equity (ROE) and return on assets (ROA) as proxies for corporate financial performance.

### **Hypothesis Development**

A striking feature of the extant innovation literature is the relative dearth of empirical studies that specifically test hypotheses on the association between financial innovation dimensions and financial performance [6, 39]. While researchers have attempted to discuss interrelationships between the dimensions of financial innovation and corporate performance [39], they also suggest additional research in other firms was required to clarify their findings. Furthermore, while the relationship between innovation types and performance has been explored in the manufacturing sector [39, 40-42], studies have ignored financial innovation and performance in the financial services sector [6, 16, 43, 44].

In order to better design and manage their financial innovation offerings, managers need to know how certain innovations might perform better or worse. Atalay *et al* [40] study find that product and process innovations have significant and positive impact on firm performance. Gunday *et al* [39] explored the effects of innovation on different aspects of firm performance, including achievements in production, marketing and finance, through an empirical study covering Turkish manufacturing firms in different industries. Analyzing using structural equation modeling (SEM) approach, Gunday *et al* [39] found that product, organization and marketing innovations have positive effects on firm performance in manufacturing industries. Nguyen *et al.*, find that product innovation is also found to contribute

significantly to the firm's financial performance. Beck, Chen, Lin & Song, [43] found a positive relationship between financial innovation and growth volatility in industries that rely more on external finance and on innovative activity. Muiruri & Ngari, [43] and Mwangi, [45] found that financial innovations have positive association with financial performance in financial institutions in Kenya. In their study on a SACCO in Kakamega, Tsuma *et al.*, [16] found a positive significant relationship between process innovation and financial performance.

Generally, researchers ignore client mix innovation, distribution channel innovation and innovation culture, which are equally important in the growth of firms. The fortunes of any commercial enterprise are behaviorally determined. Ultimately, an organization's financial success is dependent on the ability to positively and profitably influence what clients or customers do. We propose that innovation in distribution channel as in manufacturing [41, 46] would enhance firm performance in the financial sector.

Brettel & Cleven, [47] define an innovation culture as the degree to which organizations are predisposed to learn continuously and to develop knowledge to detect and fill gaps between what the market demands and what the firm currently offers. Innovation culture is organization ability to define, implement and develop new products, processes regularly, making it organizations daily life [37]. The innovative culture is based on values that enhance a shared view of the organization. Langdon, [48] as cited in Losane, [37] considers that innovation culture promotes the autonomy of working teams, the managers' support to research projects, departmental relationships, trust, sincerity and consideration. This type of culture decreases the resistance to change and facilitates the introduction of new technologies. On the contrary, a non-innovative culture provides the feeling of individualism to prevail over the team. Employees wait for somebody to tell them what to do, instead of having the initiative to carry out actions for their own. Lack of innovation culture in organizations is one of the factors of creativity and innovation decreasing and eventually of achieving less competitive advantage [49].

Based on the above, we test the following hypotheses in their null forms:

- H<sub>1</sub>: There is a positive relationship between financial innovation and financial performance.
- H<sub>1a</sub>: There is a positive relationship between product innovation and financial performance.
- H<sub>1b</sub>: There is a positive relationship between process innovation and financial performance.

H<sub>1c</sub>: There is a positive relationship between client mix innovation and financial performance.

H<sub>1d</sub>: There is a positive relationship between distribution channel innovation and financial performance.

H<sub>1e</sub>: There is a positive relationship between innovation culture and financial performance.

**METHODOLOGY AND DATA**

This paper uses a cross-sectional design with a quantitative approach. The purpose of the survey is to explore the relationships between financial innovation dimensions (product, process, client mix, distribution channel innovation and innovation culture) and financial performance in the financial services sector. For the purpose of testing the above stated hypotheses a questionnaire was designed, including a financial innovation scale adapted and modified from Lin et al (2010) comprising 30 items and financial performance variable measured by ROA and ROE for the period 2008-2014.

This questionnaire was tested in a pilot study on 30 respondents (comprising managers and experts from Gulu University) from five corporate firms operating in northern Uganda. It was revised according

to the feedback obtained from these respondents. The revised version of the questionnaire was used in the survey conducted through self administered with 424 top level managers of 39 financial institutions operating in Uganda, from March to December 2014. This sample was derived from a population of 54 financial services firms in Uganda. The data pertaining to the universe of the study was obtained from the websites of the financial institutions. A total of 195 (46%) questionnaires were obtained and found to be valid for the analysis.

