

Assessing the Moderating Role of Risk Management Capabilities in the Relationship Between Service Innovation and Financial Performance of Insurance Firms

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Abstract

The study assessed the moderating role of risk management capabilities in the relationship between service innovation and financial performance of insurance firms. A survey research design was adopted, with a quantitative research approach. The population of comprises life and non-life insurance companies in Ghana, numbering 39. There were 17 insurance firms selected for the study, from which 161 management staff were drawn as respondents. Data was analyzed using Structural Equation Modelling (SEM). The study concludes that, risk management capability had a positive moderative effect on the relationship between service innovation and financial performance of insurance companies in Ghana. This notwithstanding, both service innovation and risk management capability had a direct significant positive effect on financial performance of insurance firms. For stronger financial position, firms should endeavor to invest in both service innovation and effective risk management practices. The main contribution of this study centers on the interactive effect of service innovation and risk management capability. Although direct effects of service innovation and risk management, on financial performance have been established in literature, the interactive effect of these two predicting variables has not been well established in literature.

Key words: Service Innovation; Risk Management; Insurance; Financial Performance

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1. Introduction

Insurance firms offer specialized financial services, which help in the economic growth and development of nations (Apergis and Poufinas, 2020). Largely, insurance firms are responsible for absorbing risks inherent in economic activities, by mobilizing cash through premiums paid by insureds. These accumulated funds are invested to generate extra income, so in case of an eventuality for which insurance was bought, insureds could be indemnified. Insurance firms' role of risk absorption, helps in ensuring financial stability for economic activities and entities. With inherent risks in dynamic business environment, the absence of insurance will make it difficult for businesses to absorb these inherent risks on their own (Ahmed *et al.*, 2010). Some studies have projected that, sound insurance industry provides long-term funds for infrastructure development and economic growth of nations (Din *et al.*, 2020). The regulatory body for the insurance industry in Ghana is the National Insurance Commission (NIC), and in recent times, they have intensified their supervisory role in the industry (Andoh and Yamoah, 2021). This is to aid in building a more resilient and sound insurance industry, for the benefit of the entire economy.

Although there are a number of measures for organizational performance (financial and non-financial), this study hinged performance on financial measures. The financial performance of insurance firms is very pertinent in their ability to honor their obligations toward clients, in case clients suffer any eventuality insured against. This study assessed how factors such as service innovation and risk management capability could enhance the financial performance of insurance firms in Ghana. Globally, service industry contributes to about 70% of world's GDP (Chen *et al.*, 2016), however, studies on service innovation does not match the volume or percentage of contribution of the service industry (Chang and Lee, 2020). Service innovation leads to the development of new service offerings, enhancing existing service offering, and providing an enhanced service quality (YuSheng and Ibrahim, 2019; Otoo *et al.*, 2020; Sarsah *et al.*, 2020). The long-term survival and profitability of service firms depend on how they are able to satisfy their clients through their new service offerings. Since the success of firms is influenced by its internal capabilities such as service innovation capability, researchers such as Tseng *et al.* (2020) have called for more empirical studies into the influence of service innovation on organizational performance.

As presented by Bai and Li (2016), insurance firms operate a unique business model, by generating profit from taking on risks and providing risk protection for others. The ability to manage these risks is very key for the growth, survival and financial performance of these insurance firms (Watson *et al.*, 2018). Risk management does not only aid in limiting losses, but also helps to identify, develop and exploit opportunities in the market (Andreeva, 2021).

The following research gap was identified, which warranted the development of this study. Some empirical studies have been carried out on service innovation, and related outcomes. For example, Tajeddini and Martin (2020) investigated the significance of human variables for innovation and performance in services, Ali et al. (2017) emphasized on creativity in cloud-based enterprise applications as a risk control platform, and as a decision management model, in banking sector, Tan et al. (2016) analyzed service innovation against achieving a competitive edge, whereas Prajogo and Oke (2016) investigated human resources, service innovation competitive edge and financial performance. From these past studies, attention was placed on industries like the banking, and IT, will little attention to the insurance sector. Considering the proliferation of insurance firms in Ghana for example, it is important for firms to innovate to keep up with the changing customer demands, gain competitive advantage, and also boost financial performance. Though some research such as Kokobe and Gemechu (2016) have considered the influence of risk management on the efficiency of insurance companies, the cumulative effects of innovation and risk management has not been analyzed. In this transformative age, the traditional ways of running an insurance business are being replaced with new ways business operations and new thinking. Globally, the insurance sector is faced with major changes, leading to insurers investing heavily in innovation, to remain competitive. Dynamic consumer needs and preferences, stringent and changing regulatory requirements, complex risks, and competition, are forcing insurance firms to innovate in order to survive. This research thus assesses the moderating role of risk management capabilities in the relationship between service innovation and insurance firms' financial performance. Figure 1 presents the conceptual framework of the study.

