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Strategic Entrepreneurship Risk-taking on Technological Opportunism to Enhance Revenues and Manage Bank Viability in Competitiveness

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Abstract. The risk of relying on technology within organizations is whether it generates success and profits related to the objectives of the overall plan or no success and loss of objectives and finances in opposite. As a result, strategic entrepreneurship can be used to develop methods of asserting whether the introduction of new models or tools can lead to intended outcomes. Entrepreneurial strategy underpins several concepts that support the development of an outcome to expect from both entrepreneurial orientations and planning flexibility; in particular, risk-taking, responsiveness and innovation, which can be measured in the course of operations, in order to determine, if they exist, moderating and mediating factors between technological opportunism and performance of organisations achieving a high rate of success through a new product, revenue growth, ROI (return on investment), substantial share of the market, or outstanding lucrativeness.This article investigated the technological opportunism effects on the performance of firm and the effects of mediating and moderating of risk taking in strategic entrepreneurship. The banking sector is the domain in which the influence of risk-taking was assessed using hypotheses.

Keywords. Risk-taking, Technology, strategic entrepreneurship, banking sector, Return on Investment

Introduction

Strategic entrepreneurship is the concept promoted by its propensity to bring entrepreneurship closer to strategic management (Kuratko and Audretsch, 2009). Business leaders and board members are, through their strategic entrepreneurship, well equipped to identify, explore and exploit the advantages of their organization in a competitive environment in order to make inroads that will sustain competitive advantage aligned with the industry, influence the industry and ensure the security of future revenue for the organization. (Urban and Venter, 2015).

The strategic advantage organizations seek is the technological possibilities inherent in evolution through the implementation of specific toolkits that support the development of internal applications, concepts and organizational activities, such as operations, production, management, quality improvement, customer satisfaction, etc. (Chen and Lien, 2013; Sarkees, 2011, Voola, 2011; Casimir, Carlson, Adnihotri and Anushree, 2012 and Srinivasan, Lilien and Rangaswamy, 2002).

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Backgrounds

Technological opportunism and entrepreneurial initiatives

Corporate risk-taking behaviour refers to an organizational readiness to investment in entrepreneurial initiatives with outcomes uncertainties (Lumpkin and Dess, 1996). The choice of taking risks is tied to a willingness to commit more resources to initiatives for which the cost of failing is relatively high (Miller and Friesen, 1978). In addition, risk behaviours are largely a result of the organization's desire to refrain from testing, imposing uncertainty or unknowns, that can generate significant financial returns (Wiklund & Shepherd, 2005). Theoretically, enterprise risk-taking is based on the viewpoint and behaviour of firms creating new business ventures for growth and profitability while accepting the estimated likely losses (Bulut et al., Yilmaz, 2008).

This research formulated a hypothesis based on an identified literature in which perceived risk taking behaviour by organizational mediator and moderator in relationship between business performance and technological opportunism is observed.

Risk taking and technological opportunism in organisation

A number of researchers are convinced that risky behaviours are likely to be associated with dynamic resource and capacity theories. Organizations need to be resourceful in taking risks and influencing dynamic capabilities to make profitable investments. Similarly, risk taking must play an important role in the adoption of new technologies in order to increase vigilance against any technological opportunity, while acting with caution before the implementation of technological knowledge. The propensity to take risks may be associated with investments in technological development with no guarantee of financial return. As a result, risky behaviour may be involved in technological opportunism as consumer outcomes are not known from the point of view of market orientation and adaptation to technological innovations. Consistent with Lumpkin and Dess (2001), risk taking is identified with the ability to make informed decisions and take advantage of opportunities to develop a new business by combining the resources needed in a business while foreseeing positive results. Risk behaviour also takes into account the organization's desire to get rid of proven techniques and venture into the unknown outcomes that can generate high financial returns (Wiklund and Shepherd, 2005). In the current development and context of technology through the 4th Industrial Revolution, there is an

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increase in the certainty of life-enhancing technology that would always need public awareness, acceptance and safety. In line with Halaweh (2013), companies that invest in 4IR are taking an essential step forward in transforming current industries; these are intensive entrepreneurial enterprises which are not always spared from risks when financial investments, sometimes significant, are involved, while these emerging technologies are science-driven innovations.

