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Project Communication and Perceived Project Performance:
The Mediating Influence of Individual Commitment in Uganda’s Citizenship Projects

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ABSTRACT

This paper examines the mediating influence of individual commitment on the relationship between project communication and perceived project performance. Many citizenship projects frequently fail to deliver on time, budget, specifications, and quality or do not deliver value to the public. This could be attributed to ineffective project communication and lack of individual commitment. Despite previous research contributions, no existing studies have investigated the mediating influence of individual commitment on this relationship. Thus, empirical research to corroborate these claims in this area remains anecdotal and scanty. Based on a cross sectional data set from 322 citizenship project stakeholders in Uganda used to validate the theoretical model, findings reveal that individual commitment elements (affectivity, normative and continuance) significantly mediate the relationship between project communication and perceived project performance. The results also suggest that affectivity and normative commitment have
a stronger influence towards perceived project performance than continuance commitment. Theoretical and practical implications are also discussed.

Keywords: project communication, mediation, individual commitment, citizenship projects, project performance

INTRODUCTION

In most developing countries, many organisations have devised citizenship projects as a competitive strategy to improve organisational performance (Hopkins, 2007; McDonald and Rundle-Thiele, 2008). Citizenship projects are those projects aimed at making a difference in one’s community, society and country (Drucker, 1993). Many commercial banks, for instance, are becoming more involved in activities like improving education, public health, fighting poverty, rehabilitation and fighting social injustices (Barclay’s Bank sustainability review report, 2012). The assumption is that superior firm performance is associated with success of citizenship projects (Hopkins, 2007; Scott, 2007). Despite an increased involvement of commercial banks in citizenship projects in Sub-Saharan Africa like Uganda, anecdotal evidence reveals that over 70% of citizenship projects fall short of the expected quality, fail to boost bank awareness, have cost overrun and are completed behind schedule (Stanbic Bank Uganda, 2009; Barclay’s Bank-Uganda, 2007). This possibly could be attributed to ineffective project communication (Ramsing, 2009; Ruuska, 1996) and lack of individual commitment to such projects (Meyer and Allen, 1997).

There is need to ensure that citizenship projects that commercial banks fund achieve their objectives. While most previous studies have attempted to examine the predictors of perceived project performance using models from what may be referred to as developed world contexts (Chow and Cao, 2008; Misra et al., 2009; Raed and Cavana, 2012; Pinto and Slevin,
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1988), no research has been done in Sub-Saharan Africa to corroborate these findings. Similarly, despite the contribution of various studies, the extent to which individual commitment mediates the relationship between project communication and perceived project performance remains unclear, especially in the citizenship projects of Uganda. Most of the research is still speculative, anecdotal and scanty. Therefore, this article examines the mediating influence of individual commitment between project communication and perceived project performance. The rest of this article is organised as follows: The next section reviews literature on key concepts to develop hypotheses and a conceptual framework. In section 3, methodology is described and in section 4, findings, implications, limitations, and future research are discussed.

LITERATURE REVIEW

2.1 Project Communication, Individual Commitment and Perceived Project Performance

Project communication refers to information exchanges intended to create understanding among project stakeholders (Ruukska, 1996). On the other hand, individual commitment is willingness by an individual to devote energy and loyalty to a project as expressed in three forms: affective, continuance and normative (Meyer and Allen, 1997). The net sum of a person’s commitment to a project reflects each of these separable psychological states (Meyer and Allen, 1997). An affective commitment is an individual’s emotional attachment with (that is, identification with and involvement in) the project. Continuance commitment refers to the individual’s recognition of the benefits of continued association with the project compared to perceived cost of leaving the project. Normative commitment refers to the employee’s feeling of obligation to remain in the project. All three forms of commitment affect the individual’s willingness to remain with a project and their work-related behaviour.
Many studies have revealed that project communication and individual commitment are critical factors for project performance (Chow and Cao, 2008; Ntayi et al., 2011; Raed and Cavana, 2012). Oliver’s (1980) cognitive and affective theory suggests that when a manager or team member with a high need for self-esteem, volunteers to work on a project and communicates their intentions to associate within the project, emotionally they get attached to ensuring that the project succeeds. This is because they derive satisfaction from the success of philanthropic engagements (Ahimbisibwe and Nangoli, 2012). This implies that effective project communication creates a feeling of responsibility and attachment between stakeholders and the project tasks that make one feel indebted to the project thereby creating an atmosphere for individual team members to act without much control and coercion. Under such circumstances, what drives a person to work is the emotional attachment to the project as fostered through communication. Therefore, H₁: there is a positive relationship between project communication and individual commitment to the project.

Furthermore, the need for adequate communication channels and effective communication has also been emphasized in previous studies as extremely important in creating an atmosphere for successful project implementation (Ahimbisibwe and Nangoli, 2012). Project communication refers not only to feedback mechanisms, but, for example the necessity of exchanging information with both clients and the rest of the organization concerning project goals, changes in policies and procedures as well as status reports (Lievens, et al., 2000; Zhong and Low, 2009). Therefore, communication is not only essential within the project team itself (intra-communication), but also between the team and the rest of the organization as well as with the clients (extra-communication). Therefore, H₂: there is a positive relationship between project communication and perceived project performance.
2.2 Individual Commitment and Perceived Project Performance

A project is usually defined as “a temporary endeavour undertaken to create a unique product, service, or result” (Project Management Institute-PMI, 2008, p. 5). Projects undergo a series of stages that include initiation, planning, controlling, implementation, and closing processes (PMI, 2008). Project performance is completion of the project according to desired specifications, within the specified budget, scope, and time schedule while keeping the customer and other stakeholders happy (Ika, 2009). Equally, Jugdev and Muller (2005) argue that project success has been defined and measured differently in literature. Truly, Pinto and Slevin (1988) had earlier acknowledged three aspects of project success as the implementation process, perceived value of the project, and client satisfaction with the delivered project outcome. Shenhar et al. (1997) suggest two additional measures for business success and preparing for the future. However, empirical results by Lipovetsky et al. (1997) indicate that the importance of the latter measurement is all but negligible.

Individual commitment influences project performance (Chow and Coa, 2008; Raed and Cavana, 2012). Committed project teams more often do not have intentions to quit (Addae, et al., 2006). This saves the project costs of recruiting and orienting new team members in terms of both time and money (Gakovic and Tetrick, 2003). Similarly, costs of supervision are mitigated if the project team is committed to their project tasks (Riketta, 2002). It follows that where project stakeholders are satisfied about the project’s success, the investing bank’s public image will blossom, as in the case of citizenship projects run by commercial banks (Ofori and Hinson, 2007). Thus \( H_3 \): there is a positive relationship between individual commitment to the project and perceived project performance.

Furthermore, when \( H_1 \), \( H_2 \) and \( H_3 \) are connected together in the theoretical model shown in Figure 1, then there is need to investigate the mediating influence of the individual commitment existing between project
communication and perceived project performance. However, whether this mediation role is full or partial deserves more attention. Therefore, H₄: individual commitment mediates the relationship between project communication and perceived project performance. Figure 1 demonstrates the theoretical model of relationships between project communication, individual commitment and perceived project performance.

![Theoretical Model](image)

**Fig. 1: Theoretical Model**

### RESEARCH METHODOLOGY

#### 3.1 Survey Design

The survey questions addressed only a single issue at a time and avoided phrases that could elicit socially acceptable responses. Each construct was measured by at least three questions that were relevant in terms of established theory. A cover letter was included that explained the purpose and intended use of survey data and assured anonymity of both respondent
Project Communication and Perceived Project Performance

and company in the reporting. Survey questions captured the perceptions of stakeholders about citizenship projects for which they are expected to be the most knowledgeable. Perceptual measures are frequently used in project management research since they can parallel objective data in accuracy, and cogent arguments have been advanced for using the managers as the key informant for questions regarding performance of projects within the organization. However, when using single informants, it is desirable to select the most experienced and knowledgeable person. By virtue of their roles, stakeholders are knowledgeable about the progress and benefits of projects. To reduce the possibility of single-informant bias that might result from exaggeration and self-promotion and to encourage participation, the respondents were advised that results would be completely anonymous (Podsakoff, et al., 2003).