2. Literature

2.1 Theoretical Review

The study was founded on resource-based theory. This theory places much credence to internal capabilities of firms, as the contributing factor for competitive advantage (Barney, 1991; Grant, 1991), and not external factors. External factors are considered to be available for all to tap into, and therefore difficult to achieve competitive advantage through these factors (Dogbe et al., 2020). Internal capabilities and resources are however unique to each organization, and not exposed to competitors, so it is much easier to achieve competitive advantage through those internal factors (Grant, 1991). Service innovation and risk management capabilities are internal resources which can be unique to each individual insurance firm. For example, the innovation processes of one insurance firm, and its risk management strategies, may be very different from other firms, based on their unique organizational setting. According to Barney (1991), for these internal resources to translate or offer competitive advantage to firms, they must possess four unique characteristics. First, the resource must be valuable, that is, provide strategic values for firms. Secondly, the resource must be scarce, that is, it should be unique and peculiar to only the focal firm, and not readily available to

competitors. Thirdly, the resource should have the potential of imperfect imitability, that is, competitors should not be able to perfectly imitate or possess that capability. And finally, the resource should be non-substitutable, that is, there should not be a perfect alternative for this resource. This present study identifies service innovation and risk management as capabilities which could be unique to each individual firm, and could thus grant these firms competitive advantage, through enhanced profitability.

2.2 Effects of Service Innovation on Firm Performance

Gronroos (2007, p.52) defined services as “*an activity of more or less intangible nature that normally, but not necessarily, takes place in interactions between the customer and service employees and/or physical resources or goods and/or the service provider, which are provided as solutions to clients’ problems*”. Service innovation is defined as the combination of diverse organizational resources and capabilities, to develop a new offering which provides value to customers (Lusch and Nambisan, 2015; Tajeddini et al., 2020). O’Cass and Ngo (2011) classified service innovation into interactive and supportive. Interactive service innovations lead to the creation of new values which are directly experienced by clients, or the innovations in the service consumption interface (frontage or front-end) (Salunke *et al.*, 2019). Salunke and McColl-Kennedy (2013) stated that interactive service innovation refers to the changes in service offering itself, service delivery process, and service customization to meet the unique needs of clients. Supportive service is also considered as the changes in organizational processes, reflected in service production, sourcing for production inputs, and service quality (Salunke *et al.*, 2019). Supportive services also refer to service provision interface, which serves as a support base for the frontage or interactive service. As indicated by Salunke and McColl-Kennedy (2013), a new service thrives on effective back-end configurations, to ensure that the new service offers new value proposition to clients, generating value for the organization in general.

Financial performance is also considered as the rise in firm’s profits, earnings, and value of share price (Nufus *et al.*, 2020; Tajeddini et al., 2020). For the insurance sector, performance is usually measured in annual turnover, profitability from underwriting activities, net premium earned, return on equity and returns on investment (Jaishi, 2020). Assessing the financial performance of insurance sector is of critical importance, because the sector serves as an avenue for cash savings, as well as redirecting surplus funds into economically deficient sectors, to boost investment in the whole economy (Gathungu *et al.*, 2014). Financial performance of a firm is of most importance to shareholders or owners of the firm, as it defines shareholder value. Financial performance could be achieved either through growth strategy, or productivity strategy. Increasing productivity through service innovation will enhance insurance firms’ financial position (Rajapathirana and Hui, 2018). Service innovation could reduce the direct and indirect cost of production, by making efficient use of the available resources.

Existing literature suggests that service innovation has effect on the internal business processes of the firm, through an enhanced service delivery capability (Chu et al., 2017), internal capability through an enhanced learning (Salunke et al., 2019), customer value (Chang and Lee, 2020), customer satisfaction (YuSheng and Ibrahim, 2019), environmental performance (Løvlie *et al.*, 2008), competitiveness (Tan et al., 2016). All these effects of service innovation, culminates in enhancing the financial performance of firms, and the insurance firms for that matter. Based on these discussions, the first hypothesis is presented as;

H1: Service innovation has a direct positive effect on financial performance of insurance firms.

2.3 Effects of Risk Management Capability on Financial Performance

Risk is defined by Bessis (2002) as the potential loss, danger, injury, and adverse consequences associated with an activity. Risks when effectively managed, could serve as a source of opportunity, rather than threat (Okoye et al., 2017). Risk management is also defined as the measures put in place by an individual or corporate entity, to mitigate against the adverse consequences of risk resulting from their operations or activities (Kokobe and Gemechu, 2016; Dogbe et al., 2019). A number risk management techniques are being used in the insurance sector, including, loss prevention and control, loss financing, and risk avoidance (Rejda, 2003; Meredith, 2004). Loss prevention and control looks at the preventive measures taken to reduce the frequency (minimize) or prevent the occurrence of adverse effect or loss. Insurance firms guide their clients on risk prevention, to minimize loss and subsequent claims payment. Loss financing ensures that funds are available for claims payment, when client suffers a loss. This is achieved through risk retention, risk transfer and risk diversification. Finally, avoidance as a risk management strategy means a loss exposure is never acquired or an existing loss exposure is abandoned.

