

## Organizational Resources, Innovation and Performance of Insurance Companies in Kenya

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In spite of a growing body of literature on firm performance, explaining why firms in the same industry and markets differ in their performance remains a fundamental question within strategic management field. While some researchers have attributed these differences to the resources owned and controlled by firms, others have argued that resources alone do not explain the differences in the firms' performance. This debate still continues, hence providing room for further contributions. Underpinned by the postulations of resource based theory, dynamic capabilities theory and knowledge based theory; this study contributes to the debate. The study advances the proposition that resources influence performance through the intervening effect of innovation. The proposition is empirically tested using both primary and secondary data from 46 Insurance Companies in Kenya. The results reveal that both tangible and intangible resources have a statistically significant direct influence on non-financial performance despite mixed findings as regards to the independent effects of resources on various firm performance indicators. Innovation was found to have a statistically significant intervening influence on the relationship between resources and non-financial performance. The findings offer some support for the anchoring theories as well as partial support to previous similar studies. In spite of the inherent limitations, the study advances the frontiers of knowledge in confirming the anchoring theories while providing ground for policy direction and managerial practice.

**Key Words:** *Organizational Resources, Innovation, Firm Performance, Insurance Companies*

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## Introduction

Strategic management scholars and practitioners have over the past two decades explained why firms in the same industry differ in performance. This has inconclusively been attributed to resources (Barney, 1986; Barney, 1991; Amit and Schoemaker, 1993; Kraatz and Zajac, 2001). Amit and Schoemaker (1993) propose that firms in the same industry perform differently because they differ in terms of the resources and capabilities they control even in equilibrium.

However, other researchers have proposed that resources alone cannot be a source of Sustained Competitive Advantage (SCA). Other factors come into play, key among them innovation. Scholars have argued that innovation is a crucial source of competitive advantage and survival in a given dynamic environment (Dess and Picken, 2000).

The study was anchored in various theories. Resources were underpinned by the Resource Based Theory (RBT) (Barney, 1991) and the Dynamic Capabilities Theory (DCT) (Teece, Pisano and Shuen, 1997). The key postulation of the RBT is that the unique configuration and bundling of resources in competitive markets leads to Competitive Advantage (CA) and improved firm performance (Barney, 1991). The DCT postulates that an organization's ability to achieve innovative forms of competitive advantage depends on path dependencies and market positions (Leonard-Barton, 1992 in Teece et al., 1997). Innovation was anchored in the Knowledge-Based Theory (KBT) (Michailova and Hutchings, 2006). The KBT views knowledge transfer and sharing as core to innovation (Michailova and Hutchings, 2006).

Studies on organizational resources, innovation, and performance have been done in isolation, the results remain fragmented and no consensus has yet emerged. Even though Kotler (1991) established that return on innovation accounting statistics showed that as high as 50 percent of corporate revenue is innovation driven, the role of resources was not considered. Nelson and Winter (1982) have suggest that firms with a strong commitment to research and development and learning will experience a higher growth rate. Studies on resources argue that if a firm is to achieve a state of SCA, it must acquire and control Valuable, Rare, Inimitable, and Non-Substitutable (VRIN) resources (Barney, 1991). Carmeli and Tishler (2004b) established that intangible resources positively influenced performance. From the foregoing, it is noted that few studied have bothered to investigate the role of innovation in the resource - performance relationship. This study therefore sought to shed light on the interrelationships between resources, innovation and performance of insurance companies in Kenya.

Firm performance has been central in strategy research for decades and the central tenet has been why firms differ in performance (Porter, 1991). Hofer (1983) contends that performance is a contextual concept associated with the phenomenon being studied. Historically, firm performance was seen to be a function of factors outside the organization. More recently, there has been a paradigm shift with scholars arguing that firm performance is affected by organizational factors. Zott (2003) proposed that firm performance is affected by its ability to integrate, build and reconfigure capabilities and competences. Soh (2003)

posits that firms with a more efficient networking strategy will acquire more competitive information about other firms. This information advantage in turn leads to better new product performance and improved overall performance of the firm (Soh, 2003).

Historically, financial measures have been used to measure firm performance. These include profit, return on investment, return on assets, earnings per share, market share, revenue growth and current ratio (Pandey, 1999). Dess and Robinson (1984) propose that regardless of the framework chosen to conceptualize Organizational Performance (OP), they argue that OP is a complex and multidimensional phenomenon difficult to measure. The constituency approach views the organization as existing to benefit numerous constituents both internal and external to the organization. Its focus is to fulfill constituents needs (Thompson, 1967).