3.2 Measures and Operationalization

Project communication was measured using an abridged version of Goldhaber and Rogers’ (1979) Communication Audit Survey (CAS) questionnaire. In assessing the level of individual commitment, an abridged version of the employee Organizational Commitment Questionnaire (OCQ), as developed by Meyer and Allen (1997), was modified. Perceived project performance was measured using an amalgam of the research measures used by Pinto and Slevin (1988) as well as Shenhar, et al. (1997) and competence areas defined in ‘A Guide to the Project Management Body of Knowledge’ (PMI, 2008). All the responses in the questionnaire were anchored on a 5-point Likert scale of strongly disagree (1), disagree (2), not sure (3), agree (4), and strongly agree (5). Reliability of scales was ascertained by performing the Cronbach’s alpha coefficient test and all the coefficients were above 0.7 (see Table 1) hence, deemed adequate (Nannually, 1967).
Table 1: Cronbach Alpha Values

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anchor</th>
<th>Cronbach Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Communication</td>
<td>5 Point scale</td>
<td>0.832</td>
</tr>
<tr>
<td>Individual Commitment</td>
<td>5 Point scale</td>
<td>0.867</td>
</tr>
<tr>
<td>Perceived Project Performance</td>
<td>5 Point scale</td>
<td>0.868</td>
</tr>
</tbody>
</table>

3.3 Survey Piloting and Validation

The self-administered questionnaire was first piloted on management professors from Makerere University, Kampala. Among them, four professors had worked on citizenship projects in Sub-Saharan-Africa for longer than four years and had widespread experience with this topic. The scales were also pilot-tested using 45 citizenship projects and yielded a 98% response rate. Based on these responses and comments, item scales that were unclear and ambiguous were either improved or deleted.

3.4 Sampling Procedure and Sample Size

The population consisted of 121 citizenship projects conducted by at least 16 commercial banks in Uganda (Bank of Uganda, 2011). Simple random sampling method was adopted and the 121 citizenship projects were written down on small pieces of paper and mixed in a box and then 92 of them were randomly picked in accordance with Krejcie and Morgan (1970) criteria for sample determination. This method of sampling gives an equal chance to each project in the sampling frame that was chosen. From each selected bank, at least three project managers, two of whom were from any two conveniently selected branches of the bank and one was from the bank’s head office, were sampled. Five employees from each of the bank branches were also purposively targeted. Similarly, at least five beneficiaries for each project were also targeted. This finally added up to a total of 392 target respondents. Inclusion and exclusion criteria were that where a person
was picked and found not to have participated in the selected projects, he/she was discarded from the data and replaced with the next convenient person. The final responses were 322 usable questionnaires representing an 82% response rate.

DATA ANALYSIS AND FINDINGS

4.1 Descriptive Statistics

The results showed that 54% of respondents had been involved in execution of citizenship projects for a period of three to six years; 6.4% and 1.7% had spent seven to 10 and more than 10 years, respectively. The findings further indicated that most of projects existed for about three to six years (48.8%), less than three years (43.6%), or more than 10 years (2.9%). Majority of respondents were females (51.7%), which could imply that more females take up citizenship activities than their male counterparts. Majority of respondents were either married (52%) or single (46%), with those in the age bracket of 20 to 30 years representing 73.3%. Of the respondents, 72.7% had attained at least a bachelor’s degree, and 4% and 15% had master degrees and professional qualifications, respectively. Regarding positions held in execution of citizenship projects by individual respondents, majority (78.5%) of them revealed that they were team members, while 10.5% were project managers and 4.1% were project beneficiaries. The project types included categories of health (31.7%), education (19%), environment (11.1%), economic (25.4%), and rehabilitation (12.7%).

4.2 Factor Analysis

A factor analysis was conducted using the Principal Components Analysis (PCA) approach with varimax rotation to confirm suitability of the construct
indicators. The PCA was chosen because it is the simplest of the true eigenvector-based multivariate analyses that often reveals the internal structure of the data in a way that best explains variance by providing the user with a lower-dimensional picture when viewed from its most informative viewpoint (Hair, et al., 2009). A number of meaningful factors explaining a larger percentage of the common item variance emerged and most items loaded on the hypothesized constructs exceeding 0.50 as presented in Tables 2 and 3.

Factor analysis results for project communication yielded two components which were interpreted as intra-project communication (variance = 53%) and extra-project communication (variance = 12%), both explaining 64% of total variance in project communication. Individual commitment yielded three components, which were interpreted as continuance commitment (variance = 38%), affective commitment (variance = 16%) and normative commitment (variance = 12%). The three factors together explained 66% of the variance in individual commitment. Finally, perceived project performance yielded one component with explained variance of 64% of the variance in perceived project performance. All the items, whose factor loadings were below 0.5 or had cross loadings were dropped and not considered in subsequent analyses because this demonstrated lack of construct validity.
## Project Communication and Perceived Project Performance

### Table 2: Factor Analysis Results for Project Communication

<table>
<thead>
<tr>
<th>Factors</th>
<th>Emotional Communication</th>
<th>Extra-project Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>The amount of information disseminated by project supervisors is satisfactory</td>
<td>0.758</td>
<td></td>
</tr>
<tr>
<td>The language we use in our correspondences is familiar to all team members</td>
<td>0.847</td>
<td></td>
</tr>
<tr>
<td>I like the channels that we use to share information amongst team members</td>
<td>0.844</td>
<td></td>
</tr>
<tr>
<td>I frequently use electronic means to exchange information with team members</td>
<td>0.727</td>
<td></td>
</tr>
<tr>
<td>Informal communication amongst team members is usually active</td>
<td>0.701</td>
<td></td>
</tr>
<tr>
<td>New information usually circulates amongst project team members in time</td>
<td>0.664</td>
<td></td>
</tr>
<tr>
<td>Supervisors are always attentive to what their subordinates have to say</td>
<td>0.562</td>
<td></td>
</tr>
<tr>
<td>We have reliable avenues for receiving reactions about our activities in the community</td>
<td></td>
<td>0.860</td>
</tr>
<tr>
<td>We have always maintained timely communications with external stakeholders</td>
<td></td>
<td>0.682</td>
</tr>
<tr>
<td>Information concerning our citizenship activities is widely available to the public</td>
<td></td>
<td>0.661</td>
</tr>
<tr>
<td>Our external stakeholders like the way we communicate with them</td>
<td></td>
<td>0.652</td>
</tr>
<tr>
<td>Our information is largely shaped by preferences of the communities we serve</td>
<td></td>
<td>0.651</td>
</tr>
<tr>
<td>Our external stakeholders are reliably informed of the progress of our citizenship projects</td>
<td></td>
<td>0.540</td>
</tr>
<tr>
<td>Eigen value</td>
<td>3.526</td>
<td>1.157</td>
</tr>
<tr>
<td>Variance %</td>
<td>52.886</td>
<td>11.571</td>
</tr>
<tr>
<td>Cumulative %</td>
<td>52.886</td>
<td>64.457</td>
</tr>
</tbody>
</table>

### Table 3: Factor Analysis Results for Individual Commitment

<table>
<thead>
<tr>
<th>Factors</th>
<th>Continuous Commitment</th>
<th>Affective Commitment</th>
<th>Normative Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think no other activities can match the benefits that citizenship activities present to me</td>
<td>0.666</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would be very hard for me to abandon citizenship activities even if I wanted to</td>
<td>0.723</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My life would be upset if I decided not to engage in citizenship activities</td>
<td>0.605</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would be necessary for me to quit citizenship activities right now</td>
<td>0.354</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking part in citizenship projects is a matter of necessity as much as desire</td>
<td>0.604</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would readily accept any job assignments related to serving community</td>
<td>0.704</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find that my personal values and those of citizenship projects are very similar</td>
<td>0.746</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel like part of the family of the citizenship project team</td>
<td>0.805</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel emotionally attached to citizenship projects</td>
<td>0.859</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel a strong sense of belonging to citizenship projects</td>
<td>0.710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel I have an obligation to keep performing citizenship activities</td>
<td>0.527</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a sense of obligation to the recipients of citizenship projects</td>
<td>0.799</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I owe a great deal to citizenship projects</td>
<td>0.756</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eigen value</td>
<td>3.433</td>
<td>1.482</td>
<td>1.160</td>
</tr>
<tr>
<td>Variance %</td>
<td>38.146</td>
<td>16.022</td>
<td>11.809</td>
</tr>
<tr>
<td>Cumulative %</td>
<td>38.146</td>
<td>54.168</td>
<td>65.977</td>
</tr>
</tbody>
</table>
4.3 Zero-Order Correlations and Multiple Regression Analysis Results