**RESULTS**

**Descriptive Statistics**

In order to understand the attributes of both the unit of analysis and unit of inquiry in this study, details of demographic characteristics of financial services firms (unit of analysis), employees and senior managers (unit of inquiry) are provided. And the data come solely from the head of organizations and do not necessarily represent the innovation behaviour of the organizations’ relevant members. The unit of inquiry characteristics for the study included education levels, age, position held, duration in the firm and gender while those of the unit of analysis were assets size, employee status and age of institution.

**Table 1: Demographic characteristics**

Variable		Frequency	Percent
Industry	Commercial Banks	22	55
	Insurance Companies	12	30
	Micro Finance Deposit Taking Institutions	3	7.5
Assets (\$ Mn)	Credit institutions	3	7.5
	Less than 10	9	24
Firm Age (Years)	10-50	7	18
	50-100	6	16
	100-500	10	26
	More than 500	6	16
	Less than 4	4	10
	5-10	8	22
	10-15	3	8
	15-50	19	50
	More than 50	4	10
	Employment	10-49 Employees	11
50-100 Employees		6	12.3
101-200 Employees		10	20.5
201-300 Employees		2	15.1
Over 300 Employees		12	43.8
Total		41	100.0

**Source:** Primary Data

In Table 1 above, the sample firms are operating in a variety of industry –specific areas. The sample of this study includes 22 firms operating in the banking industry, 12 firms in the insurance services

industry, 3 firms operating in the credit institution industry and 3 firms in the microfinance deposit taking industry.

**Table 2: Descriptive Statistics for Mean and Standard deviation**

	N	Mean	Std. Deviation
	Statistic	Statistic	Statistic
Client mix innovation	195	4.09	0.768
Distribution channel innovation	195	3.79	0.876
Product innovation	195	4.02	0.703
Process innovation	195	4.00	0.799
Innovation culture	195	4.23	0.664
Valid N (listwise)	195		

Source: Primary data

Table 2 above reveals that on importance attached to financial innovation attributes by senior managers, innovation culture scored highest (M = 4.09, SD = 0.664) while distribution channel innovation scored lowest (M = 3.79, SD = 0.876).

**Data Analysis**

Multiple correlation and regression are used to test the relationship between financial performance (based on each of the five measures) and the various financial innovation dimensions. To identify potential multicollinearity problems, the correlations between independent variables were reviewed and tests were conducted for normality (based on skewness and kurtosis) for all dependent and continuous independent variables and when normality was a problem, the data was transformed. Appropriate transformations were conducted to ensure data normality. All independent and dependent variables were transformed using logarithmic transformation. An analysis of residuals was conducted to test for homoscedasticity, linearity and normality assumptions. Normality tests of the original variables indicate a significant number of them

are significantly not normally distributed at 95%, hence the need for variable transformations by applying natural logarithms.

**Reliability Tests**

The reliability test for each dimension emerged after conducting a principal component analysis with varimax rotation method. Bartlett's Test of Sphericity for each construct was significant. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy for each construct is presented in Table 3 below. Cronbach's alpha coefficient is widely used as a measure of reliability. Hair et al, (2010) recommends a lower limit of 0.6 in exploratory research with each indicator - reliability above 0.50.

The Cronbach's alpha values ranged from 0.704 to 0.869 for financial innovation attributes (i.e. 0.704 for process innovation, 0.785 for product innovation, 0.807 for client mix innovation, 0.869 for distribution channel innovation and 0.725 for innovation culture).

**Table 3: Descriptive Statistics for Construct Reliability Tests**

Constructs	N	Anchor Points	Cronbach's Alpha	KMO	N of Items
Product innovation	195	Five Point	.607	0.646	5
Process innovation	195	Five Point	.704	0.734	6
Client mix innovation	195	Five Point	.705	0.689	6
Distribution channel innovation	195	Five Point	.715	0.713	6
Innovation culture	195	Five Point	.725	0.541	7
Financial performance	6	Actual	.689		6

Source: Primary data

**Results of Correlation Analyses**

The following subsections present results of correlation analyses to establish relationships between the research variables. We apply a log-log model where all the quantitative independent variables are expressed as natural logarithms.