Critics have expressed dissatisfaction with exclusive use of financial data to measure performance. They argue that use of financial data encourages short term and local optimization thus overlooking the long term improvement strategy and ignoring competitor information (Kaplan and Norton, 1992). Due to the inefficiencies of financial measures of performance, the Balanced Scorecard (BSC) (Kaplan and Norton, 1992) which has a more stakeholder-based view was developed. The BSC evaluates corporate performance from four perspectives namely financial, internal business processes, customers and learning and growth. The firm is seen as having responsibilities to a wider set of groups than simply shareholders (Freeman, 1984). Over the years, performance has evolved to encompass wider definitions and

philosophies such as Profit Impact of Marketing Strategy (PIMS). This is grounded on the premise that firms are responsible for more than just creating economic value. In 1997, the Triple Bottom Line (TBL) was developed as a tool for measuring organizational performance (Elkington, 1997). The TBL considers excellence along all the three lines of sustainable reporting (economic, social and environmental) (Hubbard, 2009). The TBL adds social and environmental measures of performance to the economic measures used in organizations.

### **The Kenyan Insurance Environment**

The insurance industry in Kenya plays the financial intermediary role that contributes significantly to the realization of the Kenya Vision 2030. Kenya Vision 2030 aims to achieve an average Gross Domestic Product (GDP) growth rate of 10 percent per annum (Kenya Vision 2030 Report, 2007). The insurance industry falls in the financial services sector, which is among the priority sectors that are expected to spur the country's economic growth. This study focused on insurance companies because their performance will impact on the achievement of the Kenya Vision 2030. The Kenyan insurance industry has been known to be conservative as innovation has not been fully embraced by these firms. For this reason, the Insurance Regulatory Authority has continuously advocated for innovation activities to enhance performance (AKI, 2011). This is evidenced by the fact that insurance penetration remains low at 3.3 percent.

Previously, some insurance companies have been placed under receivership yet they had good resources. This is evidence

that resources alone cannot be a source of SCA. If these companies have to experience improved performance, they should put more emphasis on innovation. Investment in innovation will help firms to adapt to the dynamic environment in which these firms operate. This study therefore aimed at establishing the intervening effect of innovation on the relationship between resources and performance of insurance companies in Kenya.

### **Literature Review and Conceptual Hypotheses**

Resources a firm owns and controls are considered as determinants of superior firm performance. Strategic management scholars (Barney, 1991; Marino, 1996) have defined organizational resources as assets, knowledge, capabilities and organizational processes. These resources enable the firm to visualize and implement strategic decisions. Resources are input into the production process and can be tangible or intangible. Tangible resources include the financial and physical assets that are identified and valued in a firm's financial statements. This includes capital, factories, machines, raw materials and land (Itami, 1987). Intangible resources are more difficult to measure, evaluate and transfer and include employee's knowledge, experiences and skills, firm's reputation, brand name and organizational procedures (Johnson et al., 2008). These attributes of intangible resources make them firm specific thus difficult to imitate. It is thus plausible to argue that they confer to the firm superior performance as compared to tangible resources.

Recent research has shifted focus from tangible to intangible resources because they are thought to be valuable, rare and

difficult to imitate leading to a SCA (Barney, 1991). Kostopoulos, Spanos and Prastacos (2002) classified resources as tangible (financial or physical) or intangible (employee's knowledge, experiences and skills, firm's reputation, brand name, organizational procedures). According to Conner (2002) tangible resources are a weak source of competitive advantage compared to intangible resources as competitors can easily duplicate them. Empirical and theoretical literature proposes intangible resources as the drivers of a firm's superior performance (Amit and Schoemaker, 1993).

Among the intangible resources that have attracted researchers attention is corporate reputation. . In their empirical study of 93 Israeli firms, Carmeli and Tishler (2004b), found that intangible resources (managerial skills, organizational culture, organizational communication, and perceived organizational reputation) were a source of superior firm performance. Of the four variables, their study established that reputation had the highest contribution to firm performance. Similarly, Iwu-Egwuonwu (2011) contends that corporate reputation has a positive influence on firm performance.

Another important intangible resource is knowledge and as a strategic resource, employees' knowledge has been thought to be an important determinant of a firm's success (Nonaka, 1994). Nelson and Winter (1982) also agree that organizational knowledge derived from multiple individual sources is greater than the sum of its parts, and becomes a key strategic asset.

Schein (2004) argues that culture can help organizations adapt well to the external environment for rapid and appropriate

responses. Peters and Waterman (1982) proposed that firms' with strong cultures had excellent management. Firms are also recognizing the importance of environmental threats such as the climatic change due to the warming of the earth's atmosphere. Consequently, firms are developing strategies and programs to create products and production processes that are more environment friendly.

