

Transformational Leadership, Knowledge Management and Performance of Telecommunication Firms in Kenya

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Abstract

***Purpose** – The purpose of this study was to investigate the influence of transformational leadership on performance of telecommunication firms in Kenya. Further, the study sought to establish the mediating role of knowledge management in the relationship between transformational leadership and performance of telecommunication firms in Kenya. This study employed a questionnaire approach. The Sample for the study was drawn from a population of 404 Telecommunication firms registered by the Communications Authority of Kenya (CAK) as at June 2015. Regression analysis was used to test the hypotheses in a sample of 202 firms. The findings suggest that Transformational leadership has a direct and significant effect on firm performance. Transformational Leadership influences firm Performance directly and also indirectly through knowledge management.*

Keywords: Transformational Leadership, Knowledge Management, Performance, Telecommunication Firms

1. Introduction and study background

Transformational leaders have been characterized as possessing attributes of idealized influence, inspirational motivation, Intellectual Stimulation and individualized consideration (Bass, 1985). These attributes are argued to influence the performance of a firm in many ways, leading to greater effectiveness and outcomes (Avolio and Howell, 1992; Bass *et al.*, 2003; Walumbwa and Muchiri, 2012). Transformational leadership has gained a strong base with several studies conducted over many years, and it is still more studied than other leadership styles. However, it is surprising that few studies have empirically established strong evidence to support its connection with firm performance. For example, Tosi *et al.* (2004), Waldman *et al.* (2001), Agle *et al.* (2006) and Ensley *et al.* (2006) failed to find any connection between transformational leadership and firm performance. Ling *et al.* (2008) found a significant connection in a sample of less complex, small, privately held firms. Similarly, Pedraja-Rejas *et al.* (2006) found that transformational leadership has a positive impact on performance in a sample of small firms. Hmieleski's (2006) found no evidence to support a positive main effect of transformational leadership on firm performance. Ling *et al.* (2008) argue that the weak relationship found in prior studies between transformational leadership and performance may be a consequence of using data from large firms where organizational complexity is a major obstacle to establishing this link. This research aims to add on to existing empirical work to establish a relationship between transformational leadership and firm performance.

Studies linking transformational leadership, knowledge management (KM) and firm performance are limited. Few studies have explored the role of transformational leadership on individual employee's performance and organizational performance through knowledge creation, knowledge documentation, knowledge sharing and knowledge application (Hislop, 2009). In addition very few of the studies have clarified the leadership style that positively predicts firm performance when knowledge management activities are incorporated (Crawford, 2005). The central proposition of this study is that transformational leadership will exert a positive effect on firm performance. In addition, this study argues that transformational leadership would influence knowledge management activities and the link between knowledge management and firm performance. Transformational leaders have been found to have great impact on the work employees' behaviors.

They can therefore mobilize their employees to exchange and create knowledge more aggressively through establishing more favorable organizational contexts for knowledge management. Accordingly, transformational leaders are likely to influence employees' behaviors in knowledge management activities such as creation, sharing and application of knowledge. The study seeks to establish whether knowledge management activities positively impact firm performance.

2. Literature review and Hypotheses Development

This section reviews the literature to identify the relevant practices comprising Transformational leadership, Knowledge management and firm performance. Hypotheses are then developed based on the literature that has been reviewed.

2.1 Transformational Leadership and Firm Performance

Bass (1985) identified four dimensions of transformational leadership, popularly referred to as the four I's. They include idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence emphasizes trust, values, and ethics. Inspirational motivation consists of leaders providing meaning and challenge to followers' work and using inspiring messages to arouse emotions. Intellectual stimulation encourages new ways of thinking. Individualized consideration refers to leaders who consider the needs, abilities, and goals of followers and provide coaching and mentoring. Meta-analytic evidence has shown that transformational leadership has strong positive relationships with not only leader effectiveness but also follower satisfaction with leaders, job satisfaction, organizational commitment, and job performance (DeGroot et al., 2000; Judge and Piccolo, 2004; Lowe et al., 1996). Transformational leadership has been found to be closely associated with a range of organizational outcomes pertaining to the individual followers' creativity (Gumusluoglu and Ilsev, 2009; Shin and Zhou, 2003), satisfaction and performance (Vecchio et al., 2008).

