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Why Pursuit of Enhanced Non-Financial Performance Should Refocus on Management of Intellectual Capital: The Case of Family Firms

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Abstract:

A number of studies reveal that financial performance of organizations is, to a significant extent, dependent on management of intellectual capital in firms. Equally, more and more studies trace significant upturns in financial performance to non-financial performance, yet investigations on the association between management of intellectual capital and nonfinancial performance remains largely ignored. The interdependent association between non-financial and financial performance, therefore, calls for a study to unravel the relationship between management of intellectual capital and non-financial performance. The purpose of the study is to establish the effect of management of intellectual capital on non-financial performance by focusing on family owned Micro, Small and Medium Establishments in Migori County, Kenya. Survey research design is used with a target population of 167 registered family owned MSMEs. A sample of 118 respondents is used. Simple and stratified random sampling techniques are adopted. Primary data are collected through self-administered questionnaires. Both descriptive and inferential statistics are employed in data analysis. Findings reveal that management of intellectual capital ($\beta = 0.757, p < 0.05$) has a positive and statistically significant effect on non-financial performance. The study recommends that organizations create an environment where management of intellectual capital is encouraged to facilitate improved non-financial performance. The findings are in support of the of the resource based view theory that non-financial performance in organizations is largely attributable to the valuable, rare, inimitable, and non-substitutable knowledge held by the firm. The study also recommends that similar studies be undertaken in different settings and sectors, different from family owned MSMEs – as is the case with this study.

Keywords: Intellectual capital, non financial performance and family firms

1. Introduction

A study by Ernst and Young (2017) reveals the significant role played by non-financial information for investors in firms. According to the study, 68% of investors base their investment decisions majorly on non-financial reports of companies. Besides, the import of non-financial performance is advocated for by Maroun (2017), who observes that the use of non-financial information in an organization's reporting has the potential to maximally improve information transparency - leading to benefits for both clients and business owners. The last three decades has witnessed several studies carried out on the relationship between management of intellectual capital and performance (Inkinen, 2016; Omotayo, 2015; Ferraris, Santoro & Dezi, 2017; Giampaoli, Ciambotti, Bontis, 2017). Alarming, however, very few studies have attempted to address the underlying relationship between non-financial performance and knowledge management in firms.

In addition, the performance dimensions investigated have been heavily biased; since they have majorly focused on elements that are not reflective of non-financial performance in organizations. Besides, other studies have targeted innovative performance (De Castro, 2015; Ferraris, Santoro & Dezi, 2017) and professional performance (Zheng, Xu & Kong, 2017) – to the detriment of non-financial performance. Also of concern, is that the constructs used by a number of past studies have also been different for management of intellectual capital dimensions (Inkinen, 2016; Giampaoli, Ciambotti, Bontis, 2017). The situation arising out of the glaringly missing elements in related previous studies coupled with gaps in practice and performance, therefore, calls for an urgent need to investigate the relationship between management of intellectual capital and non-financial performance.

The study is guided by the resource based view theory (Barney, 1991; Conner, 1991). The resource based view theory originated in the late 20th century and has its roots in the works of Wernerfelt (1984), Barney (1986) and Conner (1991). The theory emphasizes on the critical role of the valuable, rare, inimitable, and non-substitutable resources that exists in firms. According to resource based view school of thought, once a firm boasts of the valuable, rare, inimitable, and non-substitutable resources, then it can enjoy competitive advantage over its competitors (Barney, 1999).

Management of intellectual capital aids a business enterprise to realize value addition and competitive advantage (Onyekwelu, Okoh & Iyidiobi, 2017). It is also argued that management of intellectual capital enables a business enterprise to achieve a better orientation towards added value and competitive advantage (Gogan & Duran, 2014). The view is

advocated for by the resource based view (Barney, 1991). In addition, intellectual capital has been argued to be a critical element of value creation and competitive advantage of organizations. Apparently, if studies continue with the path of giving little focus to the relationship between management of intellectual capital and non-financial performance, then most organizations will invariably lose out due to inability to tap from their valuable, rare and not easy to use resources.

Non-financial performance measures comprise of 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 study are customer satisfaction, customer retention, employee satisfaction, employee retention, product quality, and service quality.

Obeidat, Abdallah, Aqqad, Akhoershiedah and Maqableh (2017) empirically investigated the effect of intellectual capital of manufacturing establishments based in The Republic of Jordan on their performance. Findings revealed that intellectual capital positively impacts organizational performance, in addition to knowledge sharing.