Although tangible resources are limited in the range of industries in which they can be applied in order for firms to prosper, they should have a combination of both tangible and intangible assets (Chatterjee & Wernerfelt (1991). Amit and Schoemaker (1993) established a positive relationship between organizational resources and performance. The foregoing can thus be hypothesized:

***Resources have a significant influence on firm performance.***

Due to the changing customer tastes and preferences and environmental dynamism, a firm's survival and success depends on how it adapts to the external environment. According to Child (1997), innovation is considered the ability to respond to changes in the external environment and to influence it. Dess and Picken (2000) argue that innovation is a crucial source of competitive advantage and survival in a given dynamic environment. They contend that organizations innovate to adapt to their environment and to respond to perceived external and organizational changes (Dess and Picken, 2000). Thus, an innovative organization is one that is intelligent and creative (Glynn, 1996), capable of learning effectively (Senge, 1990) and creating new knowledge (Nonaka, 1994). This study hypothesizes that if firms have to compete effectively in the market place, they should avoid status

quo. Firms have to start doing things differently from their competitors for superior performance.

According to the Organization of European Commission for Development ((OECD), 2007), innovation facilitates economic progress and enhances solutions to global challenges. Innovation is a key element of corporate competitiveness in the 21<sup>st</sup> century, and has therefore attracted special attention from strategic management researchers and practitioners. Researchers (Crepon, Duguet and Mairesse, 1998; Bönnte, 2003; Hall et al., 2008) among others have investigated the relationship between firm performance and product innovation. Evolutionary theories (Nelson and Winter, 1982) suggest that firms with a strong commitment to research and development and learning will experience a higher growth rate. Darfus, Maggit, Grimm and Smith (2008) posit that resource scarcity, hyper competition, an innovative culture and resources may spur and foster innovation. Hall et al. (2008) posit that production of new goods reflects successful innovation activity. Product development is one of the mechanisms by which firms create, integrate, recombine, and shed resources. There is empirical evidence that commitment to innovation is a key to success and in the long run can be helpful in earning a competitive advantage for the firm. Cucculelli and Ermini (2012) found that product development promotes growth of firms.

Return on innovation accounting statistics show that as high as 50 percent of corporate revenue is innovation driven (Kotler, 1991). Other researchers have found that availability of financial resources can expand a firm's capacity to

support its innovative activities (Lee et al., 2001). The presence of different organizational resources and capabilities positively affects the outcome of the innovation process. This study proposes that in order for firms to achieve and sustain competitive advantage, they should consistently innovate in order to stay ahead of competition. This can thus be hypothesized:

***Innovation has a significant intervening influence on the relationship between resources and firm performance.***

### **Methods**

A cross-sectional survey was used to collect primary data. According to Nachmias and Nachmias (2004), cross-sectional surveys help a researcher establish whether significant associations among variables exist at some point in time. Cooper and Schindler (2006) pointed out that cross sectional studies are carried out once. For purposes of this study, all the 46 insurance companies in Kenya were targeted thus making it a census survey.

### **Key Constructs**

#### **Resources**

Organizational resources were the independent variable for this study and were operationalised based on Barney (1991) and Grant (2001). Organizational resources have been classified in different and overlapping ways. According to Barney resources can be physical, human, and capital (Barney, 1991). Grant (1991) expanded this list by including the technological and reputational aspects. This study categorized resources as tangible and intangible.

The study classified intangible organizational resources into five strategic resources namely reputation, culture,

capabilities, knowledge and technological (Amit and Schoemaker, 1993; Barney, 1991). Tangible resources were operationalised as physical and financial resources. The specific measures for tangible resources were fixed assets, employees, funds for day to day running, office equipment, furniture and fittings, investment in stocks and bank deposits. The specific measures for intangible resources consisted of 15 statements on reputation, culture, capabilities, knowledge and technology.

#### **Innovation**

Innovation was another variable considered for this study and was the intervening variable. Based on extensive empirical and theoretical literature review, innovation was operationalised as two aspects namely, Research and Development (R& D) and process improvements. The specific measures were number of new products and services, unique processes and channels, technology adoption and amount of money spend on R&D.

#### **Firm Performance**

The dependent variable for this study was firm performance and this study used both financial and non-financial indicators to examine firm performance. Non-financial performance indicators were based on the BSC approach of Kaplan and Norton (1992; 1996) that captures both qualitative and quantitative performance indicators. The study also included social and environmental aspects in line with Hubbards' (2009) proposition of the Sustainability Balanced Scorecard (SBSC). Financial performance measures for this study were three-year data from the AKI's industry report (AKI, 2012) and included profit before tax and premium. Non-financial performance indicators

consisted of 21 statements on customer perspective, learning and growth, internal business processes, CSR and environmental aspect.

### **Data Collection**

The study collected both primary and secondary data. Primary data, which consisted of resources, innovation and the qualitative measures of performance, was obtained through a structured questionnaire and an interview guide. Resources were operationalized as tangible and intangible resources. Tangible resources were conceptualized as physical and financial resources. The specific indicators were deposits in banks, investments in stocks, furniture and fittings, office equipment, land and buildings, number of employees and operational funds. Similarly, intangible resources were captured through a 5-point Likert type scale using 15 items that consisted of reputation, capabilities, culture, technology and knowledge.