Firm performance has been viewed in many different aspects and connotations depending on application e.g. McCann (2004) and Firer (2003) viewed it in terms of efficiency and effectiveness in converting inputs into outputs. Norton and Kaplan (1987) viewed it in terms of balanced scorecard (Innovation, learning and internal processes). Richard et al. (2009) viewed firm performance as encompassing three specific areas of firm outcomes; financial performance (profits, return on assets, return on investment); product market performance (sales, market share) and shareholder return (total shareholder return, economic value added etc). This study adopted a combination of financial and non financial measures of performance. Based on the literature review, the following hypothesis is proposed;

H1. Transformational leadership has a significant effect on Firm Performance

2.2 Transformational Leadership, Knowledge Management and Firm Performance

Knowledge Management is the management function responsible for regular selection, implementation and evaluation of knowledge strategies that aim at creating an environment to support work with knowledge internal and external to the organization in order to improve organizational performance (Maier, 2005). Literature emphasizes that the process involved in KM should be integrated with employees who lead their organization towards achieving competitive advantage (Yahya & Goh, 2002; Perez & de Pablos, 2003; Davenport & Prusak, 1998). In this direction, tactical KM process is given much consideration and it comprises knowledge creation/acquisition, knowledge documentation/embodiment, knowledge sharing /transfer and knowledge application/use (Filius et al., 2000).

According to Lesser et al. (2000), customers' knowledge creates value when companies incorporate it into planning and operating activities. In addition, customers' knowledge can improve service and support by enabling enterprises to reuse best practices solutions that have worked in one situation to solve similar problems for other customers. Customer's knowledge can also enhance product and service development, product manufacturing, service delivery and fulfillment. With an effective management of knowledge processes in place, client interaction with the company is enhanced.

When knowledge is well managed, an organization can streamline and improve its administrative processes, all the vital Knowledge necessary to its core business can be integrated and therefore, the Intellectual Capital of the company will be enhanced. Furthermore, effective management of knowledge allows the organization to increase profit and reduce cost, increase market share and market size, (Lesser et al., 2000).

Filius and De Jong (2000) opine that once employees acquire knowledge from external networks and customers; they document solutions for the problem in the brainstorming sessions frequent changes consequently take place in procedures and policies. Knowledge creation takes place through discussing problems and failures and assigning employees to new high profile projects; and knowledge is applied in the form of using customers' experiences for product or service improvement.

Bailey and Clarke (2000) highlighted the disconnect in how leadership has not kept pace with the need to understand the role of knowledge. They noted that for some reason many managers have yet to grasp the clear personal relevance, utility, and organizational significance of knowledge management. They further reported that many leaders felt that knowledge management was more fad than reality and struggled to both conceptualize and practice knowledge management. Baines (1997) suggested that leaders are responsible for learning, personally as well as organizationally. According to Scharmer (2001) Leaders must be able to see the emerging opportunities before they become manifest in the marketplace. Leaders play a crucial role in building and maintaining an organizational culture of learning.

Politis (2001) looked at the relationship between transformational/transactional leadership and various knowledge management attributes. He found that transformational and transactional leadership styles are related to dimensions of knowledge acquisition. Politis (2002) revealed that transformational leadership behaviors, particularly inspirational motivation and intellectual stimulation are positively related to knowledge acquisition. He (Politis, 2002) further commented on the need for leaders to act within an empowered environment. The empirical findings seem to lend support to the theoretical assumptions made by many authors speaking of the need for a participative transformational leadership in the face of the transition to the knowledge society.

In view of prior empirical evidence on the connection between transformational leadership, knowledge management and firm Performance, the following hypothesis is proposed;

H2. The relationship between transformational leadership and firm performance is mediated by knowledge management.

3.0 Research methodology

3.1 Data collection and sampling

The empirical study employed a questionnaire approach designed to collect data for testing the validity of the model and research hypotheses. Variables in the questionnaire include background information, Transformational Leadership, knowledge management and firm performance. All of the independent and dependent variables were assessed via five-point Likert-type scales ranging from "strongly disagree" to "strongly agree". The sample for this study was drawn from a population of the 404 Telecommunication firms listed in the Communications Authority of Kenya (CAK) register as at June 2015. A random stratified sampling method was used to select 202 firms representing each of the six existing Tiers. Questionnaires were distributed to all the available sampled firms. Follow-up e-mails and phone calls were done after two weeks. Out of the 202 firms that the study targeted, valid data was available for 160 firms representing a success rate of 79.2%, which was considered acceptable.