The results indicated significant positive relationships between all the predictor values and perceived project performance supporting H₁, H₂, and H₃. The results in Table 4 indicate that there exists a significant positive relationship between project communication and individual commitment ($r = 0.623^{**}$, $p < 0.01$). The results further reveal that intra-project communication ($r = 0.667^{**}$, $p < 0.01$) and extra-project communication ($r = 0.640^{**}$, $p < 0.01$) are both positively related to individual commitment. Then, it also demonstrates that project communication had a much stronger relationship with normative commitment ($r = 0.560^{**}$, $p < 0.01$) than the other components of individual commitment, that is, continuance and affective commitment whose correlation coefficients were ($r = 0.325^{**}$, $p < 0.01$) and ($r = 0.547^{**}$, $p < 0.01$), respectively supporting H₁. There is a significant and positive relationship between individual commitment and perceived project performance ($r = 0.672^{**}$, $p < 0.01$). Specifically, it was shown that improvements in continuance commitment, affective and normative commitment are likely to result in improvements in perceived project performance ($r = 0.478^{**}$, $p < 0.01$), ($r = 0.557^{**}$, $p < 0.01$) and ($r = 0.530^{**}$, $p < 0.01$), respectively.

These results highlight the fact that if individual team members on a given citizenship project are committed to execution of project tasks, the project in question usually succeeds and hence, supporting H₃. The results reveal that where project members willingly exert more effort to guarantee success of, say, Acquired Immune Deficiency Syndrome (AIDs) reduction campaigns; they will perceive their efforts to have enabled the bank to incur lower costs of operation. This statement was supported by a coefficient of ($r = 0.530^{**}$, $p < 0.01$). These findings also imply that there are individuals within project management teams who find it just too hard to exclude themselves from execution of citizenship projects and they
perceive their efforts to positively contribute to performance. This contribution could be in terms of ensuring that activities are completed on time and at minimal cost. The results further reveal a positive and significant relationship between project communication ($r = 0.722^{**}$, $p < 0.01$), intra-project communication ($r = 0.730^{**}$, $p < 0.01$) and extra-project communication ($r = 0.734^{**}$, $p < 0.01$) and perceived project performance providing support for $H_2$.

Table 4: Zero-Order Correlations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intra-project communication-1</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extra-project communication-2</td>
<td>0.697^{**}</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project communication-3</td>
<td>0.858^{**}</td>
<td>0.838^{**}</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuance-4</td>
<td>0.345^{**}</td>
<td>0.443^{**}</td>
<td>0.525^{**}</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective-5</td>
<td>0.569^{**}</td>
<td>0.478^{**}</td>
<td>0.543^{**}</td>
<td>0.238^{**}</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative-6</td>
<td>0.598^{**}</td>
<td>0.562^{**}</td>
<td>0.560^{**}</td>
<td>0.405^{**}</td>
<td>0.514^{**}</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual commitment-7</td>
<td>0.667^{**}</td>
<td>0.569^{**}</td>
<td>0.623^{**}</td>
<td>0.717^{**}</td>
<td>0.767^{**}</td>
<td>0.609^{**}</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Perceived project Performance-8</td>
<td>0.730^{**}</td>
<td>0.734^{**}</td>
<td>0.722^{**}</td>
<td>0.478^{**}</td>
<td>0.557^{**}</td>
<td>0.530^{**}</td>
<td>0.672^{**}</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Consistent with results in Table 4, the regression model shown in Table 5 also revealed that project communication ($\hat{\alpha} = 0.466$, sig < 0.01) and individual commitment ($\hat{\alpha} = 0.303$, sig < 0.01) are significant predictors of perceived project performance and account for 59.3% of the variance in perceived project performance (Adjusted R Square = .587). The Variance Inflation Factor (VIF) was less than 4 and tolerance ratio was above 0.1 indicating that multi-collinearity in this study was not a problem (Garson, 2010) and as such the interpretations of the beta weights and R-squares were reliable.
4.4 Testing for Mediation Effects

Consistent with Baron and Kenny (1986), four conditions for existence of mediation effects were tested. Overall, the regression results support all these conditions for mediation as summarized in Table 6. Table 6 indicates that all four conditions for mediating influence are met according to Baron and Kenny (1986).

Table 6: Mediating Influence of Individual Commitment on the Relationship Between Project Communication and Perceived Project Success

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>Beta</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.489</td>
<td>.151</td>
<td>1.401</td>
</tr>
<tr>
<td>Project communication</td>
<td>.612**</td>
<td>.039</td>
<td>.655</td>
</tr>
<tr>
<td>Individual commitment</td>
<td>.444**</td>
<td>.048</td>
<td>.581</td>
</tr>
</tbody>
</table>

Note: N=322, *p<0.05, **p<0.01

First, there is an effect to be mediated (â = 0.619, p < 0.01). Second, there is a significant relationship between project communication and
mediator (individual commitment) ($\hat{a} = 0.612$, $p < 0.01$), and third, the coefficient of the mediator (that is, individual commitment) is significant in regression model three ($\hat{a} = 0.444$, $p < 0.01$) with both project communication and mediator (individual commitment) as predictors. Additionally, the total effect of project communication on perceived project success is less in regression three (standardized beta coefficient = 0.333, $p > 0.01$) than in regression model two (standardized beta coefficient = 0.727, $p > 0.01$). Hence, providing support for $H_4$: individual commitment significantly mediates the relationship between internal project communication and perceived project success. Since the coefficient of the predictor is other than zero when the mediator is introduced in the final model, these findings indicate that partial mediation exists on this relationship.

DISCUSSION

This paper examined the mediating influence of individual commitment on the relationship between project communication and perceived project performance. As initially hypothesised, results revealed that individual commitment is a partial mediator on the relationship between project communication and perceived project performance. Project communication is positively related to all three individual commitment elements (affectivity, normative and commitment). This means that effective project communication creates a feeling of responsibility and attachment between the stakeholder and the project tasks that makes one indebted to the project thereby creating an atmosphere for individual team members to act without much control and coercion (Ahimbisibwe and Nangoli, 2012). This is consistent and mirror Ntayi, et al.’s (2010) findings that workers with positive attitude about the task carry out certain role behaviors well beyond the basic minimum levels required of them. The emotional attachment to the project drives a person to work as influenced by communication (Ahimbisibwe and Nangoli, 2012). Similarly, these results
concur and reflect Yammarino and Naughton’s (1988) study that found a positive relationship between amounts of time spent communicating and the level of effort expended by each project team member on execution of tasks.

The results further indicate that project communication influences perceived project success through the partial mediation of individual commitment. It means that project communication must work through individual commitment in order to achieve significant influence on project performance. The results also suggest that affectivity and normative commitment have a stronger influence towards perceived project performance than continuance commitment. Therefore, this study makes a significant contribution by concluding that individual commitment partially mediates the relationship between project communication and perceived project performance. This means that projects need individual commitment to be successful in addition to project communication.

5.1 Practical and Theoretical Implications

All efforts whether financial or otherwise invested into citizenship projects could be fruitless, unless project sponsors and champions ensure that other project stakeholders have been provided with and are satisfied with the availed project information. In addition, where project supervisors are not as attentive to their subordinates’ views and no appropriate avenues have been designated to capture feedback from implementers and beneficiaries of the project, there will be a high likelihood of chances of failure of citizenship projects. The project managers in charge of citizenship projects in commercial banks ought to ensure commitment of project staff to achievement of objects by creating an atmosphere of feeling like they are part of the family of the project implementation team. This could be through fulfilling promises that top management sets forth. In this way, various stakeholders involved in implementation are likely to perceive the project as a success.
Project Communication and Perceived Project Performance

This study extends the research frontiers in understanding the role of interpersonal factors (project communication and individual commitment) in perceived project performance. Despite previous research contributions in project management, very few have focused on the role of interpersonal factors and yet as indicated by findings, these factors play a significant role. Moreover, no previous study has examined how these concepts are linked together by examining the mediation influence of individual commitment on the relationship between project communication and perceived project performance. As noted, projects are about managing expectations that have to do with perceptions of success. When researchers are conceptualizing and building theories, they should not ignore interpersonal (soft) factors.