Innovation was also captured using a 5-point Likert scale using items to represent research and development and process improvements. Data on qualitative measures of firm performance were gathered using a 5 point Likert type scale consisting of customer perspective, internal business processes, learning and growth, environment aspect and corporate social responsibility. Data on quantitative measures of performance (profit before tax and premium) were obtained from published sources, that is, the AKI annual reports of 2011-2013. The study used a 3 year data because there had been reorganization of insurance businesses in to life and non life and so most of the

companies had complete data for only three years. The target respondents were senior managers of insurance companies and the study targeted Chief Executive Officers (CEO) or designated director, head of department, general manager or line managers. The senior managers were picked from either marketing department or strategy and risk departments. These respondents were best placed to answer the research questions as they were thought to be knowledgeable and define the direction of the organization.

### **Validity and Reliability Tests**

Before data analysis, validity and reliability tests were carried out. Reliability is the extent to which data collection techniques or analysis procedures will yield consistent findings (Mugenda and Mugenda, 2003). It establishes if the measure will yield the same results on other occasions, similar observations are reached by other observers and transparency in the raw data. Reliability was used to check the internal consistency of the data measuring instrument. Cronbach's coefficient alpha determines the internal consistency or the average correlation of items within the test. It was used after collection of data to test the results. Alpha values range from zero - no internal consistency to one - complete internal consistency. The higher the coefficient, the more reliable the measurements scale. Nunnally (1978) proposed that if values were too low, either few items were used or the items had little in common and suggested that a value of .70 and above was sufficient. The alpha values of the research instrument are shown in the table below.

**Table 1: Reliability Test**

Variable	Number of Items	Cronbach's Alpha	Conclusion
Tangible organization resources	7	.703	Reliable
Intangible organization resources	15	.881	Reliable
Innovation	16	.940	Reliable
Non- Financial Firm performance	21	.891	Reliable

From Table 1, tangible resources had a reliability coefficient of 0.703 while intangible organizational resources had a reliability coefficient of 0.881. Innovation had a reliability coefficient of 0.940 while non-financial firm performance had 0.891. The reliability coefficients of all the study variables were above 0.70. This is consistent with Nunnally (1978) who argued that a value of 0.70 is recommended, and therefore the measurement scale had a high level of internal consistency.

According to Cooper and Schindler (2006), validity is the ability of the research instrument to measure what it is supposed to measure. There are three types of validity namely; construct validity, content validity, and criterion related validity. The study sought to measure content validity. Content validity measures the extent to which the instrument provides adequate coverage of the investigative questions guiding the study. Content validity was determined using expert judgment from lecturers of the University of Nairobi, doctoral research supervisors, research experts and colleagues in the doctoral class.

### Data Analysis

Data were analyzed using inferential statistics. To test for the direct relationship between resources and firm performance, the study used simple regression analysis. The study used hierarchical regression analysis to test for the intervening effect of innovation on the relationship between organizational resources and firm performance. Hierarchical regression analysis helped determine how much each set of these candidate variables added to the prediction of the dependent variable over and above the contribution of the previously included independent variables (Cohen et al., 2003).

The first step in testing for the intervening effect involved establishing the direct relationship between organizational resources and firm performance. The second step involved establishing the joint effect of organizational resources and innovation as predictors of firm performance. The intervening influence of innovation could only be confirmed if the joint influence of innovation and organizational resources was more than that of the direct influence. The analysis generates a constant, the standardized beta coefficients ( $\beta$ ) for the independent variables, t-values, and significance levels. Composite indices were computed to aid in regression analysis. Pearson (product moment) correlation coefficient

(r) was used to establish the extent of correlation between study variables and the strength of the linear relationship (Cooper and Schindler, 2006). P-value and t- statistic were used to determine the individual significance of the coefficients while the F statistic was used to determine the overall model significance.

## Results

### Tests of Hypotheses

#### Organizational Resources and Firm Performance

The first objective of the study was to establish the influence of organizational resources on performance of insurance companies in Kenya. The study used

simple linear regression analysis to test the influence of organizational resources on firm performance. To address this objective, independent influence of tangible and intangible resources were tested on various performance indicators (premium, profit, customer perspective, internal business processes, learning and growth, environmental aspect and CSR). The second part addressed the combined effect of tangible and intangible resources on the above performance measures. Lastly, the composite index of non-financial firm performance measures was regressed on the composite index of tangible and intangible resources measures.