The log-transformation is widely used in statistics and management research to deal with skewed data [50, 51]. Expressing the dependent variable and relevant independent variables in natural logarithm

form will facilitate the interpretation of the estimated coefficient as elasticity. Quenouille stated that the logarithmic transformation tends to restore normality in the distribution and equalize the variances simultaneously, whereas Hoyle [52] cites a number of studies empirically showing the logarithmic transformation as a way of making the data conform to the three linear-model assumptions of additivity, constant variance, and normality.

The log-transformation specification assists in alleviating heteroskedasticity [54] and allows for the

interpretation of regression coefficients as elasticities (i.e., the percentage change in financial innovation in response to a percent change in financial performance).

The results of Product Moment (Pearson) correlation coefficients are shown in Table 4 below.

**Table 4: Pearson Correlations for Financial Innovation and Financial Performance**

	Innovation	LnPdt	LnProc	LnCli	LnDist	LnInnC	LnFinnov
LnROA	Corr	-0.118*	0.008	-0.040	-0.016	-0.042	-0.071
	Sig (P value)	0.100	0.916	0.580	0.823	0.563	0.322
LnROE	Corr	0.485***	0.255***	0.198***	0.208***	0.462***	0.523***
	Sig (P value)	0.000	0.000	0.006	0.004	0.000	0.000
LnFinperf	Corr	0.322***	0.216***	0.137*	0.171**	0.366***	0.393***
	Sig (P value)	0.000	0.002	0.057	0.017	0.000	0.000

\* 10% Level of Significance, \*\*5% Level of Significance, \*\*\*1% Level of Significance

Source: Primary data

Results from Table 4 above show that generally, there is a positive relationship between financial innovation and financial performance ( $r = 0.393$ ,  $p = 0.000$ ). Thus,  $H_1$  is supported. Therefore, we can safely conclude that there is a positive relationship between financial innovation and financial performance in the financial services sector. In particular, results in Table above also indicate that there is a positive relationship between product innovation and financial performance ( $r = 0.322$ ,  $p = 0.000$ ). Furthermore, consistent with earlier studies, we expect that product innovation is an important driver of financial performance.

There is a positive relationship between process innovation and financial performance ( $r = 0.216$ ,  $p = 0.002$ ). There is a negative relationship between client mix innovation and financial performance ( $r = 0.137$ ,  $p > 0.005$ ). There is a positive relationship between distribution channel innovation and financial performance ( $r = 0.171$ ,  $p = 0.017$ ). Finally, there is a positive relationship between innovation culture and financial performance ( $r = 0.366$ ,  $p = 0.000$ ). Thus, sub-hypotheses  $H_{1a}$ ,  $H_{1b}$ ,  $H_{1c}$ ,  $H_{1d}$  and  $H_{1e}$  are supported.

**Regression Analysis**

**Table 5: Financial innovation and financial performance**

F( 5, 189) = 12.59		Prob> F = 0.0000		R-squared = 0.2499		
LnFinperf	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
LnPdt	0.128292	0.035423	3.62	0.000	0.058418	0.198167
LnProc	0.081838	0.05455	1.5	0.135	-0.02577	0.189444
LnCli	-0.01801	0.041265	-0.44	0.663	-0.09941	0.063388
LnDist	0.03401	0.039682	0.86	0.392	-0.04427	0.112286
LnInnc	0.19802	0.034027	5.82	0.000	0.130899	0.265142
_cons	1.025115	0.091025	11.26	0.000	0.845559	1.204671
<b>Skewness/Kurtosis tests for Normality</b>						
<b>Pr(Skewness)</b>		<b>Pr(Kurtosis)</b>		<b>adj chi2(2)</b>		<b>Prob&gt;chi2</b>
0.0151		0.7915		5.84		0.054
<b>Breusch-Pagan / Cook-Weisberg test for heteroskedasticity</b>						
Ho: Constant variance						
chi2(1) = 1.86			Prob> chi2 = 0.1727			

Source: Primary data

The results from the regression model in Table 5 above, indicate that financial innovation variables significantly [ $F(5, 189) = 12.59$ ,  $p$  value = 0.0000] explain financial performance ( $R^2 = 0.2499$ ). This implies that 24.99% of variation in financial performance is explained by financial innovation. Multiple regression analysis requires that the normality assumption between the independent and dependent variables be determined [55]. To check for normality,

we employed the skewness/kurtosis test. Since the  $p$ -value is greater than 0.05 from Table above, we accept the null hypothesis that the data come from a log normally-distributed population. Post-estimation test indicates that the residuals are log normally distributed and their variance is constant (homoscedasticity).