5.2 Limitations and Areas for Future Research

Although the study provides some findings that are important in project performance literature, there are some limitations worth noting. The study used behavioural constructs, which originated from literature review of commonly cited ‘soft’ factors in the project management literature. Although the three constructs are robust and sufficiently represent the behavioural aspects, the multidimensional nature of behavioural practises in perceived project performance can be investigated further. Furthermore, since the future of project management practises go through evolution, additional ‘soft’ factors may be incorporated into the validated model.

The data collection instrument was a standard questionnaire, which usually limits the ability to collect views about information outside asked questions. Similarly, the study used a cross sectional research design. However, time series variables could not be completely analysed and this restricts applicability of the findings as a longitudinal study may give different results from those obtained. Future research should employ a bigger sample involving other stakeholders like regulators, customers, and local population,
This is so because the study only captured perceptions of bank staff that had taken part in executing citizenship projects and was intended to justify the continued investment in citizenship projects by commercial banks. Yet accommodation of various stakeholders could give a different view. In addition, future studies should try to obtain measurements of the independent and dependent variables from different sources and at different times. Conclusively, this study results suggest that individual commitment partially mediates the relationship between project communication and perceived project performance.

ACKNOWLEDGMENTS

The authors acknowledgement Prof. Joseph Ntayi and Dr. Mohammed Ngoma both from Makerere University Business School, Kampala, Uganda for initial guidance on this research. Special thanks are also extended to the leadership of Makerere University Business School, which partly funded this study.
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**Project Communication and Perceived Project Performance**


The Mediating Role of Leader Member Exchange in the Relationship between Job Characteristics and Organisational Commitment: A Case of Ugandan Public Universities

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ABSTRACT
In a major education set up and work environment management, leadership support concerns of academic staff in public Universities in Uganda are slowly emerging as a major inhibitor to job satisfaction, organization commitment which has led to occupational stress, employee turnover, burn out and brain drain. Many scholars have argued that consideration of job characteristics as means of enriching jobs and ultimate personal job fit on employees (academic staff) would lead to organizational commitment. It is on this premise that this study is aimed at examining the relationship between job characteristic and organizational commitment and the role of leader member exchange in the relationship between Job characteristic and organizational commitment of academic staff. Data were collected from a population of 1935 academic staff from three public universities in Kampala, Uganda with a sample size of 260 academic staff using the proportionate sampling technique.

The study found that job characteristic and Leader Member
Exchange were positively related with organizational commitment; however the contribution of the two variables on organization commitment was quite small with a variance of 13%. Findings further revealed that Leader Member Exchange mediates the relationship between job characteristic and organizational commitment. Academic staff felt that job fit was not enough for them to realize organizational commitment especially affective commitment. There was need for leadership support, trust, profession, mutual contribution, and constant communication in form of leader member exchange on academic staff development, and enhancement of organization commitment at the Universities.

Key words: Leader Member Exchange, Job characteristic and Organizational commitment

BACKGROUND

In a major education set up and work environment management, leadership support concerns to academic staff is slowly emerging as a major inhibitor to job satisfaction, organizational commitment, which leads to occupational stress and burn out (Billingsley, 2004, 2005).

Most leaders in public universities in Uganda have fallen short of meeting and implementing academic staff desired unique extrinsic and intrinsic needs. For instance, inappropriate instructing materials, overcrowded classes with less space, unreasonable teaching load, less support from management and inequitable pay. Some of the factors leading to inadequate fulfillment of intrinsic needs are failure to support personal career growth of employees as desired and insufficient mentorship. Such impediments have resulted in staff turnover especially brain drain of science teachers/lecturers, reduced employee commitment, employee dissatisfaction and consequently, low discretionary behavior (Kasozi, 2009; Owoeye and Oyebade, 2010; Karuhanga, 2010).
Leadership in some public African universities is perceived to be authoritative and managers are mostly pre-occupied with management of internal conflicts. For instance, top leadership in Universities mostly manage by intimidating staff rather than having an amicable/consensus resolution. This hinders the staff willingness to implement policies advanced by management (Hussain & Huque 2002:179). Considering Ugandan public universities, a number of academic staff acknowledged that leaders do not appreciate their subordinates given their authoritative nature of intimidation and hence, job insecurity.

University leaders have failed to support staff on their role thus increasing poor working styles. (Karuhanga, 2010). Besides Owoeye and Oyebade (2010) confirm that public universities like Makerere and Kyambogo have had problems in promoting good work style among its subordinates, the universities have suffered bureaucratic management systems. The leaders mostly have engaged in mismanagement and embezzlement of university funds that are supposed to support the employees’ well-being and universities’ infrastructural development. These vices have instigated various strikes especially with Kyambogo University experiencing rampant strikes both by academic staff and students upon embezzlement of billions of shillings meant for university development (Talemwa, the observer Sept, 2012). Such issues create a clear perception of lack of leader member exchange; the subordinates are not supported or engaged by their leaders to meet their intrinsic and extrinsic needs.

Ineffective management of public universities in Uganda could be explained by the laxity and complacency of university leaders to relate and support its subordinates in meeting the university and staff Intrinsic and Extrinsic needs, which could promote organization commitment and improved discretionary role.
LEADERSHIP MEMBER EXCHANGE

Numerous leadership studies have been carried out with much influence on academia, politics, military and government with an aim of promoting effective performance behavior, traits and adequate style (Truckenbrodt, 2000). One of the approaches adopted is leader member exchange theory. This theory was advanced by Graen and Ulil-Biens (1995), which focuses on the relationship of a leader and that of its subordinates. This implies that leadership quality will differ with each subordinate interacting with the leader such that leaders will naturally differentiate among followers on the preferred set components, attributes and behavior. Leader member exchange (LMX) could be well triggered by similarities between the leader and subordinate perceived similarities like personality, work orientation, perennial achievement and self-efficacy (Murphy and Ensher, 1999; Engle and Lord, 1997; Lunenburg, 2010).

Based on the theory, leader member exchange can be defined as a form of leadership approach that focuses on the role of a leader on different sets of employees / members in an organization (Dienersch and Liden, 1986 pg 618.)

Leader member exchange (LMX) is made up of three dimensions, namely respect, trust and mutual obligation. These attributes are based on working relationship characteristic for instance “mutual respect for others capabilities, the mutual obligation relating to individuals assessments of each other in terms of their professional capabilities and behavior. This obligation is expected to grow over time” (Graen and Bien, 1995).

There is a limitation of time all leaders face on job when developing roles for the subordinates. “Due to this time pressure, the leader develops a close relationship with only a few key subordinates and for the rest of the employees, the leader relies mainly on formal authority, rules and policies to ensure productivity” (Dienesch and Liden, 1986 pg 621). The argument above clearly divides Leader member exchange (LMX) theory into two
components, that is, leader’s interactions with in-group members / subordinates and leader’s interaction with out-group members. These two components are based on high quality relationship as the former and low quality relationship as the latter in a group nature of LMX.

The leaders interaction with in-group members / subordinates is characterized with high quality relationship. For instance, managers with high leader member exchange will show high level of mutual respects, trust and obligation towards members and consequently member will enjoy the benefits of influence in decision making, clear information improved confidence and thus enhance greater responsibilities and commitment to the organization (Barbuto and Gifford, 2012; Gerstner and Day, 1997; Lunenburg, 2010).

The leaders’ interactions with out-group members/ subordinates is characterized with low quality relationship. For instance, managers with low quality relationship will highly rely and be limited with formal employment contract, the leader here practices contractual exchange with members. Members in this component are less committed to do extra roles. This is because there are low levels of mutual trust, respect and obligation from the leader and vice versa (Graen Etal, 1982; Lunenburg, 2010).

