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Mediating Effect of Strategic Capability on the Relationship between Knowledge Management and Non-Financial Performance: The Case of Family Firms

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Abstract:
Drawing on the resource based view theory; an inquiry is initiated to establish the mediating effect of strategic capability on the association between knowledge management practices and non-financial performance. The study is necessitated by the gap in previous literature - in which express studies on the relationship between knowledge management and non-financial performance, mediated by strategic capabilities are increasingly hard to come by. It is hypothesized that strategic capability has no mediating effect on the relationship between knowledge management and non-financial performance. To test the hypothesis, a survey of 75 family firms in Migori County, Kenya is carried out. Descriptive and inferential statistics ($\alpha = 0.05$) are affected. Findings suggest that strategic capability mediate the relationship between knowledge management and non-financial performance. On the theoretical front, the study adds to the debate on strategic capabilities by showing that a firm's valuable, rare, non-imitable, and non-substitutable resources can jumpstart an enterprise's non-financial performance. Moreover, on the practical level, the study supports firm level activities, for instance firm productivity, core competences and marketing effectiveness.

Keywords*: Strategic capability, knowledge management and non-financial performance*

1. Introduction

The last few decades have witnessed several studies carried out on the relationship between knowledge management and performance (Inkinen, 2016; Omotayo, 2015; Ferraris, Santoro & Dezi, 2017; Giampaoli, Ciambotti, Bontis, 2017). Alarmingly, very few studies have attempted to address the underlying relationship between non-financial performance and knowledge management in firms mediated by strategic capabilities. The mediating role of strategic capabilities has been given scanty attention by most studies. In an empirical study in Italy by Giampaoli, Ciambotti and Bontis (2017) on the relationship between knowledge management practices and performance it isrevealed that managing knowledge in organizations greatly improves their financial performance. However, the mediating role of strategic capability is not addresses by the study. Kinyua (2015)also conducted a study in Kenya that established that knowledge management in commercial banks greatly improves their performance. Clearly, the mediating role of strategic capabilities on the association has received scant attention.

The current study is guided by the resource based view theory (Barney, 1991; Conner, 1991). The theory emphasizes the critical role of the valuable, rare, inimitable, and non- substitutable resources that exists in firms. Proponents of the theory argue that if valuable knowledge is shared, then there is bound to be an improvement in output, which ultimately translates into improved non-financial performance (Malgharini, 2012). Naturally, the rare knowledge in the particular firm can be exploited optimally before competitors exploit it to their advantage. Besides, the non-imitable and non-substitutable knowledge by the firm can be used to add to its competitiveness (Mahoney & Pandian, 1992; Kinyua, 2015). The theory explains strategic capabilities at play in organizations; since an enterprise's productivity, development of their core competencies and marketing effectiveness majorly result from the rare, non-imitable characteristics of the firm's products (Wernefelt, 1986; Barney, 1991).

Strategic capability refers to the ability of an organization to transform its resources and competences into services and products that match the needs of consumers in the market (Wanjiku, 2016). The need for strategic capability is advocated for by Jokull and Iryna (2010), who observe that for businesses to survive and thrive in a competitive business environment, there is need for enterprise to be in possession of certain levels of strategic capability. According to Jokull and Iryna, a capability is therefore, strategic if it results in change or has the potential to generate change. Strategic capability in the current study is characterized by firm productivity (Milara, 2014), core competences (Jokull & Iryna, 2010, Prahalad & Hamel, 1990), and marketing effectiveness (Jokull & Iryna, 2010, Prahalad & Hamel, 1990).

Non-financial performance measures comprise of variables such as customer satisfaction, job satisfaction, management control systems, and others that are not captured by financial systems (Malgharni et al., 2010). Non-financial performance measures in the current study are customer satisfaction, customer retention, employee satisfaction, employee retention, product quality, and service quality.

2. Method and Discussion

Table 1 presents the reliability test results

Variable	Cronbach's Alpha	No. of Items	Scale Statistics	
			Mean	Std. Deviation
Knowledge Sharing Culture	0.917	17	69.29	11.54
Management of Intellectual Capital	0.881	11	43.28	7.78
Knowledge Creation	0.909	15	62.20	9.85
Strategic Capabilities	0.906	12	49.98	7.95
Non-Financial Performance	0.955	20	83.07	14.43

Table 1: Reliability Test Results
Source: Survey Data (2019)

Table 1 reveals that KSC, MIC, KC, SC and NFP have Cronbach alpha values of 0.917, 0.881, 0.909, 0.906, and 0.955 respectively. Since the alpha values are all greater than 0.7, the researcher proceeds with further analysis since the measures meet the minimum requirement of 0.7 as recommended by Cooper and Schindler (2007)

A survey targeting 167 family firms in Migori County is initiated. By proportionate stratified sampling, a sample of 118 respondents is obtained as advocated for by Yamane (1967). The final number that responds in the field is 75. Table 2 presents non-financial performance dimensions, number of respondents involved, means, standard deviations, t- values, degrees of freedom, and the accompanying p-values.