Two variables significantly relate positively with financial performance, that is product innovation

( $B = 0.1283$ ,  $p = 0.000$ ) and innovation culture ( $B = 0.1980$ ,  $p = 0.000$ ). In Table above, the coefficients of product innovation and innovation culture are positive at the 1% significance level, which means the relationships between product innovation and financial performance and innovation culture and financial performance are statistically significant positive. This concretizes the support for  $H_{1a}$  and  $H_{1e}$ .

One percent unit increase in product innovation leads to 12.83% increase in financial performance. Furthermore, one percent unit increase in innovation culture leads to 19.80% increase in financial performance. The relationship between both process innovation and distribution channel innovation and financial performance are positive, albeit insignificant. Thus  $H_1$  is verified.

## **DISCUSSION**

Many studies have kept a waking eye on this topic to better understand the relationship that may exist between innovation and financial performance [56]. In order to better design and manage financial innovation offerings, managers need to know how certain innovations perform better or worse. Innovation literature does not reveal a conclusion whether a specific innovation type is likely to provide more or less an impact on corporate performance. While researchers have attempted to discuss interrelationships between financial innovation dimensions and corporate performance [39], there are calls for additional research in other firms to clarify their findings. In particular, the influence of financial innovation on performance is still not clear even when the distinction between innovation typologies is done as suggested by scholars [6].

As a first major finding, our research indicates that financial innovations have different financial performance implications in the financial services sector. Based on this finding and from previous research, it appears safe to say that financial innovation contributes to improved firm performance in financial services firms. This result is consistent with the resource-based theory that resources availability for strategic performance helps to improve financial performance [57]. The sector should manage their business with regard to the development of new and existing products and services, process innovations, client mix innovation, distribution channel innovation and innovation culture as suggested by the financial innovation variable. Therefore, even though the development of an innovative company culture can be complex and a time consuming process, this may result in benefits to the firm.

This study reports that there is a positive relationship between financial innovation and financial

performance. The findings in this study are perhaps most interesting with regard to innovation culture. Financial services firms showed a result that is consistent with the literature, which argues that knowledge resources have perhaps the greatest ability of all resources to serve as a source of sustainable competitive advantage [47]. This study suggests that there is a positive relationship between innovation culture and financial performance.

Our research thereby underscores anecdotal evidence that suggests financial services companies competing on innovative services are not exploiting all innovation typologies to their advantage.

This result is consistent with results from previous studies [39]. Gunday *et al.*, [39] find a positive insignificant relationship between product innovation and financial performance in manufacturing firms in Turkey. In this study, there is a positive relationship between process innovation and financial performance and this is supported by previous research [16, 39] study find a positive significant relationship between process innovation and financial performance. Tsuma *et al.*, [16] find a positive relationship between process innovation and financial performance in a Savings and Credit Cooperative Society in Kenya. This study also reveals that there is a negative relationship between client mix innovation and financial performance. Furthermore, there is a positive relationship between distribution channel innovation and financial performance. Finally, there is a positive relationship between innovation culture and financial performance. Findings of this study are consistent with previous studies [15, 39, 41].

## **CONCLUSION**

This study reports that there is a positive relationship between financial innovation and financial performance. Our research thereby underscores anecdotal evidence that suggests financial services companies competing on innovative services are not exploiting all innovation typologies to their advantage. In order to better design and manage financial innovation offerings, managers need to know how certain innovations perform better or worse. Actually, the key reason for innovativeness is the desire of firms to obtain increased business performance and increased competitive edge. Against this background, we suggest that financial services firms should closely monitor the implications of their innovation activities.

Results from this study should be taken with caution as financial system in Uganda is still underdeveloped and so are the perceptions of the respondents. Future research should focus on each

financial innovation dimension in reality contributes to financial performance.

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