The core service of insurance firms is to absorb or provide a cover for potential risks or losses of other entities. These risks borne by insurance firms, when not well-managed, could have negative effect on the performance of insurance firms (Watson et al., 2018). It is therefore imperative for insurance firms to develop better models or strategies in handling these absorbed risks which could potentially cripple the insurance firm (Andreeva, 2021). Andersen (2008) identified some risks which could potentially affect the performance of insurance firms, and these include, underwriting, agency, credit, liquidity, market, operational, strategic, compliance, reputation, and legal risks. These risks have financial implications, and thus could affect the financial performance of the performance firms (Kokobe and Gemechu, 2016). Mohsen *et al.* (2011) identified that effective management of these risks will help increase the value of insurance firms for enhanced profitability, and avoid the risk of bankruptcy. Tony *et al.* (2012) suggested that, without effective risk management strategy, insurance firms cannot survive increased loss

and expense ratios. Based on these discussions, the second hypothesis is presented as;

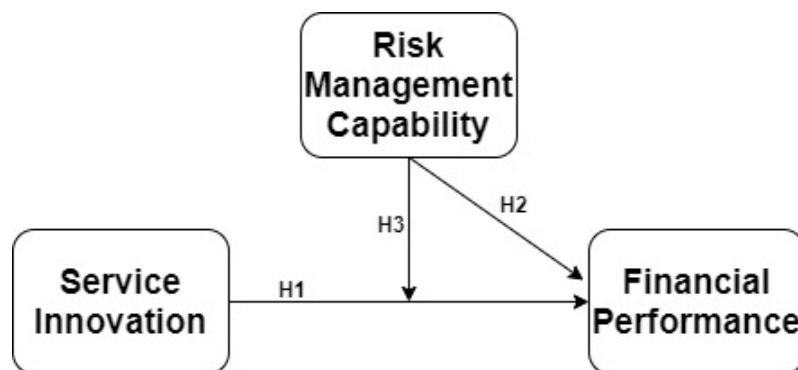
H2: Risk management capability has a direct positive effect on financial performance of insurance firms.

2.4 Moderating Role of Risk Management Capability

Firms make huge investments to transform innovative ideas into viable business offerings, which offer new or improved solution to clients. This means firms commit resources into the development of new products, services and processes, in line with the dynamic market environment (Tseng et al., 2019). Responding to the changes in market environment helps firms to survive the turbulent or competitive business environment, however, without innovation, firms cannot meet the changing needs in the market (Tan et al., 2016). This notwithstanding, it has been established that not all innovation efforts yield the desired goal (Xiong et al., 2019). There is therefore an inherent risk in innovation itself. Investment in service innovation by insurance firms should thus be geared towards effective risk response for enhanced financial performance. Also, investments in service innovation by insurance firms could achieve the desired goal of enhancing its financial position, through the provision of new or improved value for clients (Mahmoud et al., 2018), however, when risks (such as, underwriting, agency, credit, liquidity, market, operational, strategic, compliance, reputation, and legal risks) are not properly managed, the positive effect of service innovation will be eroded (Andreeva, 2021). Risk management capability is therefore key in enhancing the effect of service innovation on the financial performance of insurance firms. Thus, the combined effects of service innovation and risk management capabilities, will have greater impact of insurance firms' financial performance. Based on these discussions, the third hypothesis is presented as;

H3: Risk management capability positively moderates the relationship between service innovation and financial performance of insurance firms.

Graph 1. Conceptual Framework



Source: Authors' construct

3. Methods

3.1 Research Design and Approach

The presents study adopted cross-sectional research design, as the data for the study was gathered within a specific point in time. The data collection took 4 weeks, within the month of August 2020. It also adopted a survey research approach, as samples from the population was drawn, and inferences were made for the entire study, after the completion of the study. A structured questionnaire was also used as the research or data collection instrument.

3.2 Population, Sample and Sampling Technique

The population of this study comprises the insurance companies in Ghana. As at 2020, there were 39 life and non-life insurance firms in Ghana (NIC, 2020). This study used purposive sampling, which is a non-probability sampling technique. Purposive sampling enables a researcher to select key informants who have adequate knowledge on the subject matter investigated (Saunders et al., 2012). On the website of the NIC of Ghana, there were lists of insurance firms with their contact addresses and emails. The researcher emailed all the 39 insurance firms with a cover letter, detailing the focus of the research. Out of the 39 emails sent, 17 of the firms replied, giving their willingness to partake in the study. An e-version of the questionnaire was emailed to their correspondence, and asked to forward to the category of management members listed in the cover letter attached. The respondents were Chief Operating Officers, Claims Managers, Underwriting Managers, Finance Managers, Risk Managers, Reinsurance Managers, Marketing Managers, Sales Managers, Customer Service Managers, and Branch Managers. Ten (10) management members each were expected to respond to the questionnaire from the selected insurance firms, giving a sample size of 170. After the data collection period however, 161 questionnaires were filled. This gave a response rate of 94.7% $[(161/170)*100]$.