Dimensions	N	Mean	Std. Dev	t	df	Sig. (2-tailed)
Customer Satisfaction	75	4.133	0.709	50.509	74	0.000
Customer Retention	75	4.150	0.803	44.741	74	0.000
Employee Satisfaction	75	4.183	0.747	48.500	74	0.000
Product Quality	75	4.207	0.773	47.153	74	0.000
Service Quality	75	4.093	0.840	42.199	74	0.000

Table 2: Descriptive Statistics for Non-Financial Performance
Source: Survey Data (2019)

Table 2 shows that the means for NFP vary between 4.093 and 4.183. Evidently, product quality is the most predominant NFP aspect, followed by employee satisfaction. Nonetheless, the least in prevalence is service quality.

A one-sample t-test with a theoretical test value of zero is conducted to establish whether NFP measures vary from one family firm to another. The results reveal that NFP mean score measures differ significantly from a respondent's firm to the other. The highest difference is noted in customer satisfaction (t-value = 50.509, $p < 0.05$), followed by customer retention (t–value = 44.741, $p < 0.05$). The lowest statistical difference is occasioned in service quality (t-value = 42.199, $p < 0.05$).

Table 3 presents knowledge management practice dimensions by showcasing the number of respondents participating, the averages, standard deviations, t- values, degrees of freedom values, and the accompanying probability values.

	N	Minimum	Maximum	Mean	Std. Deviation
Knowledge Sharing Culture	75	2.317	5.00	4.08	.678435
Management of Intellectual Capital	75	2.083	5.56	4.28	.842165
Knowledge Creation	75	1.958	5.00	4.15	.660699

Table 3: Descriptive Statistics for Strategic Knowledge Management Practices
Source: Survey Data (2019)

Table 3 shows that the means for knowledge management practices range between 4.07956 and 4.28407 which confirms that respondents are in agreement that strategic knowledge management practices are well embedded in their firms.

Table 4 presents the capability dimensions by displaying the number of respondents, mean values, departures from mean, t-values, degrees of freedom, and probability values.

Dimensions	N	Mean	Std. Dev.	t	Df	Sig.(2tailed)
Firm Productivity	75	4.180	0.675	53.646	74	0.000
Core Competencies	75	4.220	0.714	51.172	74	0.000
Marketing Effectiveness	75	4.097	0.794	44.702	74	0.000

Table 4: Descriptive Statistics for Strategic Capabilities

Table 4 reveals that the means for strategic capability vary between 4.097 and 4.220. The means reveal that core competencies are the most prevalent strategic capability aspect, followed by firm productivity. The least in prevalence is marketing effectiveness. Since all the manifestations of strategic capability are above four, it is concluded that respondents are in agreement that strategic capability are well embedded in their establishments.

To test for the hypothesis that KMPs has no significant effect on NFP, KSC, MIC, and KC are linearly regressed against the composite value of NFP using multiple linear regression method. The regression result is presented in Tables 5.

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate		
1		0.927[a]	0.858	0.852	0.275016		
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	32.562	3	10.854	143.506	0.000[b]	
	Residual	5.370	71	0.076			
	Total	37.932	74				
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	
		B	**Std. Error**	**Beta**			
1	(Constant)	-0.107	0.208		-.515	0.608	
	Knowledge Sharing Culture	0.490	0.095	0.464	5.151	0.000	
	Management of Intellectual Capital	0.001	0.066	0.002	0.022	0.983	
	Knowledge Creation	0.544	0.092	0.502	5.888	0.000	

Table 5: Regression Results for Knowledge Management Practices on Non-Financial Performance
a. Dependent Variable: Non-Financial Performance

In Table 5, R square is 0.858, which implies that 85.8% of the variations in NFP are explained by knowledge management practices. The implication is that there is a high degree of correlation between the variables. The table indicates that the regression model predicts the dependent variable significantly well. Since, $p < 0.0005$, the regression model statistically significantly predicts non-financial performance and is a good fit for the data. Based on the coefficients, the regression equation is NFP = - 0.107 + 0.490KSC + 0.001MIC + 0.544KC Where: NFP= Non-financial performance, MIC = Management of intellectual capital, KC= Knowledge creation.

To assess the effect of strategic capabilities on the relationship between knowledge management practices and non-financial performance, a null hypothesis is formulated, with the assumption that strategic capabilities has no mediating effect on the relationship between strategic knowledge management practices and non-financial performance. Three models namely are estimated, and a decision arrived at based on the recommendation by Baron and Kenny (1986).

The first step, the predicted model relating knowledge management practices and non-financial performance is presented in a simple linear regression model thus:

$NFP = \beta 0 + \beta 1KMPs + \varepsilon.$

Where;

NFP = Non-financial performance

KMPs = Knowledge management practices

In the equation, $\beta 0$ is the estimate of the intercept, ε is the associated regression error term, $\beta 1$ is the beta value associated with knowledge management practices. The composite construct knowledge management practices are regressed against NFP. The results are presented in Table 6.