**JOB CHARACTERISTICS**

Hackman and Oldham (1976) define job characteristics as a set of environmental variables that are widely thought to be important causes of employee affects and behavior. The business dictionary further defines job characteristics as aspects specific to a job, such as knowledge and skills, mental demands, physical demands and working conditions that can be recognized, defined and assessed. These definitions are vital in this study because they reflect aspects of jobs that are influenced by leader member exchange, and that would eventually cause organizational commitment.
Job characteristics are well explained by its theory, in the study of employee behavior. Job characteristic theory was built upon the premise that specific core job characteristics must exist in work settings so as to create job outcomes of high behavioral job performance and low turnover (Unuvar, 2006). According to Hackman and Oldham (1980), Job Characteristics theory is based on skill variety, task identity, task significance, autonomy feedback and feedback from agents aimed at influencing employee attitudes. In their earlier submission, Hackman and Oldham (1975,1976) found out that the core job characteristic (task identity, variety, significance, autonomy and feedback) lead to critical psychological state, which affects a variety of personal and work outcomes. These characteristics would cause high internal motivation, high satisfaction with work, low absenteeism and turnover and high quality work performance. If only employees have high growth, they need strength triggered by good leadership from the supervisors and management.

The outlined six job dimensions are skill variety, defined as opportunity to use many skills and talent at work and task identity, which means the opportunity to identify a whole piece of work; and task significance defined as the recognition that a job has impact on others and autonomy support, defined as the opportunity to freedom, independence and discretion; job feedback, information about ones performance obtained from job activities; feedback from agent, which means information about one’s performance obtained from the supervisor and coworkers.

ORGANISATIONAL COMMITMENT

Organizational commitment is defined as a force or feeling that unites employees or individuals to the organization (Mathieu and Zajac, 1990). It is the state in which an individual identifies with a particular organization and its goals. It is a state of psychological attachment in which employees invest what they value most like time, effort and money. Meyer and Allen
The Mediating Role of Leader Member Exchange in the Relationship...

(1991) describe three dimensional components of organizational commitment in order to maintain membership in an organization. They include affective commitment, normative commitment and continuous commitment. Affective commitment describes the integral attachment to the organization, meaning that employees derive feelings for their organization as accommodative family, which triggers loyalty and intimacy on employees’ part. This nature of commitment develops on the basis of material and non-material exchanges between management and employees. Normative commitment explains the feeling of obligation to remain in the organization. This could be moral values and beliefs for instance training and development investment on employees amounts to an obligation on the employees. Continuous commitment refers to employees’ awareness of personal costs associated with leaving the organization. Such employees hold onto the organization while still looking for opportunities elsewhere with the hope of leaving the organization once a desired opportunity is realized.

RELATIONSHIP BETWEEN JOB CHARACTERISTIC AND ORGANIZATION COMMITMENT

Dunham et al (1994) identify job characteristics such as task autonomy, task significance, task identity, skill variety and supervisory feedback as antecedents of affective commitment. These attributes of job characteristic are aimed at ensuring employee job fit and promote values and needs of the employees. Therefore, the greater the person job fit, the more employees attain organizational commitment especially affective commitment (Finegan, 2000). This outcome is supported by Kristof Brown, et al. (2005) who assert that person-job fit has a strong correlation with organizational commitment. Complex and enriched jobs are likely to yield higher organization commitment (Steers, 1977). This argument is further supported by Hackman and Lawler (1971) who believed that if jobs could be enriched
in certain ways, certain psychological states composed of special attitudes and beliefs would result, leading to positive outcomes including high levels of internal motivation, job satisfaction and feelings of commitment. Job characteristics antecedents in a real work environment would promote development of employee competences and hence, improve their work attitudes like organizational commitment (Unuvar, 2006).

THE RELATIONSHIP BETWEEN LMX AND ORGANIZATION COMMITMENT

“High-quality LMX relates to positive organization and individual outcomes. These positive outcomes are based on role theory and social exchange theory as subordinates in high quality exchanges receive better roles, increased communication, higher levels of trust, and increased access to the supervisor. Some of these positive outcomes include higher performance ratings, better objective performance and increased organizational commitment” (Harris, Harris and Eplion, 2007pg 95).

This argument is further supported by Leow and Khong (2009) who assert that LMX relates to the amount of work and social interaction exchanges between the supervisor and subordinates. The higher the amount of interaction, the greater exchange of effort, resources, and support between the two parties, whereas a low-Quality LMX relationship, the minimal the exchange effort, resources, and support between the two parties. In regard to this, it can be concluded that LMX will relate with Organizational commitment at all levels, affective, normative and continuous depending on the level of leader member exchange in the organization. This assertion is supported by Ansari et al (2001) in their research on some attributes of LMX. They (ibid.) confirmed that LMX positively correlates with organizational commitment. In their detailed analysis, they (ibid.) found out that LMX dimensions of trust, respect, professional, affect and mutual obligation (Sparrowe and Liden, 1997; Yukl, 1998; Ansari, et al, 2001) positively correlate with affective and normative commitment, but are negatively associated with continuance commitment. Further
research on a meta-analysis of 23 studies found a general positive relationship between LMX and affective organizational commitment (Wayne, et al., 2009).

**Hypothesis 1: Job characteristics associates with organization commitment.**

**The relationship between Job characteristics and LMX**

According to the Job Characteristics Model (Hackman and Oldman, 1976), “job enrichment satisfaction is a function of skill variety, task Identity (degree to which the job requires completion of a whole and identifiable piece of work), task significance (degree to which the job has a substantial impact on the work of others), autonomy (extent to which the job provides substantial freedom, independence and discretion), and feedback (degree to which the individual receives direct and clear information about their effectiveness)”.

These attributes are well enhanced when a leaders’ unique relationship between a given supervisor and subordinate are of high quality characterized by trust and emotional support (Harris, Harris and Eplion, 2007). High-quality relationships in return enable subordinates to receive several advantages including formal and informal rewards, favors, ample access to supervisors, and increased communication (Dienesch and Liden, 1986; Graen and Scandura, 1987; Wayne, Shore, and Liden, 1997)

**Hypothesis 2: Job characteristics associates with Leader Member Exchange.**

**Mediating role of Leader Member Exchange on Job Characteristic and Organizational Commitment**

When leaders in organizations nurture high quality LMX relationships by providing job enrichment (Bauer and Green, 1996; Lapierre, Hackett,
and Taggar 2006; Yukl, 1994) and offer inducements such as influence and support (Graen and Scandura, 1987), in turn, these create obligations to followers to reciprocate and become committed to their work. For instance, followers provide leaders with valuable work related contributions, such as, striving to add to the value of assignments, actively seeking out new job assignments and persisting on projects after others give up.

Leader Member Exchange has also been positively associated with intrinsic rewards such as autonomy (Liden and Maslyn, 1998), and support (Scott and Bruce, 1994). This implies that those with high job fit are more likely to meet the organization’s behavioral standards and expectations for rewards. This is a sign of satisfied and committed employees. However, leaders have a more active role in reward distribution compared to the organization in that; they are often personally responsible for distributing rewards to employees. Thus, individuals with high quality Leader Member Exchange may still be satisfied with their jobs and committed to the organization, even when their job fit is low (Job characteristics). This implies that Leader Member Exchange mediates the relationship between job characteristic and organization commitment.

Erdogan and Kraimer (2002), argue that employees with perceived low job characteristics in terms of job fit would correspondingly be experiencing low LMX compared to those with high LMX. They further argue that LMX acts as a catalyst in promoting employees’ assimilation into the organization. Therefore, leaders with high LMX will influence employees to fit into their jobs and alternately trigger the desired work attitudes like organizational commitment.

Erdogan and Kraimer (2002) further argue that high quality LMX relationships influence leaders to have a more pervasive influence on attitudes, because they will be providing subordinates with support and rewards that are tailored to subordinates’ needs (intrinsic and extrinsic).
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Conversely, when subordinates develop low LMX, job characteristic will explain variation in work attitudes (negative attitudes that lead to counterproductive behaviors). In this case, the subordinates will rely on the general organization for rewards and support that are stipulated by the employment contract and thus, limit the desired organizational commitment.

From the previous literature review, the various relationships between (1) Job characteristic and organization commitment, (2) Job characteristic and LMX as well as (3) LMX and organization commitment. We therefore, it is proposed that LMX mediates the relationship between Job characteristics and organization commitment.