3.3 Data Collection Instruments

The data collection tool used for the study was a structured questionnaire, with five sections. Section A presented the organizational characteristics; Section B addressed respondents demographics; Section C presented questions on service innovation; Section D addressed the risk management capabilities; and Section E also had the questions relating to financial performance. Sections C to E were answered on a Likert scale of *1-Strongly disagree to 5-Strongly agree*. An electronic questionnaire (e-questionnaire) was adopted for the study. The measurement items under service innovation were adapted from Tajeddini and Martin (2020), those of risk management were adapted from Kokobe and Gemechu (2016), while those of financial performance were adapted from Tajeddini and Martin (2020).

3.4 Data Validity and Reliability

Firstly, an Exploratory Factor Analysis (EFA) was run in SPSS (v.23) to assess if measurement items properly loaded onto their corresponding latent variables. There were six (6) first-order variables, which were, interactive service innovation (ISIN), supportive service innovation (SSIN), loss prevention and control (LPC), loss financing (LFIN), risk avoidance (RAV), and financial performance (FPERF). Originally, interactive service innovation had 6 measurement items, supportive service innovation had 6 measurement items, loss prevention and control had 5 measurement items, loss financing had 8 measurement items, risk avoidance had 4 measurement items, and financial performance had 6 measurement items. During the EFA, measurement items with poor factor loadings (less than 0.5) and items loading on different constructs were deleted from the analysis (Amoako et al., 2020). After the EFA, interactive service innovation had 6 retained items, supportive service innovation had 5 retained items, loss prevention and control had 4 retained items, loss financing had 8 retained items, risk avoidance had 3 retained items, and financial performance had 4 retained items.

The total variance extracted (TVE) from the EFA was 75.18% which is higher and met the minimum requirement of 50%. The Kaiser-Meyer-Olkin (KMO) measure of sampling Adequacy should be at least 0.6 which the current study achieved 0.845 indicating high sample adequacy. Also, Bartlett's Test of Sphericity should be statistically significant in order to show the strength of correlations among the variables to guarantee EFA. The results attained ($X^2 = 4231.063$; sig. 0.000) showing EFA was appropriate, as there existed enough correlation among the variables. The correlation Determinant should also not be equal to zero (0), as an indication of positive definiteness in the data used for the estimation. The Determinant obtained for EFA was 5.137E-7 which is not equal to zero (0).

Secondly, a Confirmatory Factor Analysis (CFA) was run in Amos (v.23), to further check the reliability of the measurement items in loading unto their respective latent variables. Results of the CFA are presented as Table 1 and Figure 2. From the results, the standardized factor loadings for the measurement variables were all greater than 0.5, as expected. This shows that all measurement items significantly explained their latent variables. Cronbach Alpha (CA) was also run using the retained variables, and results presented indicated that all latent variables had an alpha score of higher than the minimum requirement of 0.7, which shows that there was a high internal reliability among the measurement variables. According to Fornell and Larcker (1981), a minimum Average Variance Extracted (AVE) of 0.5 is required to claim for convergent validity, and a composite reliability (CR) on the other hand is required to be at least 0.7. These were all achieved for all the constructs.

As per model fit indices, CMIN/DF is expected to be less than 3, PClose should be more than 0.05, GFI should be at least 0.8, TLI and CFI are all expected to be greater than 0.9, whiles RMSEA and SRMR are also expected to be less than

0.08 (Hair *et al.*, 2010). From Table 1, it is realized that the results met these thresholds, and so the study concludes that the data appropriately fit the construct model.

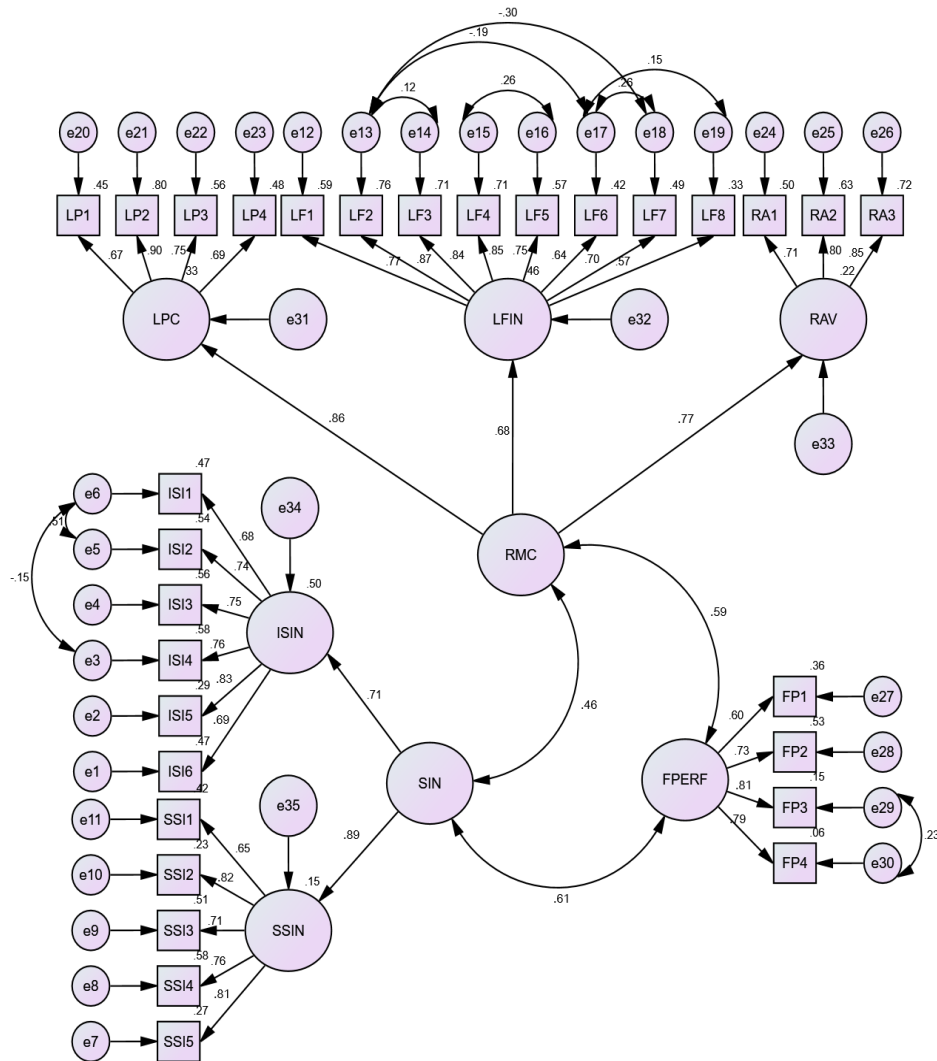
Table 1. Confirmatory Factor Analysis (CFA)