**Table 2: Effects of Intangible Resources on Performance**

Performance Indicators	R	R <sup>2</sup>	F	Significance
Premium Growth=f (KNW, REP,CUL,TECH,CAP)	.384	.147	.830	.541
Profit Growth=f (KNW, REP,CUL,TECH,CAP)	.204	.041	.199	.960
C.P=f (KNW, REP,CUL,TECH,CAP)	.475	.226	1.515	.220
L&G=f (KNW, REP, CUL, TECH, CAP)	.627	.393	3.371	0.018
IBP=f (KNW, REP, CUL, TECH, CAP)	.525	.276	1.983	0.115
Environment Aspect= f (KNW, REP, CUL, TECH, CAP)	.472	.223	1.494	0.226
Corporate Social Responsibility= f (KNW, REP, CUL, TECH, CAP)	.581	.338	2.651	0.046

Key: CP-Customer Perspective; L&G -Learning and Growth, IBP-Internal Business Processes;KNW-Knowledge,REP-Reputation,CUL-Culture,TECH-Technology,CAP-Capabilities.

Results in Table 2 indicate that intangible resources have a statistically significant influence on learning and growth and social responsibility. However, statistically not significant results were reported for financial performance indicators and internal business processes, customer perspective and environment aspect. Despite the statistically insignificant results, there is a relationship between

intangible resources and these performance indicators based on the R values (ranging from .204 to .525).

The study further computed a composite index for intangible resources which was regressed on the composite index of non financial performance. The results in Table 3 show that R<sup>2</sup> was .287 indicating that 28.7 percent of variation in non financial performance was accounted for by

intangible resources. The remaining 71.3 percent was explained by other factors not considered in the study. The overall model had a p-value of 0.002 which is less than

0.05. The results indicate that intangible resources have a statistically significant influence on non-financial firm performance.

**Table 3: Regression Results of the Influence of Intangible Resources on Non Financial Performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.536 <sup>a</sup>	.287	.263	.08477		
ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.087	1	.087	12.077	.002 <sup>a</sup>
	Residual	.216	30	.007		
	Total	.302	31			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.316	.114		2.772	.009
	Non Tangible Resources	.551	.159	.536	3.475	.002
A. Predictors: (Constant), Intangible Resources						
B. Dependent Variable: Non Financial Performance						

The study further tested the independent influence of tangible resources on various performance indicators.

**Table 4: Effects of Tangible Resources on Various Indicators of Firm Performance**

Performance Indicator	R	R <sup>2</sup>	F	Significance	Remarks
Premium Growth=f (phy, fin resources)	.551	.303	5.875	0.008	Accept
Profit Growth=f (phy, fin resources)	.275	.076	1.064	0.360	Reject
C.P=f (phy, fin resources)	.351	.124	2.044	0.148	Reject
Learning and Growth=f(phy,fin resources)	.410	.168	2.936	0.069	Reject
IBP=f (phy, fin resources)	.468	.219	4.069	0.028	Accept
Environment Aspect= f (phy, fin resources)	.532	.283	5.731	0.08	Accept
Social responsibility= f (phy, fin resources)	.435	.189	3.389	0.048	Accept

Key: C.P-Customer Perspective; IBP-Internal Business Processes; phy-Physical, fin-Financial.

Results in table 4 reveal statistically significant results of tangible resources on premium growth, internal business processes, environment aspect and social responsibility. Profit growth, customer perspective and learning and growth posted statistically not significant results. However, despite the statistically insignificant results, the results show that there is a relationship between tangible resources and those performance indicators based on the R values (.272, .351, and .410) for profit growth, customer

perspective and learning and growth respectively. R shows the strength of the linear relationships between variables in the model.

After establishing the individual and combined effects, the study computed a composite index of the tangible resources and regressed on the composite index of all the non financial performance indicators to establish the influence of tangible resources on non financial firm performance. The results are shown in Table 5.

**Table 5: Influence of Tangible Resources on Non Financial Firm Performance**

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.439	.193	.166		.09019	
ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Significance (P-value).
1	Regression	.058	1	.058	7.175	.012 <sup>a</sup>
	Residual	.244	30	.008		
	Total	.302	31			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.390	.120		3.253	.003
	Tangible Resources	.406	.152	.439	2.679	.012
a. Predictors: (Constant), Tangible Resources						
b. Dependent Variable: Non Financial Firm Performance						

The regression results in Table 5 indicate a statistically significant but weak model ( $R^2 = 0.193$ ,  $F = 7.175$ ). The results indicate that 19.3 percent of variation in non financial performance was explained by tangible organizational resources. The variation coefficient was also significant ( $\beta = 0.406$ ,  $t = 2.679$ ,  $p\text{-value} = 0.012$ ). The

results indicate that tangible resources significantly influence firm performance. Finally, both tangible and non tangible resources combined were regressed on non financial performance indicator. The combination of tangible and non tangible organizational resources against non financial firm performance yielded the results as shown in the Table 6.