**Hypothesis 3: LMX mediates the relationship between Job characteristics and organization commitment.**

**Conceptual Model of the Hypothesis**

**METHOD**

**Subjects and Procedure**

The study utilized a survey research design, in particular, a cross-sectional survey design focusing on quantitative research approach. The study variables included, the independent variable as Job characteristic; the moderating variable being Leader Member Exchange and the dependent variable as organizational commitment. This design allowed data to be
collected from a sample to represent a larger population of 1935 academic staff from three public universities in Kampala, Uganda. Proportionate stratified random sampling procedure was used to administer 260 questionnaires to the academic staff (Professors, Associate Professors, Senior lecturers, Lecturers, Assistant Lecturers and Graduate Assistants) working in 3 public universities in Kampala, Uganda, namely, Makerere, Kyambogo and Makerere University Business School. Permission was sought from respective authorities.

We received 180 questionnaires with a response rate of 69%, which were subjected to data cleaning to determine the useable sample. Then 178 sample questionnaire were later considered for analysis with a response rate of 68%. Both variables, according to Kolmogorov-Smirnov Test and the Shapiro-Wilk Test which recommends values greater than 0.05, appeared normal. The participants were predominantly male (68%) with female representing 32%; married dons were 74% compared to unmarried at 26%; the common age bracket is 30-39 yrs (51%) followed by 40-49 yrs (17%) and 50 yrs and above at 11%; most of the employees have a tenure of 5-7yrs and 8yrs at 60%; in terms of education level, 69% had Masters degree, 14% had PHD and 0.6 had attained professorship; most of the employees were Assistant Lecturers (39%), lecturers (33%), senior lecturers (9.6%) and Professors at 1.7%.

Measurements

Job Characteristics

Job characteristic was operationalized using Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1976). The JDS measures the five core job dimensions of skill variety (SV), task identity (TI), task significance (TS), autonomy (AU), and feedback (FB). The JDS consisted of 15 items with 3 items for each attribute of job characteristic. Responses were
recorded using a five-point rating scale anchored by 1 = “Very Inaccurate” and 5 = “Very Accurate” (Cronbach’s alpha=0.754).

**Leader Member Exchange (LMX)**

The quality of the supervisor-subordinate relationship was assessed using the seven-item measure of leader-member exchange (LMX-7) developed by Graen and Uhl-Bien (1995) and advanced by Gerstner and Day (1997) in their meta analysis. Each was anchored on a five-point Likert scale ranging from 1=“strongly disagree” to 5=“strongly agree” (Cronbach’s alpha=0.753). The items consisted of statements like “I know where i stand with my leader, usually know how satisfied my leader is with what I do”.

**Organizational Commitment**

Organizational Commitment Questionnaire: Affective, Normative, and Continuance commitment were measured using Organizational commitment Questionnaire developed by Meyer and Allen (1997). This revised Questionnaire has 18 items. Employee responses were obtained on a 7-point Likert-type scale where 1 = “strongly disagree” and 7 = “strongly agree.” (Cronbach alpha=0.851). Items consisted statements like “I would be very happy to spend the rest of my career in this organization”. Individual constructs like affective commitment had a cronbach alpha of 0.728, continuous commitment=0.560 and normative commitment=0.701.

**ANALYSIS**

The analysis focused on first determining the association between variables, determination of both multiple and hierarchical regression analysis, it also involved analysis of LMX as a moderator variable in the association between job characteristics and organization commitment.
Correlation analysis and multiple / hierarchical regression analysis are employed to test the association and moderating effect on the basis of controlling the association statistics variables with LMX.

Table 1: Means, Standard Deviations and Correlations among Variables

<table>
<thead>
<tr>
<th>Key variable</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Job Characteristic</td>
<td>5.1504</td>
<td>.75153</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2. Leader Member Exchange</td>
<td>3.2986</td>
<td>.68146</td>
<td>.201 *</td>
<td></td>
</tr>
<tr>
<td>3. Organizational Commitment</td>
<td>4.1048</td>
<td>.95196</td>
<td>.326 *</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Multiple Regression Analysis Showing the Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td>.485</td>
<td>.000</td>
</tr>
<tr>
<td>Job Characteristics</td>
<td>.283</td>
<td>.223</td>
<td>3.039</td>
<td>.003</td>
</tr>
</tbody>
</table>

Dependent Variable: Organization Commitment

Table 1 explains the association with the different variables, Pearson correlation table suggests that Job characteristics strongly correlate with Organization commitment (r=.233 p<0.01), Leader Member exchange strongly correlates with Organization commitment (r=.326, p<0.01) and job characteristic strongly correlates with Leader member exchange (r=.326, p<0.01).

Table 2 is a Multiple regression analysis, whose findings confirm the association of Job characteristics and Organization commitment (â=.206, p<.05). However, job characteristic explains 4% variance only to Organizational commitment. The results answer hypothesis 1 that job characteristics associate with organization commitment.
The Mediating Role of Leader Member Exchange in the Relationship...

Furthermore from Table 1, the associations suggest that there could either be a partial or full mediation of LMX on Job Characteristic and Organization Commitment.

Table 3: Results of Regression Analysis Showing the Mediation Role of LMX on the Relationship between Job Characteristic and Organization Commitment (n = 178)

<table>
<thead>
<tr>
<th>Step and Independent Variables</th>
<th>Lead Member Exchange</th>
<th>Organization Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R²</td>
<td>Adj R²</td>
</tr>
<tr>
<td>Step 1 Job Characteristic</td>
<td>0.04</td>
<td>0.035</td>
</tr>
<tr>
<td>Step 2 Job Characteristic</td>
<td>0.05</td>
<td>0.044</td>
</tr>
<tr>
<td>Step 3 Job Characteristic and Leader member Exchange</td>
<td>0.13</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Table 3 explains the step by step process of mediated regression analysis as proposed by Baron and Kenny (1986) that was used to determine whether or not LMX plays a mediating role among Job characteristic and Organizational Commitment. On the first step, LMX as the hypothesized mediator was regressed by Job Characteristics. Job Characteristics explained 3.5 percent variance in the model (F statistics = 7.402*, ̂β = 0.201, t = 2.721*, *p<0.007) in LMX. At the second step, Job Characteristics explained 4.4% variance in OCB with F-statistics (9.234*) and standardized beta coefficient is ̂β = 0.223 (t = 3.039*,*p<0.003). At final step. The dependent variable organization commitment was regressed on Job Characteristic and LMX. Both variables exerted 12.2% variance together in organization commitment with F-statistics (13.320*, *p<0.000). The beta coefficient of Job Characteristics is ̂β = 0.164 (t = 2.288*,*p<0.023) and LMX is ̂β = 0.293 (t = 4.073*,*p<0.000).
According to Baron and Kenny (1986), if the impact of the independent variable on the dependent variable drops to statistically lower levels after partialling out the influence of the mediating variable then partial mediation exists between Job Characteristic and Organization commitment.

**Sobel Test**

We further conducted a Sobel test to confirm the mediation effect of LMX in the relationship between Job Characteristic and Organization Commitment using the Aroian version suggested in Baron and Kenny (1986). The reason behind this choice is because it does not make the unnecessary assumption that the product of $s_a$ and $s_b$ is vanishingly small as seen below.

<table>
<thead>
<tr>
<th>Test Statistics</th>
<th>Std. Error</th>
<th>P.Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.95452892</td>
<td>0.0506387</td>
<td>0.04384177</td>
</tr>
</tbody>
</table>

The results show that ($t = 1.955^*, *p<0.044$) reflects a mediation effect of LMX in the relationship between Job Characteristic and Organization Commitment.

**DISCUSSION**

Existing research about Leader member exchange (supervisors-subordinates) and on Job Characteristic and Organization commitment are far from satisfactory. As an effort in this under researched area, our study contributes to the literature by showing that there is a partial mediating effect of Leader-Member Exchange (LMX) on the relationship between job characteristics and organization commitment among academic staff of public universities in Uganda.
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This major hypothesis is supported by a number of scholars indirectly. For instance, Liden and Maslyn (1998), and Scott and Bruce (1994) argue that employees (academic staff) with high job fit are more likely to meet the organization’s behavioral standards and expectations for rewards. This is a sign of satisfied and committed employees. However, leaders have a more active role in reward distribution organization in that, they are often personally responsible for distributing rewards to employees. Thus, individuals with high quality LMX may still be satisfied with their jobs and committed to the organization, even when their job fit is low (Job characteristics). Therefore, LMX is seen to mediate the relationship between job characteristic and organization commitment.