Entrepreneurial opportunity and risk taking

An entrepreneurial opportunity is described as an entrepreneurial action that can be motivated by the pursuit of profit (Acs, Mcmullen and Plummer, 2007). Although, with perception and some idiosyncratic shocks, risky technologies can generate a lot of capital over secure technologies once they are used successfully and, on the contrary, no capital is released in the event of failure. With banks, for example, risk-taking is endogenous; in the event of non-payment of the risk incurred, entrepreneurs can extend as much as possible to the possibility of taking out a loan and they are secured against such a risk. Banks may have many adverse incentives due to their limited liability and the inherent value of deposits and, such adverse incentives act as prudential regulation (Agénor and Pereira da Silva, 2017).

Research approach

The study applied the quantitative empirical approach to data collection and extracted available statistics using a structured online questionnaire duly completed by employees in the banking sector and exclusively executives as respondents.

The study aimed conducting an empirical research on the effects of strategic entrepreneurship, particularly on entrepreneurial orientation: risk taking, innovation and responsiveness, with respect to technological opportunism and business performance in the banking sector. The study distributed by email containing a hyperlinked online survey of 1,848 employees of a banking institution selected at random. About 509 positively responded and this during a 45-day period of data collection, representing 28% of the initial response rate. Out of 509 responses resulted in a sample of 347 usable responses, sufficient to address any statistical requirements. The choice of an institution as the sample is justified given the identical profile of the market environment and the same business approaches and conditions as those applied by South African banks. The epistemological perspective used was the positivist perspective with a framework to focus on understanding, describing and analysing the specific worldviews of the population; thereby increasing the knowledge base linking operational variables also known as constructs. This research was conducted as an empirical study to focus on evidential knowledge through the use of collected data for evidential hypothetical analysis.

Table 1: Levels of Research Constructs

Sources: (Murimbika and Urban, 2015; Chen and Lien, 2013)

Variable Type	Level 1 Construct	Level 2 Construct	Level 3 Construct
Independent Variable	Strategic Entrepreneurship	Entrepreneurial Orientation	Risk taking*
			Proactiveness
			Innovation

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Research hypotheses

The hypotheses requested for empirical validation in the framework of the entrepreneurial orientation dimension of the concept of strategic entrepreneurship (Table 1), namely:

Mediator

- **Hypothesis 1**: A primary relationship between firm performance and technological opportunism is mediated by means of risk taking in the way that an indirect or direct existence of the association is positively risk taking linked.

Moderator

- **Hypothesis 2**: Risk taking is the moderating variable between firm performance and technological opportunism and is considered a key relationship in that both strength and direction are determined by a defined level of risk taking.

The respondents were approached with the request of giving ratings on the bank's perceived collective management style on the argument of key decision making in relationship with risk taking concept. The assessment of entrepreneurial orientation's signification construct items analysed by means of a seven-point Likert scale.

Results and analysis

The results are derived from empirical research based on descriptive demographic analysis providing frequencies, means and standard deviations, scales and results of validity of measures and tests of hypotheses. The research instrument included constructs of control variables such as technological turbulence and competitive hostility. The questionnaire consisted of 45 questions divided into six sections: entrepreneurial orientation, corporate performance, planning flexibility, demographics, technological opportunism and external environmental factors related to technological turbulence and competitive hostility.

Measurement scale validity

Scale validity

To assess the validity of the data, an exploratory factor analysis of the constructs in the hypotheses was conducted. The outcomes are displayed in Table 2 and Table 3.

The values of the sphericity test based on the Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy and Bartlett as revealed in Table 2, and further was revealed that all KMO values were greater than 0.5 which is the minimum required value and less than 0.05 of significant p values. This implies the that sample size was acceptable for having factor analysis of the different constructs conducted.