**Table 6: Influence of Organization Resources on Non Financial Firm Performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.586	.343	.321	.08136		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.104	1	.104	15.683	.000
	Residual	.199	30	.007		
	Total	.302	31			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.210	.127		1.658	.108
	Organization Resources	.678	.171	.586	3.960	.000
Predictors: (Constant), Organization Resources						
Dependent Variable: Non Financial Performance						

Results in Table 6 above indicate that the model was statistically significant ( $R^2=.343$ ,  $F= 15.683$ ,  $sig=0.000$ ). The results reveal that 34.3 percent variation in non financial performance was explained by both tangible and non tangible resources. The coefficient was also significant ( $\beta=.678$ ,  $sig=0.000$ ). The findings thus statistically supported the combined influence of tangible and intangible organizational resources on non financial performance of insurance companies in Kenya.

### **Resources, Innovation and Performance of Insurance companies in Kenya**

To determine the intervening influence of innovation on the relationship between organizational resources and performance of insurance companies in Kenya, the study employed hierarchical regression analysis.

This study was based on the premise that resources influence innovation which in turn influences firm performance. To test for the intervening influence, the study used hierarchical regression analysis. The composite indices of non-financial performance, profit and premium were regressed on tangible and intangible resources and innovation. The results are as presented in the 7 tables below.

**Results of Organizational Resources and Innovation on Non-Financial Performance**

**Table 7: Organizational Resources and Innovation on Non-Financial Performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.587 <sup>a</sup>	.344	.299	.08270	.344	7.607	2	29	.002
2	.769 <sup>b</sup>	.591	.547	.06646	.247	16.909	1	28	.000

A. Predictors: (Constant), Intangible Resources, Tangible Resources

B. Predictors: (Constant), Intangible Resources, Tangible Resources, Innovation

Table 7 shows the coefficient of determination for tangible and intangible resources in model one while model two shows the coefficient of determination for the tangible and intangible resources jointly with innovation. In model one, R<sup>2</sup> was 0.344 indicating that resources alone accounted for 34.4 percent variation in non-financial performance. In model two, when innovation was added, R<sup>2</sup> was 0.591. This indicates that tangible and intangible resources together with innovation

accounted for 59.1 percent variation in non-financial performance of insurance companies in Kenya. The R<sup>2</sup> change was 0.247 when innovation was added implying that innovation accounted for a further 24.7 percent variation in non-financial performance. The results indicate that for insurance companies in Kenya, innovation will lead to a SCA hence improved performance. Managers of these firms should focus on innovation to realize improved performance.

**Table 8: The Influence of Organizational Resources and Innovation on Non-Financial Performance**

Model		Sum of Squares	df	Mean Square	F-value	Sig.
1	Regression	.104	2	.052	7.607	.002 <sup>b</sup>
	Residual	.198	29	.007		
	Total	.302	31			
2	Regression	.179	3	.060	13.490	.000 <sup>c</sup>
	Residual	.124	28	.004		
	Total	.302	31			

A. Dependent Variable: Non-Financial Performance

B. Predictors: (Constant), Intangible Resources, Tangible Resources

C. Predictors: (Constant), Intangible Resources, Tangible Resources, Innovation

Table 8 presents results for the model summary. Both models one and two were significant (p-values = 0.002 and 0.000),

respectively. The hypothesis that innovation does not have a statistically significant influence on firm performance

was rejected. Therefore innovation had a statistically significant intervening influence on the relationship between

organizational resources and non-financial performance of insurance companies in Kenya.

**Table 9: Coefficients of Organizational Resources and Innovation on Non-Financial Performance**

Model	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.205	.131		1.566	.128
	Tangible resources	.242	.153	.262	1.588	.123
	Intangible resources	.439	.170	.427	2.585	.015
2	(Constant)	.181	.106		1.710	.098
	Tangible resources	.271	.123	.293	2.204	.036
	Intangible resources	.099	.160	.096	.617	.542
	Innovation	.379	.092	.591	4.112	.000

A. Dependent Variable: Non-Financial Performance

Table 9 above shows coefficients for tangible and intangible organizational resources in model one. Model two presents coefficients for tangible and intangible organizational resources jointly with innovation. Tangible resources and innovation had positive coefficients ( $b_1 = 0.293$ ,  $p\text{-value} = 0.036$ ;  $b_2 = 0.591$ ;  $p\text{-value} = 0.000$ ), respectively indicating that a unit change in tangible resources causes a positive change in non-financial performance. Likewise, a unit change in innovation causes a positive change in non-financial performance. The

relationship can be represented by the following equation:

$$\text{Non-financial performance} = 0.293 \text{ TR} + 0.591 \text{ INN}$$

(0.036)      (0.000)

The results indicate that a unit change in tangible resources causes an increase of 0.293 in non-financial performance while a unit change in innovation causes an increase of 0.591 in non-financial performance. The results indicate that insurance companies should focus on innovation and tangible resources for improved performance.