Observed, First-Order Latent & Second-Order Latent Variables	Factor Loading
CMIN=726.347; DF=390; CMIN/DF=1.862; P-value=.000; GFI=.868; PClose=.177; TLI=.905; CFI=.915; RMSEA=.053; RMR=.059	
Service Innovation (SIN): CA=0.793; CR=0.785; AVE=0.649	
<i>Interactive Service Innovation (ISIN): CA=0.879; CR=0.880; AVE=0.552</i>	<i>0.710</i>
The modes by which our firm interacts with our clients' have significantly improvement over the past 5 years (ISI1)	.683
The number of service offerings has significantly increased over the past 5 years (ISI2)	.736
The service delivery channels has seen significant improvement over the past 5 years (ISI3)	.749
The speed in which our firm delivers services has significantly improved over the past 5 years (ISI4)	.762
We have had an improved brand reputation over the past 5 years (ISI5)	.834
We are able to customize service to meet individual client's needs, over the past 5 years (ISI6)	.684
<i>Supportive Service Innovation (SSIN): CA=0.881; CR=0.869; AVE=0.571</i>	
Service production procedures has significantly improved over the past 5 years (SSI1)	.652
We have significantly improved our service quality procedure over the past 5 years (SSI2)	.824
The technologies used to deliver services have significantly improved over the past 5 years (SSI3)	.715
We have adopted a more innovative ways of procurement, over the past 5 years (SSI4)	.761
The collaborative arrangements our firm has with other businesses has significantly improved over the past 5 years (SSI5)	.813
Risk Management Capability (RMC): CA=0.850; CR=0.820; AVE=0.604	
<i>Loss Financing (LFIN): CA=0.903; CR=0.913; AVE=0.571</i>	<i>0.684</i>
Retention is the act of keeping the possibility of loss with no attempt to transfer that loss to another party (LF1)	.770
Our firm retains risks, when the loss exposure is either too small with little impact or too great to be able to do anything with it (LF2)	.871
Our firm retains risks, when the risks of loss is too great to be able to do anything with it (LF3)	.842
Our firm transfers risks through reinsurance (LF4)	.845
Our firm transfers risks through hedging (LF5)	.754
Our firm allocates risks to those parties who are most appropriate to bear them (LF6)	.643
Our firm sometimes lowers risk by combining exposures that are not related to one another (LF7)	.697

Our firm sometimes creates portfolios that optimize various levels of risk and return (LF8)	.574
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<i>Loss Prevention and Control (LPC): CA=0.843; CR=0.841; AVE=0.572</i>	<i>0.864</i>
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We have measures in place to assist clients to minimize the occurrence of the insured eventuality (LP1)	.670
We advise our clients to instill good housekeeping habits, such as smoking only in designated areas (LP2)	.897
We advise our clients on how to reduce motor accidents (LP3)	.748
We advise our clients on fire prevention measures (LP4)	.690
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<i>Risk Avoidance (RAV): CA=0.823; CR=0.828; AVE=0.617</i>	<i>0.774</i>
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Our firm sometimes avoids certain loss exposures by not acquiring them (RA1)	.707
Our firm sometimes abandons an existing loss exposure (RA2)	.796
Our firm sometimes prefers to sell small policies instead of comprehensive (RA3)	.847
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Financial Performance (FPERF): CA=0.790; CR=0.825; AVE=0.544	
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Profit goals have been achieved over the past 5 years (FP1)	.596
Sales goals have been achieved over the past 5 years (FP2)	.730
Market share goals have been achieved over the past 5 years (FP3)	.813
Return –on- asset goals have been achieved over the past 5 years (FP4)	.792
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Source: Authors' calculations

Graph 2. Confirmatory Factor Analysis



Source: Authors' calculations

The discriminant validity was obtained by comparing the square-root of raw average variance extracted (\sqrt{AVE}) to their corresponding inter-correlation coefficients, as was done by Bamfo et al. (2018). \sqrt{AVE} is showed as bold and underline. All variables attained the required threshold as presented in Table 2. In conclusion, data obtained from CFA analysis is legitimate for model estimation.