Considering the correlation results, all of the findings showed consistent results with previous studies. All the hypotheses were supported. Consistent with previous research, there was a strong correlation between Job characteristic and Organizational commitment. To elucidate, Finegan (2000), suggested that job characteristic attributes like autonomy, task identity, task significance, skill variety and feedback are aimed at ensuring employee job fit and promote values and needs of the employees; therefore the greater the person job fit the more employees attain organizational commitment especially affective commitment. This outcome is supported by Kristof Brown et al (2005) who assert that person-job fit has a strong correlation with organization commitment. In Ugandan higher academic context, complex and enriched roles involving training, consultancy, and research and curriculum development, apart from traditional teaching roles, would likely yield higher organization commitment especially the desired affective commitment on academic staff in public universities.

Besides, the study showed that job characteristic and Leader member exchange (LMX) were highly correlated. This association needs further attention within the academic context. However, current results are aligned with a few previous studies. For instance, the extent to which the lecturing
job provides substantial freedom, independence and discretion, and the degree to which the individual receives direct and clear information about their effectiveness would lead to a higher supervisor and subordinate relationship characterized by trust and emotional support. This implies that academic jobs that are enriched will help leaders/managers to exercise high LMX given the employees right fit and linkage to achieving organization objectives. High LMX is well triggered by increased communication, formal and informal rewards, honesty and trust which are well entrenched within the various job characteristics (Dienesch and Liden, 1986; Graen and Scandura, 1987; Wayne, Shore and Liden, 1997).

In addition, there were significant correlations found between LMX and Organization Commitment, which were also consistent with previous studies. The relationship explains the situation in which employees have a higher quality relationship with their supervisors. They get to enjoy the benefits of favors such as mutual trust, support from their supervisor, effective communication, consideration, and esteem, and consequently, they will more likely be satisfied with their jobs, accomplish more, and help their organizations to prosper. As the quality of supervisor–subordinate relationships increases, the intrinsic needs of employees are also more likely to be fulfilled; thereby increasing the likelihood that employees will be committed to their jobs. As employees have higher quality exchange relationships with their supervisors, they may be better performers because they can get additional feedback, resources and opportunities. This argument is consistent with Leow and Khong (2009) who assert that LMX relates to the amount of work and social interaction exchanges between the supervisor and subordinates. The higher the amount of interaction the greater exchange of effort, resources, and support between the two parties, whereas a low-Quality LMX relationship brings about minimal exchange effort, resources, and support between the two parties. In regard to this, LMX is seen to relate with Organizational commitment at all levels, affective, normative and continuous depending on the level of leader member exchange in the organization.

Practical Implication

The practical implication that could be drawn from the study is creation of a pleasant functioning atmosphere. It has been established that LMX relationships with organizational commitment will significantly influence job outcomes. Given that influence, it is crucial for an organization to nurture existing relationships and to engage employees (academic staff) in organizational development efforts (Keup L.C., 2000). Therefore, organizations should encourage effective communication among employees and leaders by valuing open communication and increasing ways to communicate employee’s extrinsic and intrinsic needs. For example, informal meetings with perceived mutual trust, supervisor support, mutual obligation and consideration of professional. Leslie and Van Velsor (1996) suggest development of interpersonal skills between supervisor and subordinates, which can help to move from performance focus pressure at work and instead create a tension free work environment. Clear and well discussed organization’s objectives and key result area (KRA) to employees would promote perceived high Leader member exchange (LMX) and increase desired employee commitment.

Limitations

Like with most studies, this study was subjected to several limitations. Data collection was quite challenging especially on academic employees who was double as leaders, they were reluctant in giving their response on the nature of LMX on their bosses. Most of questionnaires given to such
employees either were not returned and only two of them were received by the researcher. This outcome is well explained by the response rate of 69% of the respondents. The response rate could have been the reason behind a small variance of 13% of the contribution of both Job characteristics and LMX on Organizational commitment. Besides, the study initial aim was to use sophisticated analysis in determining the mediation effect of leader member exchange, like Structural equation modeling. However, this could have not been possible given the small sample response of only 178 respondents against the required minimum for running SEM of a sample of 200 respondents and above.

**Recommendations for Future Research**

This study involved participation of academic employees alone with exclusion of their managers (leaders). Although subordinates (academic employees) would be quite an ideal unit of analysis to test the mediating role of LMX, it would also be interesting to acknowledge the perception of the leader on their relationship with their subordinates. There is also need to acknowledge the role of teams and leaders in these relationships like team member exchange.

Secondly the study focused on limited samples of academic employees in only 3 public universities in Uganda within Kampala region. With about six public universities in Uganda from various regions, there is need to increase the current sample by including the other universities like Gulu, Mbarara and Busitema. This would possibly improve the mediation effect of the study from partial to full mediation. The work outcomes experienced at Makerere University, Kyambogo University and Makerere University Business School could not critically be used to reflect the remaining public universities in different regions.
Conclusion

In our study, we focused on the mediating role of LMX on the relationship between job characteristic and organizational commitment. In general, the findings were consistent with the hypotheses set. The results showed that there is a partial mediating effect of LMX on the relationship between job characteristic and organizational commitment. Based on the findings, the researcher learnt that organization’s leaders normally ignore the role of LMX as a component of Human resource best practice in highly influencing work outcomes. The researcher also noted that employees can have job fit but fail to be committed, especially those with perceived LMX. Therefore, promotion of high LMX is vital in improving organization commitment. Therefore, employee communication, mutual trust, respect, mutual obligation, profession and supervisor support are seen as key attributes that would improve employee commitment (affective and normative commitment).
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Assessment of the Impact of Foreign Direct Investment on Tanzanian Labor Market: A Case of Hotel Industry

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ABSTRACT

The main objective of the study was to assess the impact of FDI on Tanzanian labor market using a case of hotel industry. The specific objectives are to determine the trend in employment, assess the extent of salary discrimination between foreign and local employees and find out the labour market challenges in the sector. The study which was conducted in Dar es Salaam, was both longitudinal and cross sectional in nature. It involved both primary and secondary data. Secondary data were collected on trend in employment and salary discrepancy, while data on challenges in the sector were collected from focus group discussion targeting the hotel top executives. Data on employment trend and salary difference were analyzed using regression and Theil models respectively. The findings show that for the entire period covered by FDI flow, employment has been rising. At the same time, salaries of foreign employees were higher than those of locally employed workers. In addition, the former are more educated, and have more skills than the latter. The challenges facing this sector include lack enough government support and constantly changing government regulations and tax systems. It is recommended that the hotel sector has to build capacity of local employees by in house and formal training in order to reduce salary inequality between foreign and local employees and also the government should support the sector in terms of transparent regulations and tax systems.
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The Effect of Terrorism on Kenya’s Securities Market:  
The Case of The Nairobi Securities Exchange

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ABSTRACT

The stock market plays a critical role in the national economy since it facilitates fundraising activities, trade, investment and economic growth and development. An understanding of all the factors that affect its performance is crucial.

Socio-political events such as terrorism have been noted to disrupt the flow of financial capital between nations and affect incomes, company profits and stock prices. Terrorism has become a fairly recent global phenomenon which almost every society finds itself exposed to from time to time, hence the need to understand its effect on the stock market. Terrorism is of particular interest to the government, investors and listed companies at the Nairobi Securities Exchange (NSE).

The objective of this research study was to establish the effect of terrorism on the Nairobi Securities Exchange (NSE). This study utilized
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event study methodology to examine the effect of terrorism and military attacks on the Kenyan stock market and relied heavily on secondary data obtained from the NSE.

The event study analysed the data using excel and Statistical Package for Social Sciences (SPSS) and results presented in tables, figures and appendices. The study suggests that further research studies be conducted to establish the effect of terrorism on other sectors of the economy such as financial institutions as well as the insurance and re-insurance sector.

The study determined that there are significant short term negative stock returns around the terrorist event dates as evidenced by the decline in the NSE 20 share index, abnormal returns (AR) and the cumulative abnormal returns (CAR) around the terrorist event dates. Therefore, terrorism has a negative effect on Kenya’s stock market.