**Results of Organizational Resources and Innovation on Premium**

**Table 10: Organizational Resources and Innovation on Premium**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.176 <sup>a</sup>	.031	.041	.32983	.031	.431	2	27	.654
2	.313 <sup>b</sup>	.098	.006	.32427	.067	1.933	1	26	.176

A. Predictors: (Constant), Intangible Resources, Tangible Resources

B. Predictors: (Constant), Intangible Resources, Tangible Resources, Innovation

Table 10 shows the coefficient of determination for tangible and intangible resources in model one while model two shows the coefficient of determination for tangible and intangible resources jointly with innovation. In model one; R<sup>2</sup> was 0.031 indicating that resources alone account for 3.1 percent variation in premium. In model two, when innovation

was added, R<sup>2</sup> was 0.098. This indicates that tangible and intangible resources together with innovation accounted for 9.8 percent variation in premiums of insurance companies in Kenya. The R<sup>2</sup> change was 0.067 when innovation was added implying that innovation accounted for a further 6.7 percent variation in premium.

**Table 11: Analysis of Variance of the Influence of Organizational Resources and Innovation on Premium**

Model		Sum of Squares	df	Mean Square	F-value	Sig.
1	Regression	.094	2	.047	.431	.654 <sup>b</sup>
	Residual	2.937	27	.109		
	Total	3.031	29			
2	Regression	.297	3	.099	.942	.435 <sup>c</sup>
	Residual	2.734	26	.105		
	Total	3.031	29			

A. Dependent Variable: Premium Growth

B. Predictors: (Constant), Intangible Resources, Tangible Resources

C. Predictors: (Constant), Intangible Resources, Tangible Resources, Innovation

Table 11 presents results for the model summary and both models one and two were not significant (p-values = 0.654 and 0.435), respectively. The hypothesis was not rejected and therefore innovation does not have a statistically significant intervening influence on the relationship between organizational resources and premium growth of insurance companies in Kenya. The model being not significant implied that it was not robust enough to predict results.

### **Results of Organizational Resources and Innovation on Profit**

Table 12 shows the coefficient of determination for tangible and intangible

resources in model one while model two shows the coefficient of determination for tangible and intangible resources jointly with innovation. In model one R<sup>2</sup> was 0.029 indicating that resources alone accounted for 2.9 percent variation in profit. In model two, when innovation was added, R<sup>2</sup> was 0.108 and this indicates that tangible and intangible resources together with innovation accounted for 10.8 percent variation in premium of insurance companies in Kenya. The R<sup>2</sup> change was 0.079 when innovation was added implying that innovation accounted for a further 7.9 percent variation in profit.

**Table 12: Organizational Resources and Innovation on Profit**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.170 <sup>a</sup>	.029	.046	2.15819	.029	.385	2	26	.684
2	.328 <sup>b</sup>	.108	.001	2.10968	.079	2.209	1	25	.150

A. Predictors: (Constant), Intangible Resources, Tangible Resources

B. Predictors: (Constant), Intangible Resources, Tangible Resources, Innovation

Table 13 presents results for the overall model summary which indicated that both models one and two were statistically not significant (p-values = 0.648 and 0.407), respectively. The hypothesis was not rejected and therefore innovation did not

have a statistically significant intervening influence on the relationship between organizational resources and profit of insurance companies in Kenya. The model being not significant implied that it was not robust enough to predict results.

**Table 13: Analysis of Variance of the Influence of Organizational Resources and Innovation on Profit**

Model		Sum of Squares	df	Mean Square	F-value	Sig.
1	Regression	3.585	2	1.792	.385	.684 <sup>b</sup>
	Residual	121.102	26	4.658		
	Total	124.687	28			
2	Regression	13.418	3	4.473	1.005	.407 <sup>c</sup>
	Residual	111.269	25	4.451		
	Total	124.687	28			

A. Dependent Variable: Profit

B. Predictors: (Constant), Intangible Resources, Tangible Resources

C. Predictors: (Constant), Intangible Resources, Tangible Resources, Innovation

## Discussion

The study sought to determine if innovation had a statistically significant intervening influence on the relationship between organizational resources and performance of insurance companies in Kenya. However, the study first determined the influence of resources on firm performance. The study established that resources alone accounted for 34.4 variation in firm performance. With respect to the individual effect of tangible resources on the various performance indicators, the findings were mixed. The study reported statistically significant

influence of tangible resources on premium, internal business processes, environment aspect and CSR. Statistically not significant results were observed for profit, customer perspective and learning and growth. This indicated that, tangible resources significantly influence premium but do not significantly influence profit. Conversely, when the composite index of tangible resources was regressed on the composite of non-financial performance measure, the results indicated an R<sup>2</sup> of 0.193 which was lower as compared to the R<sup>2</sup> of some of the individual effect results. This was an indicator that individually,

tangible resources had a higher contribution to non-financial performance than when combined.