Table 2: All Constructs for KMO and Bartlett's Test

Entrepreneurial Orientation – Risk Taking		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.649
Bartlett's Test of Sphericity	Approx. Chi-Square	220.319
	Df	3
	Sig.	.000

Table 3: Validity of Scale: Risk Taking through Factor Analysis

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construct	Items	Factor loading	Total Variance explained
Risk Taking	In general, the leaders within the bank favour a cautious "wait and see" approach in order to minimise risk	.859	65%
	In general, the leaders within the bank favour low risk projects with normal	.785	
	In general, the leaders of our bank believe that owing to the nature of the environment, it is be…	.764	

The Entrepreneurial Orientation construct with the construct or variable Risk taking had three items. This sub-construct retained three factor loading of 0.859, 0.785, and 0.764 respectively, with a total variance of 65% in the items.

Reliability of Scale

The computation of Cronbach's alpha was performed for the construct search in order to evaluate the scale reliability. Findings are as presented in Table 4.

Table 4: Scale reliability

Construct	Cronbach's Alpha	Items (Number)	Reliability level
Technological opportunism	0.909	8	Excellent
Risk taking*	0.726	3	Acceptable
Innovation	0.692	2	Questionable
Pro-activeness	0.701	3	Acceptable

It is clear from Table 4 that technological opportunism with 8 items had outstanding reliability with Cronbach's Alpha values above 0.9 (0.909). Risk taking (0.726) had acceptable reliability level given that values of Alpha were greater than 0.7. Since all the constructs resulted a Cronbach's Alpha score greater than 0.5, these values are refuted. For each construct, a summary assessment was computed by obtaining the average value of the items on the scale (Table 5).

Descriptive statistics of the constructs

Every construct and sub-construct was computed to the summated scale by calculating the average value of the scale items. Figure 5 provides the constructs' descriptive statistics with regard to standard deviations and means. Taking risks (mean = 4.67) had the highest construct, the second highest was technological opportunism (mean = 3.71).

Table 5: Descriptive statistics and correlation of Pearson

Variable	M	SD	1	2	3	4
Technological Opportunism	3.71	1.24	1			
Innovation	3.38	1.45	0.14	1		
Risk Taking*	4.67	1.11	0.05	0.34	1	
Proactiveness	4.40	1.25	0.31	0.43	0.55	1

The calculation of the Pearson's correlation was undertaken to determine the relationship

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between the constructs, then a multiple regression analysis was performed. It is to be noted that correlations should not to be taken to mean as causation effects as there may be more other constructs to affect causal relationships between constructs yet they do form part of the research. The correlation coefficients amongst the explanatory constructs was low and there was no multi-collinearity existence between independent constructs.

Table 5 shows substantial constructs and correlations between them. The correlation between technological opportunism, innovation ($r = 0.14$, $p < 0.05$), and proactivity ($r = 0.31$, $p < 0.01$) was positive and significant. It has been shown that risk taking is a significant and positive correlate of pro-activeness. ($r = 0.55$, $p < 0.01$). Pro-activeness is a significant and positive correlation with planning flexibility ($r = 0.24$, $p < 0.01$).
The observed Pearson correlations between the entrepreneurial orientation measurements, in this case, innovation, risk-taking and proactivity, were expected to a large extent of correlation given they form part of a single construct that is entrepreneurial orientation. Furthermore, Pearson's correlation coefficients between each underlying explanatory construct point to a lack of multi-collinearity.