2. Methodology

The study employs a model of linear regression in measuring the connection between management of intellectual capital and non-financial performance as shown in hereafter.

$$NFP = \beta_0 + \beta_2 MIC + \varepsilon$$

Where: NFP = Non-financial performance, MIC = Management of intellectual capital, ε = error term.

According to Oso and Onen (2006), the most critical validity for a questionnaire is content validity.

The content validity index score ranges between zero to one. Management of intellectual capital is represented with 11 items. Non-financial performance is represented by 20 items. The CVI is therefore determined: $CVI = 69/78 = 0.8846$. Based on Oso and Onen (2006) who recommend that values close to one be considered very high, the researcher proceeds with administration of the instruments, since the figure 0.8846 is generated is deemed appropriate for field administration of the developed instruments.

Reliability of scores is achieved by ensuring that the measures used to ascertain the attributes of a variables adhere to authoritative beliefs from previous studies and usage. The Cronbach's alpha coefficient of internal consistency is rated highly since it avails a superior quantitative estimate of the internal consistency of a scale. The reliability test results are presented in Table 1.

Variable	Cronbach's Alpha	No. of Items	Scale Statistics	
			Mean	Std. Deviation
Management of Intellectual Capital	0.881	11	43.28	7.78
Non-Financial Performance	0.955	20	83.07	14.43

Table 1: Reliability Test Results

Source: Survey Data (2019)

Arising from Table 1, management of intellectual capital has a Cronbach's alpha score of 0.881 with 11 items. Non-financial performance has a Cronbach's alpha score of 0.955 with 20 items. It is concluded that the measures are reliable since they are greater than 0.7 (Kumar, 2011)

Survey method (Creswell, 2014) -in particular, cross sectional survey design - is employed for the study. The choice of cross sectional survey design is arrived at by the researcher since it is best primed for studies which are geared at establishing the frequency with which the occurrence of certain phenomenon, particular situations, problem issues, and attitudes that characterize given respondents in a population of interest (Kumar, 2011). A sample estimation relationship is adopted as recommended by Yamane (1967). According to the relationship, at 95% confidence level, 118 respondents are targeted. The sample of 118 respondents, translated to 70.66 percent of the initially targeted population. The sample is arrived at as a result of the equation presented hereafter.

$$n = \frac{N}{1 + N(e^2)}$$

Where: n refers to the sample size, N stands for population size, and e refers to the level of precision (also sampling error, and is at 0.05).

Therefore,

$$n = \frac{167}{1 + 167(0.0025)} = 117.81305$$

On the basis of the study objectives, associated hypothesis is developed. The statistical model for the hypothesis is presented in Table 2.

3. Discussion

Table 2 presents the data analysis result

Objective	Hypothesis	Statistical Model	Hypothesis Test and Decision Rule
Investigate the effect of MIC on NFP of family MSMEs in Migori County.	MIC has no significant effect on NFP of family of MSMEs in Migori County	$NFP = B_0 + B_2MIC + \epsilon$ Where: NFP = Mean value for Non-financial performance B_0 = constant term B_2 = slope of MIC ϵ = error term MIC = Management of intellectual capital	$H_{02}: B_2 = 0$ $H_{a2}: B_2 \neq 0$ Reject H_{02} if $p \leq 0.05$, otherwise fail to reject null at $\alpha = 0.05$

Table 2: Summary of Data Analysis
Source: Researcher (2019)

Non-financial performance is assessed using a set of five measures namely customer satisfaction, customer retention, employee satisfaction, product quality, and service quality. The descriptive statistics are presented in Table 3.

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

Arising from the results in Table 3 the means for non-financial performance vary between 4.093 and 4.183. In summary, since all the measures of non-financial performance are slightly above 4, it follows therefore that respondents are generally of the opinion that non-financial performance are well embedded in their enterprises.

Moreover, a one-sample t-test with a theoretical test value of zero is conducted to establish whether non-financial performance measures vary from one family owned firm to another. The results support the persuasion that non-financial performance mean score measures differ significantly from a respondent's firm to the other. Clearly, 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, $p < 0.05$).

Management of intellectual capital is assessed using a set of three measures namely intellectual capital development, securing of intellectual capital and intellectual asset management. Table 4 presents the management of intellectual capital dimension statistics.