The results for the individual effect of intangible resources on various firm performance indicators were statistically not significant for premium, profit, customer perspective, internal business processes and environment aspect. The results indicated that intangible resources do not significantly influence both premium and profit. The results indicated statistically not significant results for the individual effects of intangible resources on the non-financial performance indicators except for internal business processes and corporate social responsibility. However, when the composite index for intangible resources was regressed on the composite index of non-financial performance, the study established statistically significant influence of intangible resources on non-financial performance. This means that the various attributes of intangible resources may not have a significant effect on non-financial performance as individual variables. However, in combination, they had a significant influence.

The results for the influence of innovation on the relationship between resources and performance established a statistically significant intervening influence of innovation on the relationship between organizational resources and non-financial performance of insurance companies in Kenya. Resources together with innovation accounted for 59.1 variation in non financial firm performance. However, with regards to financial performance measures, the study established that innovation did had a statistically not significant intervening influence on premium and profit.

The results of this study lend partial support to previous studies that have indicated that organizational resources in the presence of innovation are likely to lead to superior firm performance (Bakar and Ahmad, 2010). They argue that when resources are combined with innovation, they lead to a competitive advantage (Bakar and Ahmad 2010). In their study of 700 Malaysian small and medium firms, they sought to find out which of the firm's resources contributed most to product innovation performance. Their study established that intangible resources were the main drivers of product innovation performance in line with the RBV.

Penrose (1959) proposed that it was not the resources owned by the firm that produced a competitive advantage. Rather, she argued that it was how the firms combined the bundle of resources that produced a SCA. Further, she posits that product innovation can be a source of competitive advantage. The results of this study suggest to managers of insurance firms that in order for them to achieve success, they need to use the firms' resources effectively and efficiently.

### **Conclusion**

The results indicate a statistically significant relationship between resources and non-financial performance of insurance companies in Kenya providing support to and extension of the RBT. With respect to financial performance indicators, there was no statistically significant relationship evidenced. The combined influence of intangible resources was more than that of independent influence on non-financial performance indicators while for tangible resources the opposite was true. The results of this study are consistent with Hult and Ketchen (2001) who established a non-linear

relationship between resources and firm success. They posited that no single resource had a positive advantage on performance. They content that when resources are used in combination, they are a source of superior performance.

The results of this study established that that innovation had a statistical significant intervening influence on the relationship between organizational resources and non-financial performance of insurance companies in Kenya. The results suggest that in the presence of innovation, organizational resources will enhance the performance of insurance companies in Kenya. These results support the RBT and DCT views that the reconfiguration of resources in to firm specific assets and processes will enhance performance because the total effect cannot be duplicated by other firms.

The results of this study offer support to previous studies. Kostopolous et al. (2002) proposed that organizational resources and capabilities underlie and determine a firm's capacity for innovation. Thus organizational resources both tangible and intangible provide the input that in turn is combined and transformed by capabilities to produce innovative forms of competitive advantage (Kostopolous et al., 2002). Morgan et al. (2004) in Ismail et al. (2012) argued that financial resources such as cash-in-hand, bank deposits and/or savings and financial capital (such as stocks and shares) were a source of a firm's competitive advantage and superior performance.

### **Implications of the Study**

Findings of this study have theoretical, methodological and policy implications for insurance companies in Kenya. The results of this study lend support to the resource based theory, dynamic capabilities theory

and knowledge based theory. The results of this study established that resources statistically significantly influence firm performance directly and indirectly through innovation. This is in tandem with the RBV and DCT. The study has empirically illustrated the magnitude of the relationships among organizational resources, innovation and firm performance. Managers of insurance companies in Kenya can configure resources through innovation for improved performance. The results have demonstrated the vital role played by innovation in enabling firms to succeed in the market place. The results contribute to the RBT by indicating to managers of insurance firms that it is how resources are combined that leads to a competitive advantage. It is the bundling/re-bundling and configuration of resources by managers that will lead to superior performance in line with (Penrose 1959).

The insurance industry is one of the key sectors identified to help spur economic growth and help achieve the country's Vision 2030. The performance of the insurance industry is important and therefore the results of this study will assist policy makers to make sound decisions regarding which variables to focus on in order for firms to achieve a SCA. Managers of insurance firms should be encouraged to attract resources that cannot be easily imitated as they propel organizations to better performance. Most importantly, they should focus on innovation as the study established that resources together with innovation contributed more to firm performance than resources alone.

When regression was carried out on non financial measures of performance (profit and premium) the results were statistically

not significant. The study proposes that future researchers could carry out a similar research using other financial firm performance measures like return on investments to establish if they can find similar results.

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