3.2 Survey measures

Five-point Likert scales with anchors of "not at all" (1) and "a very great extent" (5) were used to measure transformational leadership. A total of 18 items on transformational leadership were adopted from Bass (1985) Multi Leadership Questionnaire (MLQ) measuring the behavioral components of individualized consideration, intellectual stimulation, inspirational motivation, and Idealized influence. An example of a sample item included for individualized consideration is, "Recognizes differences among employee in their strengths and weaknesses, likes and dislikes". Judge and Piccolo (2004) reported an average correlation of 0.93 for reliability among the four transformational leadership dimensions. Accordingly, and consistent with prior studies (for examples, Judge and Piccolo, 2004; Piccolo and Colquitt, 2006; Wang and Rode, 2010; Wang and Walumbwa, 2007), the approach of these studies was adopted and the four sub-dimensions of transformational leadership were combined into a single transformational leadership factor.

To measure knowledge management and firm performance, this study relied on instruments developed in other related studies as well as concepts generated from appropriate literature. A knowledge management questionnaire was developed, covering eight to six items for each of the five processes of knowledge management generated from literature. A number of questionnaire items were derived from Filius and De Jong (2000). Each statement was rated using a five point Likert scale ranging from strongly agree (5) to strongly disagree (1).

Firm performance was measured using statements derived from both financial and non financial measurements. Financial measurements included gross profit, return on shareholder equity and growth in market share. Non financial measures included innovation and customer care. These statements were derived from literature, interviews and previous studies on firm performance. The questionnaire statements were rated based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). The study adopted a Cronbach alpha coefficient of 0.7 as the minimum acceptable measure of reliability. Hair et al. (1998) stated that a value of 0.70 and higher is often “considered the criterion for internally consistent established factors”. Results indicated the variables had alpha coefficient ranging from 0.83 for knowledge management, 0.95 for Transformational Leadership and 0.96 for firm performance. Demographic data about the firms was collected which included the number of years in operation, number of employees, scope of operations and ownership structure. The researchers believe that all these factors determine the influence of transformational leadership on firm performance as well as on their Knowledge Management initiatives. The size of the firm was measured in terms of the number of employees who are currently employed by the telecommunication firms. The results show that majority of telecommunication firms (60%) had less than 100 employees. This implies that most of the telecommunication firms in Kenya fall under the category of Small and Micro Enterprises as per the government of Kenya guideline (GOK 2005). Results on ownership structure indicated that majority of the telecommunication firms (55%) were fully locally owned. Results further show that majority (60%) of telecommunication firms had been in operation for 11- 20 years. only 24 firms were older than 30 years.

4.0 Analysis and Discussion of Results

The first objective of the study was to establish the effect of transformational leadership on the performance of telecommunication firms in Kenya. Transformational leadership was operationalized using Bass (1985) attributes namely Idealized Influence, Inspirational motivation, Intellectual stimulation and individualized consideration. To test corresponding hypothesis, a simple regression analysis was performed. The regression results shown in table 1 reveal that 63% ($r^2=0.63$) of the variations on firm performance can be explained by transformational leadership while the remaining 37 % percentage is due to other factors which are not present in the model. The models goodness of fit indicates that there is a significant relationship between transformational leadership and non financial firm performance, ($\beta = 0.795$, $t=16.496$, $P \leq 0.05$). The effect of transformational leadership on non financial firm performance is positive and significant. This implies that a unit change in transformational leadership increases firm performance by 0.795 units.