Table 2. Discriminant Validity

Variables	Mean	SD	SIN	RMC	FPERF
Service Innovation (SIN)	3.550	0.992	<u>0.806</u>		
Risk Management Capability (RMC)	4.058	0.694	0.456**	<u>0.777</u>	
Financial Performance (FPERF)	3.027	0.830	0.614**	0.591**	<u>0.738</u>

√AVE are bold and underlined; ** ~ P-value significant at 1% (0.01)

Source: Authors' calculations

4. Results

The study being a firm level analysis, controlled for two firm characteristics which could have potential impact on the outcome of the study. Firm age and size (measured by the number of employees) were controlled for because of their potential effects on service innovation adoption among firms. From Table 3 and Figure 3, it is realized that firm age had a positive and significant effect on financial performance (FPERF) of insurance firms. The unstandardized coefficient of 0.162 implies that, for every unit change in the age of an insurance firms, there is a corresponding increase in its financial performance by 0.162 (16.2% change). Similarly, the size of firm had a significant positive effect on its financial performance. A coefficient of 0.234 indicates that, a unit change in firm size, leads to 0.234 (23.4% change) in financial performance, and vice versa. Results therefore were in tandem with some past studies on innovation, which suggest that firm size and age had a significant role in firm's innovation practices (such as, Dogbe et al., 2020).

The effect of service innovation on the financial performance of insurance firms was assessed. From the analysis, we realized the unstandardized coefficient of 0.438 for the path SIN → FPERF. This implies that, a unit increase in service innovation adoption by insurance, leads to 0.438 (43.8%) rise in financial performance, and vice versa. Adopting interactive service innovation and supportive service innovation therefore boost the financial performance of insurance firms. The first hypothesis "*H1: Service innovation has a direct positive effect on financial performance of insurance firms*", is therefore accepted.

The study further assessed the direct effect of risk management capability (RMC) on the financial performance of insurance firms in Ghana. Although risks in general will have a detrimental effect on the financial performance of firms, firm's ability to effectively manage its risks, had a positive effect on its financial standing. From the analysis presented, it is realized that the unstandardized coefficient for path RMC → FPERF was 0.382. This implies that, a unit increase in risk management capability will lead to increase in the financial performance of insurance firms by 0.382, and vice versa. The second hypothesis "*H2: Risk management capability has a direct positive effect on financial performance of insurance firms*", is therefore accepted.