Model Summary				
R	R Square	Adjusted R Square	Std. Error of the Estimate	
0.899[a]	0.809	0.806	0.314965	

ANOVA[a]						
Sum of Squares	Df	Mean Square	F		Sig.	
Regression		30.690	1	30.690	309.364	0.000[b]
Residual		7.242	73	0.099		
Total		37.932	74			

Coefficients[a]					
Unstandardized Coefficients		Standardized Coefficients	T		Sig.
B	Std. Error	Beta			
(Constant)	0.183		0.229	0.800	0.426
Strategic knowledge management practices	0.952		0.054	0.899 17.589	.000

Table 6: Regression Results for KMPS on Non- Financial Performance
a. Dependent Variable: Non-Financial Performance
Source: Survey Data (2019)

In Table 5, knowledge management practices highly predict non-financial (R2 = 0.806. Moreover, the model is statistically significant since [F (1,73) = 309.364, $p \leq 0.05$]. Furthermore, the coefficients are statistically different from zero, since NFP = 0.183 + 0.899 KMPs. It is therefore concluded that knowledge management practices are correlated to high levels of non-financial performance, which paves way for step 2 of Barron and Kenny (1986).

In the second step, a regression is performed to assess the relationship between knowledge management practices and strategic capability. The regression results are presented in Table 7.

Model Summary				
	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.903[a]	0.815	0.812	0.286975

ANOVA[a]						
		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	26.453	1	26.453	321.211	0.000[b]
	Residual	6.012	73	0.082		
	Total	32.465	74			

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	0.479	0.208		2.301	0.024
	Strategic knowledge management practices	0.884	0.049	0.903	17.922	0.000

Table 7: Regression Results for KMPS on Strategic Capability
a. Dependent Variable: Strategic Capability
Source: Survey Data (2019)

Table 7 shows that knowledge management practices highly predict strategic capability (R2 = 0.812). Moreover, the model is statistically significant [F (1,73) = 321.211, $p \leq 0.05$]. Besides, the coefficients are statistically different from zero, since SC = 0.479 + 0.903 KMPs. The step satisfies step two of Baron and Kenny (1986) and paves way for step three.

In the third stepstrategic capability is treated as the independent variable and non-financial performance as the dependent variable. The results are summarized in Table 8.

Model Summary				
	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.916[a]	0.838	0.836	0.289886

ANOVA[a]						
		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	31.797	1	31.797	378.384	0.000[b]
	Residual	6.134	73	0.084		
	Total	37.932	74			

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	0.031	0.215		0.144	0.886
	Strategic Capability	0.990	0.051	0.916	19.452	0.000

Table 8: Regression Results for SC on Non- Financial Performance
a. Dependent Variable: Non-Financial Performance
Source: Survey Data (2019)

Table 8 shows that strategic capability highly predicts non-financial performance (R2 = 0.836. Moreover, the model is statistically significant [F (1,73) = 378.384, $p \leq 0.05$]. Since the coefficients are statistically different from zero in NFP = 0.31 + 0.916 SC, it is concluded that SC is correlated to significantly high levels of NFP.

In the fourth step, a regression is performed to establish the statistical significance of the relationship between the predictor variable knowledge management practices and non-financial performance. Table 9 presents the regression results of the predictor variable on the outcome variable.

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
0.931[a]	0.867	0.863	0.264631

ANOVA[a]					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	32.890	2	16.445	234.825	0.000[b]
Residual	5.042	72	0.070		
Total	37.932	74			

Coefficients[a]				
Unstandardized Coefficients		Standardized Coefficients	T	Sig.
B	Std. Error	Beta		
(Constant)	-0.107	0.199		-0.538	0.592
Strategic knowledge management practices	0.417	0.106	0.394	3.949	0.000
Strategic Capability	0.605	0.108	0.560	5.605	0.000

Table 9: Regression Results for KMPS on Strategic Capabilities
Dependent Variable: Non-Financial Performance
Source: Survey Data (2019)

In Table 9, R2 is 0.867 which implies that KMPS and SC are responsible for 86.7% of variations in NFP. Besides p <0.05. Hence, the model is statistically significant at 95% level of confidence. The relationship can be explained as in the model 3.5 as follows

NFP = - 0.107 + 0.417 KMPs + 0.605.

From Table 9, KMPs are statistically significant (β = 0.417; t = 3.949; p = 0.000). SCis statistically significant (β = 0.605; t = 5.605; p = 0.000). It is therefore concluded that SC has a positive effect on performance at 95% level of confidence.

On its own, KMPs predict 80.9% of the variations in NFP as shown in Table 9. However, the inclusion of strategic capability leads to an upward prediction of 86.7% of the variations in the non-financial performance. Accordingly, 5.8% (86.7- 80.9) more of the predictions of non-financial performance is as a result of strategic capabilities. Given that knowledge management practices predicts non-financial performance significantly (80.9%) without strategic capability, it is inferred that there exists partial mediation (Kenny, 2018) in the relationship, given strategic capabilities only improves the already present prediction.

3. Conclusion

The study supports nurturing of strategic capabilities in firms through improvement in firm productivity, enhancement of core competencies and marketing effectiveness. By having enhanced capabilities, it is expected that there can be a significant upturn in non-financial performance in firms.

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