Table 1. Regression Results for the Effect of Transformational Leadership on Firm Performance

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
0.795	0.633	0.63	0.608003	1.844	
ANOVA					
	Sum of Squares	df	Mean Square	F	Sig
Regression	100.593	1	100.593	272.117	.00
Residual	58.407	158	0.37		
Total	159	159			
Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	1.52E-16	0.048		0.00	1
Transformational Leadership	0.795	0.048	0.795	16.496	.00

a. Dependent Variable: Firm Performance

b. Independent Variable: Transformational Leadership

The second objective was to establish whether knowledge management mediates the relationship between transformational leadership and firm performance. Knowledge management was operationalized through knowledge creation, knowledge documentation, and knowledge sharing and knowledge application. The hypothesis was tested using the four-step model proposed by Baron and Kenny (1986) and Kenny et al (1997). The results of the regression Coefficients for the Mediation of knowledge management on the Relationship between transformational leadership and Firm Performance are shown in table 2,3 and 4

Table 2: Regression Summary Results for the Mediation of knowledge management in the Relationship between transformational leadership and Firm Performance

	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
Step 1	0.852	0.633	0.632	0.526	
Step 2	0.365	0.133	0.128	0.933	0.487
Step 3	0.753	0.567	0.564	0.660	0.384
Step 4	0.975	0.951	0.950	0.223	0.222

Step 1. Predictors: (Constant), Transformational Leadership : performance

Step 2. Predictors: (Constant), Transformational Leadership : Knowledge management

Step 3. Predictors: (Constant), Knowledge management : Firm Performance

Step 4. Predictors: (Constant), Transformational Leadership, Knowledge management: Firm performance

The regression results for the test of hypothesis indicate that transformational leadership explained 63% of the variance in firm performance ($R^2 = 0.633$). In step 2, knowledge management was the dependent variable and transformational leadership became the predictor variable. The results show that transformational leadership explained 13% of the variance in knowledge management ($R^2 = 0.133$). Firm Performance changes from 63% to 13% in step 2. In step 3, the relationship between the mediating variable and the dependent variable was tested and the results show that knowledge management accounted for 57% of the variance in non-financial performance ($R^2 = 0.567$). Adjusted R^2 changed from 0.13 to 0.567. In step 4 multiple regression analysis was performed to determine whether the relationship between transformational leadership and firm performance is direct or through knowledge management. Knowledge management added significantly to firm performance as the variation changed from 0.567 to 0.95 in step 4. This implies that transformational leadership contributed 95% of the total variance in firm performance after controlling for knowledge management. Further, the Analysis of Variance (ANOVA) presented in Table 3 shows statistical significance of the overall regression model.

Table 3: ANOVA Results for the Mediation of knowledge management in the Relationship between transformational leadership and Firm Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
Step 1	Regression	115.361	1	115.361	417.672	0.000
	Residual	43.639	158	.276		
	Total	159.000	159			
Step 2	Regression	21.201	1	21.201	24.309	0.000
	Residual	137.799	158	.872		
	Total	159.000	159			
Step 3	Regression	90.109	1	90.109	206.661	0.000
	Residual	68.891	158	.436		
	Total	159.000	159			
step 4	Regression	151.166	2	75.583	1514.675	0.000
	Residual	7.834	157	0.050		
	Total	159.000	159			

As presented in Table 3, step 1 shows that the predictor variable, transformational leadership had a significant contribution to firm performance ($F=417.672$, $P<0.05$). Results in step 2 indicated that the model was significant ($F=24.309$, $P<0.05$). In step 3 the model tested whether knowledge management had a significant influence on firm performance. The results indicated statistical significance ($F=206.661$, $P<0.05$). Lastly, in step 4, when controlling for knowledge management, the overall model was statistically significant ($F=1514.675$, $p<0.05$). All the four steps were statistically significant. The next step involved computing regression coefficients to determine the level of change of firm performance contributed to by transformational leadership through knowledge management. The results are shown in table 4.

Table 4: Stepwise Regression Coefficients for the Mediation of knowledge management in the Relationship between transformational leadership and Firm Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
Step 1	(Constant)	1.119E-17	.042		.000	1.000
	Transformational Leadership	.852	.042	.852	20.437	0.000
Step 2	(Constant)	-4.839E-17	0.052		0.000	1.000
	Knowledge management	.753	0.052	0.753	14.376	0.000
Step 3	(Constant)	1.477E-16	0.074		0.000	1.000
	Transformational Leadership	.365	0.074	0.365	4.930	0.000
Step 4	(Constant)	-6.412E-17	0.018		0.000	1.000
	Transformational Leadership	.666	0.019	0.666	34.980	0.000
	Knowledge management	0.510	0.19	0.510	26.787	0.000