Hypothesis 1 (Mediation):
A regression model with technological opportunism as the independent variable, firm performance as the dependent variable, and strategic entrepreneurship (combining risk taking, proactivity, and other entrepreneurial orientation variables) as the mediating variable was fitted. The findings are outlined as follows in Table 6:

Table 6: Entrepreneurial orientation mediating between business performance and technological opportunism

	Model 1: Technological Opportunism>Firm performance			**Model 2: Technological Opportunism + Risk taking > Firm performance**			**Model 3: Technological Opportunism > Risk taking**		
	B	**SE**	**β**	**B**	**SE**	**β**	**B**	**SE**	**B**
Intercept	1.29***	0.2		1.03***	0.21		2.50***	0.33	
Technological opportunism	0.42***	0.04	0.5	0.41***	0.04	0.49	0.12*	0.06	0.1
Risk taking				0. 10***	0.03	0.14			
F	40.42***			49.22***			4.05***		
R^2	0.32			0.3			0.03		

Note that: *** = p < .01; ** = p < .05; * = p < .10

The second condition, which requires the independent variable to be significantly related to the mediating variable, is not met for risk taking. Therefore, risk taking is not mediating the relationship between firm performance and technological opportunism.

Hypothesis 2 (Moderation): This moderation is underpinned by risk taking. The table 7 presents the moderating variable.

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Table 7: Entrepreneurial orientations as moderator of the relationship between firm performance and technological opportunism

Risk taking moderation	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	2.84***	0	2.8***	0	2.77***	0
Technological opportunism	0.42***	0.5	0.41***	0.5	0.41***	0.5
Risk taking			0.05	0.06	0.06	0.06
Technological opportunism x risk taking					0.03	0.04
R^2	0.3		0.31		0.31	

Note that: *** = p < .01, ** = p < .05, * = p < .10

We note that **model 2** is significant given that the p-values are smaller than 0.01 and the coefficients are positive. On the other hand, the relationship between firm performance and risk taking (B = 0.05, β=0.14, p-value > 0.1) are insignificant as the p-value was higher than 0.05.

Based on **Model 3**, the multiplication of the interaction variables [risk-taking] * [technological opportunism] on the model is insignificant although there is an increase in the R-square of 0.3. There is also no significant difference between the coefficients of the interaction variables (proactivity, innovation, and risk-taking) and zero. This is along the lines that risk-taking did not moderate the relationship between firm performance and technological opportunism.

Table 8: Entrepreneurial orientation moderating the relationship between firm performance and technological opportunism

Entrepreneurial Orientation	Model 1		Model 2		Model 3	
	B	B	B	β	B	β
Intercept	2.84***	0	2.79***	0	2.8***	0
Technological turbulence	0.04	0.04	0.04	0.04	0.04	0.04
Competitive hostility	0.17***	0.14	0.19***	0.16	0.19***	0.16
Technological opportunism	0.42***	0.5	0.39***	0.47	0.39***	0.47
Entrepreneurial orientation			-0.15***	-0.14	-0.15***	-0.14
Technological Opportunism x Entrepreneurial orientation					0.01	0.01
	0.30		0.32		0.32	

Notes: *** *= p < .01,* ** *= p < .05,* * *= p < .10*

Conclusion

As discussed in Table 5, it was found that there was no significant correlation between firm performance, technological opportunism, and risk-taking construct. The relatively high average risk-taking behaviour is an indication that the organization perceives high risk to absorb financial losses (Table 5), since this construct has no positive association with firm performance and technological opportunism.

The high level of risk-taking observed (mean = 4.67) with low moderating variability (standard deviation = 1.11), coupled with the lack of a correlation statistically significant (p-value>0.1) with firm performance and technological opportunism, implies that financial profitability is not perceived by the banking institution to be in line with this risk-taking behaviour and therefore not reflected. Non-significant correlation between risk taking and firm

performance, as long as the p-value exceeds 0.05 (p-value>0.1, r= 0.06). The low to moderate variability observed from the survey participant responses implicated a low moderate standard deviation.

Statistical results indicated the existence of high perceived risk for the organisation to incur financial losses since firm performance is not positively correlated with technological opportunism. The quintessence reading is that the organization is seen as not exploiting the technological opportunity to improve management with risk and not be misled about the profit potential of risk, although risk taking is an endogenous element in the nature of the banking activity. There was no support by statistical results of the hypotheses sustained, neither accepted the null hypothesis for mediation nor the risk-taking moderation. Therefore, technological opportunism does not significantly associate with risk-taking behaviour.

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