Dimensions	N	Mean	Std. Dev	T	df	Sig (2tailed)
Intellectual Capital Development	75	3.943	0.839	40.711	74	0.000
Securing Intellectual Capital	75	4.942	1.264	33.851	74	0.000
Intellectual Asset Management	75	3.967	0.780	44.032	74	0.000

Table 4: Descriptive Statistics for Management of Intellectual Capital
Source: Survey Data (2019)

Arising out of Table 4, the means for management of intellectual capital range between 3.943 and 4.942. Since all the manifestations of knowledge sharing culture are very close to four on the Likert scale - aside from securing of intellectual capital which is much closer to five - it is therefore evident that respondents are in agreement that management of intellectual capital is well embedded in their establishments.

Accordingly, a one-sample t-test with a theoretical test value of zero is conducted to establish whether through management of intellectual capital there can be variations from one firm to another. Findings, nonetheless, reveal that management of intellectual capital mean score measures vary significantly from one family firm to the other. In fact, the highest difference is noted in intellectual asset management (t-value = 44.032, $p < 0.05$), followed by intellectual capital

development (t-value = 40.711, $p < 0.05$). The lowest statistical difference is reported in securing intellectual capital (t-value = 33.851, $p < 0.05$).

To assess the effect of management of intellectual capital on family firms' non-financial performance, the study formulates a null hypothesis with the assumption that management of intellectual capital has no significant effect on non-financial performance. To test the hypothesis, the composite values of management of intellectual capital are linearly regressed against the composite value of non-financial performance using simple linear regression method. The results of the analysis are presented in Tables 5.

Model Summary						
	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	0.757 ^a	0.573	0.567	0.470981		
ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
	Regression	21.739	1	21.739	98.000	0.000 ^b
	Residual	16.193	73	0.222		
	Total	37.932	74			
Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	1.396	0.284		4.920	0.000
	Management of Intellectual Capital	0.644	0.065	0.757	9.899	0.000

Table 5: Regression Results of Management of Intellectual Capital on Non-Financial Performance
A. Dependent Variable: Non-Financial Performance
Source: Survey Data (2019)

Based on the results in Table 5, the value of adjusted R square is 0.567. This, therefore, implies that management of intellectual capital accounts for 56.7% of the variances registered in non-financial performance, leaving out another 43.3% to be accounted for by other variances not fitted in the model. It is therefore concluded that it is possible to attain high levels of non-financial performance in respondents' firms if the levels of management of intellectual capital are propped up in the enterprises.

Arising from the data displayed in Table 5, a simple regression equation that may be used to estimate non-financial performance given its existing management of intellectual capital and is expressed as follows

$$\text{NFP} = 1.396 + 0.757\text{MIC} + \varepsilon$$

Where;

NFP = Non-Financial Performance.

MIC = Management of Intellectual Capital.

Model here before shows that management of intellectual capital has a coefficient (β_0) of 0.757. The implication, is that a unit change in management of intellectual capital would result in a 75.7% change in non-financial performance. The t-statistic and corresponding p-value are t-value = 9.899 and p-value = 0.000 respectively. Therefore, at 5 percent level of significance, the null hypothesis is rejected. It is, therefore, concluded that management of intellectual capital has a positive and statistically significant effect on non-financial performance.

Analysis of variance test results in Table 5 illustrate the outcome for the regression model. Clearly, the overall linear regression F-test result is significant at 5% level of significance [(F (1,73) = 98.000, $p < 0.05$)]. Accordingly, it is concluded that the model explaining management of intellectual capital in family firms and non-financial performance is statistically significant.

The findings resonate with that by Nawaz and Haniffa (2017), who found a significantly positive association in relation to value added intellectual coefficient and financial performance of Islamic Banks. On the theoretical front, since management of intellectual capital exhibits a positive and statistically significant relationship with non-financial performance it is, therefore, in support of the resource based view theory (Wernerfelt, 1984; Barney 1986).

4. Conclusion

Based on the findings of the study, the researcher makes the of conclusions that since management of intellectual capital positively and statistically significantly affects family MSMEs non-financial performance it follows, therefore, that intellectual capital development, securing of intellectual capital and intellectual asset management are linked to significant improvements in non-financial performance.

It is recommended that organizational management should encourage management of intellectual capital by laying structures to spur development of intellectual capital. Besides, they should secure the already available intellectual capital and ensure that the organization's intangibles are treated as assets for the enterprises' competitive health.

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