The results in table 4 show that in step I, transformational leadership (predictor) had a significant contribution to firm performance ($\beta = 0.852$, $t = 20.437$, $P < 0.05$). A unit change in transformational leadership caused an increase in firm performance by 85%. Results in step 2 indicate that transformational leadership had a significant contribution to knowledge management ($\beta = 0.753$, $t = 14.376$, $P < 0.05$). In step 3, knowledge management as the predictor of firm performance indicated significant contribution ($\beta = 0.666$, $t = 34.980$, $P < 0.05$). Finally, in step 4 when controlling for knowledge management, transformational leadership becomes statistically insignificant ($\beta = 0.510$, $t = 26.787$, $P < 0.05$), implying that the influence of transformational leadership on performance is through knowledge management. This, therefore, confirms hypothesis two that knowledge management mediates the relationship between transformational leadership and firm performance.

5.0 Discussion of Results and conclusions

This study has several important findings. First, the results demonstrated that Transformational leadership is positively related to firm performance. The findings are consistent with Ling *et al.* (2008) and Pedraja-Rejas *et al.* (2006). Ling *et al.* (2008) found a significant connection in a sample of less complex, small, privately held firms. Similarly, Pedraja-Rejas *et al.* (2006) found that transformational leadership has a positive impact on performance in a sample of small firms. The results also support the findings of a study by O'Regan *et al.* (2005) which found that firms with transformational leadership had a significant correlation with firm performance. These findings provide implications for leaders by demonstrating that transformational leadership behaviors are important for firm performance.

This study established that majority of the surveyed firms (60%) fall under the category of Small and Micro Enterprises (SMES). Therefore, consistent with the findings of Tosi *et al.* (2004), Ling *et al.* (2008), Waldman *et al.* (2001), Agle *et al.* (2006) and Ensley *et al.* (2006), the researchers concludes that the small size of the surveyed firms may have moderated the effect of transformational leadership on firm performance.

The small size of most firms (60%) may be a contextual factor that influenced the findings of this study. This however needs to be confirmed by future studies. The researchers therefore recommend that future research should focus on the role of organizational contextual factors on the effect of transformational leadership on firm performance.

Secondly, the results demonstrated that knowledge management has a mediating influence on the relationship between transformational leadership and firm performance. The findings are consistent with C. B. Crawford (2005) who found that Knowledge management behaviors are significantly predicted by transformational leadership. The findings also support Zack, Mckeen & Singh (2009) research findings that KM practices were directly related to organizational performance. These findings are also supportive of (Sanchez-Famoso *et al.*, 2014) who concluded that CEOs who display transformational leadership accelerate organizational innovation by encouraging information sharing, cultivating trust, and fostering shared vision among team members. The findings of this study strongly support the proposition that knowledge management practices mediate the relationship between transformational leadership and firm performance. The results offer both theoretical and managerial implications that are useful for researchers and for practicing managers of firms in designing management practices and formulating human resources policies that are supportive of knowledge management activities.

5.1 Practical Implications

The results and conclusions from this study contribute to body of knowledge in Transformational leadership as well as knowledge management and firm performance by identifying possible links among the three variables. The results suggest that companies whose leaders demonstrate transformational leadership attributes of idealized influence, inspirational motivation, individualized consideration and intellectual stimulation are likely to enable knowledge processes to function effectively. Effective knowledge practices contribute to creating value for organizations, leading to improved performance. Firms therefore need to be aware of the critical benefits of combining key valuable resources of transformational leadership and knowledge management in enhancing organizational performance.

5.2 Limitations and recommendation for future research

There are three key limitations in this study. Firstly, this study was limited to telecommunication firms in Kenya. Hence the findings and conclusions drawn from this research are representative of the Kenyan context only. Generalization of the final results should therefore be considered with caution. Secondly, the regression analysis employed in the study focused on the effect of transformational leadership and knowledge management without isolating the individual attributes of each of the key variables. Future research may therefore focus on the effect each of the sub constructs of transformational leadership and knowledge management may have in the relationships. Thirdly, this study did not isolate measures of performance to determine whether the given variables impact may be different when performance is measured in terms of financial and non financial measures separately. Future studies may look into this.

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