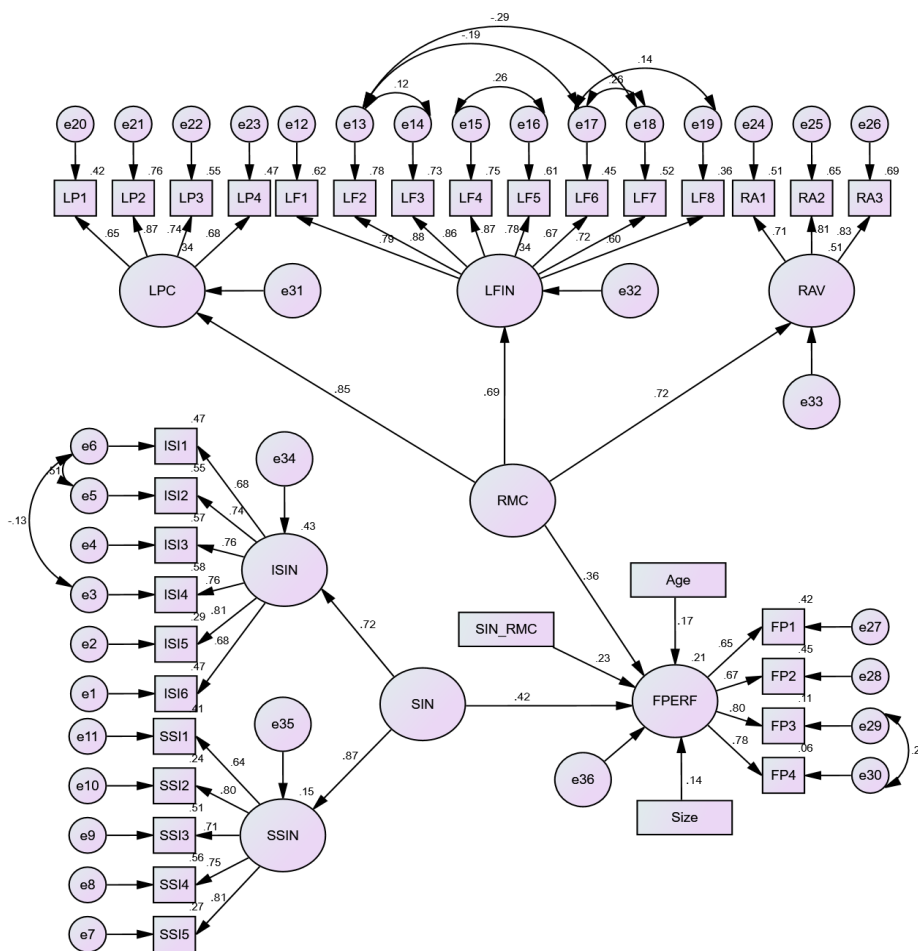
Table 3. Path Coefficients

Paths	Std. Estimates	Unstd. Estimates	S. E.	C. R.
Age → FPERF	.172	.162	.043	3.755***
Size → FPERF	.139	.234	.056	4.164***
SIN → FPERF	.419	.438	.080	5.504***
RMC → FPERF	.364	.382	.044	8.701***
SIN_RMC → FPERF	.231	.268	.081	3.322***

***Sig. at 1%

Source: Authors' calculations

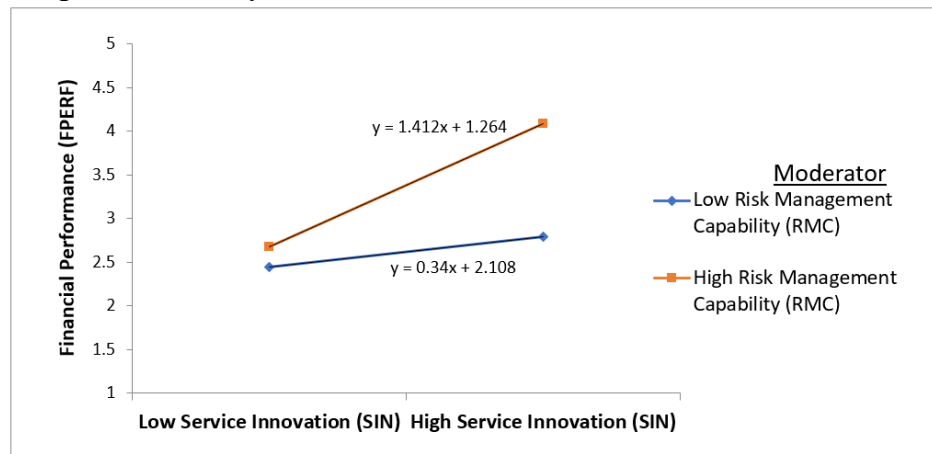
Graph 3. Structural Equation Model



Source: Authors' calculations

Finally, the moderative effect of risk management capability in the relationship between service innovation and financial performance of insurance firms in Ghana was assessed. The coefficient for the path SIN_RMC → FPERF was 0.231, and was statistically significant. This means that, the effect of service innovation on the financial performance of insurance firms, is positively moderated by risk management capabilities. From Figure 4, it is realized that, financial performance of insurance firms was greater when firms possess both high levels of service innovation and risk management capability (yellow line). Firms with low levels of service innovation and low levels of risk management capability also had a corresponding low financial performance (blue line). From Figure 3, it is realized that the moderating effect of risk management on the relationship between service innovation and financial performance of insurance firms, increases at an increasing rate of returns. The third hypothesis “*H3: Risk management capability positively moderates the relationship between service innovation and financial performance of insurance firms*”, is therefore accepted.

Graph 4. Two-Way Interaction



Source: Authors’ calculations

5. Discussion of Results and Theoretical Contribution

Financial performance measures the extent to which firms are able to use their core business activities to generate income for the organization (Rajapathirana and Hui, 2018). That is, measuring the overall financial health of the business for a specified period of time (Jaishi, 2020). It’s a key indicator that tells stakeholders (such as, shareholders, investors, creditors, managers, employees, etc.) about the general economic wellbeing of a firm (Gathungu et al., 2014). Financial performance is of much interest, as it indicates the future survival of firms, growth prospects, performance of stocks, etc. Assessing the financial performance of insurance firms therefore provides more confidence and certainty in both short-and-long term decision-making (Tajeddini et al., 2020). Financial performance of insurance firms is an indication of stability, solvency, liquidity and profitability of the firm, which forms a key basis for future investments. Since financial performance remains the primary goal of every profit-oriented organization,

assessing the factors influencing financial performance of insurance firms is very essential. We therefore assessed how service innovation and risk management, could enhance the financial position of insurance firms.

The findings from this study pointed out that service innovation had positive effect on the financial performance of insurance firms. This was in line with our first hypothesis; *H1: Service innovation has a direct positive effect on financial performance of insurance firms*. Service innovation basically changes the business processes of a firm, leading to an improved service delivery capacity (Salunke *et al.*, 2019), enhanced internal capabilities through learning effects (Lusch and Nambisan, 2015), enhanced customer value and satisfaction (Salunke and McColl-Kennedy, 2013), enhanced environmental performance (Mihardjo, 2019), and enhanced competitive advantage (Tan *et al.* (2016). These benefits of service innovation, thus result in financial performance. Studies have also shown that, innovative firms are able to develop better product mix, expand into new product categories, and grow faster (Otoo *et al.*, 2020). Insurance firms which are innovative, tend to achieve higher profitability, as clients are willing to pay more for innovative products with superior or added value (Mahmoud *et al.*, 2018). These firms are thus able to sell their insurance products faster than less innovative ones, thereby increasing their revenue inflow. Higher value differential leads to higher the revenue growth propelled by both price and volumes. Being innovative will help to lower cost of operation for insurance firms (Rajapathirana and Hui, 2018). Innovative insurance firms will have better value proposition, which leads to an increased sales revenue (Salunke and McColl-Kennedy, 2013).

This study further identified that risk management practices, had a significant positive effect on the financial performance of insurance firms. This was in line with our second hypothesis; *H2: Risk management capability has a direct positive effect on financial performance of insurance firms*. The main tenets of risk management are the control and compliance measures put in place by firms, to mitigate the effects of potential risks (Kokobe and Gemechu, 2016). Control and compliance measures help firms to save cost, thereby enhancing the financial performance of the firm (Okoye *et al.*, 2017). Risk management also helps firms to increase its value, through continuous profitability. The insurance sector is faced with multiple risks such as, underwriting, agency, credit, liquidity, market, operational, strategic, compliance, reputation, and legal risks, which will have negative effect on the financial performance (causing financial distress) of insurance firms, if not properly managed (Andreeva, 2021).

The main contribution of this study however, centers on the moderating role of risk management capability, in the relationship between service innovation and financial performance of insurance firms. Although direct effects of service innovation and risk management, on financial performance have been established in literature (Yang *et al.*, 2014; Adeusi *et al.*, 2014; Olamide *et al.*, 2015), the interactive effect of these two predicting variables has not been well established in literature. This study identified that, when insurance firms invest in both interactive

(front-end) and supportive (back-end) service innovations, the financial performance (in terms of sales, profits, and market share) is improved. However, it was realized that, insurance firms which invest in service innovation, and concurrently engage effective risk management practices, get to achieve superior financial performance. This was in line with our last hypothesis; *H3: Risk management capability positively moderates the relationship between service innovation and financial performance of insurance firms*. This arises because, the core business activity of insurance firms center on risk acquisition. This therefore exposes insurance firms to multiple risks, which could nullify the positive effect of service innovation on the financial performance of insurance firms. Risk management therefore plays a critical role, by averting the potential negative effects of insurance risks, thereby giving room for firms to leverage or achieve the maximum benefit from its investments in service innovation (Tseng et al., 2019; Tan et al., 2016; Xiong et al., 2019).

6. Managerial Implications

Based on the finding of the study, the following recommendations were made for managers. Financial performance is the main goal of every business. Shareholders invest in business with the aim of earning some returns on their investments. Financial performance is key to the sustainability and growth of every organization. The study found service innovation performance as key driver for financial performance of insurance firms. It is therefore recommended that other service firms seeking to boost their financial performance should invest in interactive and supportive service innovations.

Secondly, despite the threat of risk on the financial performance of insurance firms, it was identified that effective management of these risks had a positive effect on the financial performance of insurance firms. It is therefore recommended that, other business seeking to boost their financial performance, must invest in risk management practices such as, loss prevention and control, loss financing, and risk avoidance.

Finally, the study also finds that, firms with both high levels of service innovation and risk management capability had a strong effect financial performance of insurance firms. It is therefore recommended that, for stronger financial position, firms should endeavor to invest in both service innovation and effective risk management practices.

7. Conclusions

Overall, the study sought to ascertain the moderating role of risk management capability in the relationship between service innovation and financial performance of insurance firms in Ghana. The study concludes that, risk management capability had a positive moderative effect on the relationship between service innovation and financial performance of insurance companies in Ghana.

This implies that, insurance firms with high service innovation, and are also able to properly manage its risk, have higher financial performance, and vice-versa. This notwithstanding, both service innovation and risk management capability had a direct significant positive effect on financial performance of insurance firms. There were two service innovation types adopted by the insurance firms, and these were, interactive and supportive service innovations. Three risk management techniques were also adopted by the insurance firms, and these were, loss prevention and control, loss financing, and risk avoidance.

8. Limitations and Future Research Suggestion

This present study focused on the direct effects of service innovation and risk management capability on the financial performance of insurance firms, as well as the moderating effect of risk management capability in the relationship between service innovation and financial performance. The results as presented, supported all the stated hypotheses for the study. However, the investment in service innovation could be as a result of the inherent risks in the operation of insurance firms. Service innovation in itself may therefore be a risk mitigation measure. That is, firms may invest in service innovation as a counter measure to the effect of risk on the performance of insurance firms. Future studies could therefore assess the potential mediating effect of service innovation in the relationship between risk and performance of firms.

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Declaration of Interest Statement

We declare that there was no known conflict of interest, which could impact the outcome of this study.

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