Key words: Terrorism, Securities Market, African Union Mission to Somalia (AMISON)

PART I

INTRODUCTION AND RESEARCH OBJECTIVES

1.1 Background

The stock market plays a critical role in the national economy since it facilitates fundraising activities, trade, investment and economic growth and development. Stock markets are used to implement privatization programs and they often play an important role in the development of emerging economies (Lee, 1998).

There are a number of factors that influence share prices at the stock exchange which include industry performance, market sentiment, new
products and markets, dividends, insider trading, stock splits, earnings results and guidance. These factors could increase or decrease security prices meaning that the stock market could respond positively or negatively.

Socio-political events have been noted to affect stock market behavior and, broadly speaking, it has been shown that major events such as war and terrorism influence capital markets and asset price (Kollias et al., 2010). Essentially, unforeseen socio-political events may be viewed as external shocks to capital markets that can directly affect market risk premium highly increasing volatility and thus exert an adverse impact on asset valuation, investment decisions and portfolio allocation.

Terrorist violence, especially large scale attacks such as the 9/11 New York attacks or indeed the March 2004 and July 2005 bombings in Madrid and London respectively, constitute major external shocks that can directly impact capital markets and also capital movements between countries as Abadie and Gardeazabal (2008) report. Beyond the loss of life and personal injuries that the victims of terrorist actions suffer and the atmosphere of fear terrorists seek to create with their premeditated use of brutal violence, terror also has real economic costs (Kollias et al., 2010).

This study examines the response of Kenya’s stock market to terrorist and military attacks. Share prices at the stock market always reflect the investors’ fears and hopes about the future. Terrorist events and unforeseen disasters can have serious implications on the stock market. The investors’ decisions to buy and sell shares are affected by the information available about a terrorist event, for instance, investors can flee the market in search of safer investment instruments and panic selling ensues (Chen and Siems, 2004).

Terrorist attacks have negative effects on a number of economic indicators and variables such as investments, foreign direct investments (FDI), optimal allocation of capital, tourism, increased economic uncertainty, investors’ decisions, foreign exchange and stock markets through decreasing
company’s expected profit (Ramiah et al., 2010; Chesney et al., 2010; Drakos, 2009).

Terrorist attacks lead to regulations being imposed by the government. For instance, measures to not only prevent terrorist events, but also to impose transparency on bank accounts including the lifting of bank confidentiality laws. Consequently, investors experience difficulties in transferring money.

It is expected that terrorist attacks and military attacks have a negative effect on the Nairobi Securities Exchange. This is attributed to uncertainty about what the future holds, constrained resources and panic among investors. Furthermore, there are resultant increased costs of doing business as well as increased financial instability (Karolyi and Martell, 2006).

The increasing integration of global stock markets and advances in technology means reaction to international events also gets quickly incorporated in stock prices. ‘...Global capital markets today are tightly inter-linked; news spreads rapidly (especially bad news), with quick spillover or contagion effects’ (Chen and Siems, 2004, p. 363). The 9/11 attacks, for example, severely affected not only the U.S. but also the global financial system.

In Kenya, research has been done to establish the effect of terrorism on tourism according to studies by Kuto (2004). However, no research has been done to examine the effect of terrorism on the Nairobi Securities Exchange. I hereby consider terrorist activities in Kenya and their effect on the Nairobi Securities Exchange.

Fluctuations in the stock prices are due to change in the investors’ attitude, perception, information, rumors, economic conditions, political instability and corporate decisions. This paper tests the effect of various terror attacks on the prices of the shares of particular industries. Terror attacks have their effects on the psychology of investors, consumption power, political environment and economic wealth. These attacks sometimes
hinder the relations and business deals from foreign investors, thus affecting the stock market.

1.2.1 Terrorism Activities in Kenya

Terrorism can be defined as premeditated, politically motivated violence perpetrated against non-combatant targets by sub national groups or clandestine agents, usually intended to influence an audience. One of the largest reinsurance companies, Swiss Re defines terrorism in the following way: “Terrorism means an act or threat of violence or an act harmful to human life, tangible or intangible property or infrastructure with the intention or effect to influence any government or to put the public or any segment of the public in fear” (Brauner and Galey, 2003).

Terrorism refers to the killing of innocent people by a private group in a way to create feeling of hatred and panic as well as physical and psychological destruction among the common people of the nation. Terrorism in Kenya has been manifested in attacks by Somalia’s militant group called Al-Shabaab which is an Al Qaeda linked terrorist group.

On the 7th of August, 1998, the Al Qaeda network simultaneously executed twin attacks in Tanzania and Kenya, targeting the U.S. embassy. As a result of the embassy bombing, hotels in Kenya received numerous cancellations. The U.S. embassy in Kenya was severely damaged and the news spread throughout the world via the media. A few Americans and over two hundred Kenyans lost their lives while thousands were injured (Kelley, et al., 2003).

On 28th November, 2002, terrorists believed to be linked to Al Qaeda bombed the Paradise hotel in Kikambala on the North Coast of Kenya in a deadly attack. The Israeli-owned hotel was severely damaged by the terrorist bomb. Sixteen people died in the hotel attack, including three suicide bombers (Daily Nation, Friday, November 29, 2002). Simultaneously, two rocket propelled grenades were fired at an Israeli
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Airliner at the Moi International Airport, Mombasa. Both missiles narrowly missed the aircraft. These attacks triggered fears in the hospitality industry, with tourism suffering a setback due to a drop in the number of incoming tourists (Agutu, 2003). Both attacks specifically targeted Israeli tourist interests on Kenyan soil.

Following these attacks of terrorism, Western governments led by the United States of America and Britain issued travel advisories to all their citizens against travelling to Kenya in 2003. The Kenya Tourism Federation stated that the suspension of British Airways regular and charter planes flying to Nairobi, coupled with travel advisories, closed down access to 90% of Kenya’s oversees markets. The country was losing an estimated amount of over 1 Billion Kenya shillings per week. In addition to the revenue loss, at stake were over 500,000 direct jobs and another 2.5 million indirect jobs (Gitu, 2003).

On 16th October, 2011, after the kidnapping of three tourists in Lamu and two aid workers in the Dadaab refugee camps, Kenya sent its troops under “Operation Linda Nchi” to southern Somalia to fight Al Shabaab, a fundamentalist group with links to Al Qaeda. The Kenyan government intervened and coordinated with Somali and Ethiopian Armies under the African Union Mission to Somalia (AMISOM) in the attempt to preserve tourism which is a key source of foreign currency. Lamu is of strategic importance owing to infrastructural project for a new port and an oil refinery as well as a pipeline, motorway and railway linking the Lamu port to South Sudan and Ethiopia (LAPSSET).

On 24th October, 2011 the Al Shabaab attacked a bar in Nairobi and one person died and twenty others were injured. The same day, terrorists attacked the Machakos bus terminus in Nairobi and five people died and twenty others were injured. Other terrorist attacks happened on 29th April, 2012 where worshippers were attacked in a church in Ngara, Nairobi and on 15th May, 2012 when a nightclub in Mombasa was attacked, killing
one person and injuring five others. On 24th June 2012, terrorists attacked a pub in Mombasa, killing three people and injuring thirty people.

1.2.2 The Nairobi Securities Exchange (NSE)

The Nairobi Securities Exchange (NSE) was formed in 1954 as a voluntary organization of stock brokers and is now one of the biggest and most active capital markets in Africa. It is located on the first floor of Nation centre, Kimathi Street, Nairobi. The securities exchange is responsible for investor protection, capital allocation as well as raising shareholders’ equity cheaply. It also facilitates an accurate price discovery. It helps mobilize domestic savings for investments and makes long term investments liquid by facilitating transfer of securities between shareholders (Lee, 1998).

The NSE enables Kenyans to buy and own shares of companies listed at the NSE. Stock brokers act as financial advisors to their clients and carry out their orders as per the NSE website.

The NSE deals in both variable and fixed income securities. Variable income securities are the ordinary shares that do not have a fixed rate of dividend payable since the dividend is dependent on both the company’s profitability and the board of directors’ decision. Fixed income securities, on the other hand, covers treasury and corporate bonds, preference shares and debenture stocks which have a fixed rate of interest or dividend irrespective of profitability.

A robust stock market assists in the rational and efficient allocation of capital which is a scarce resource. The stock market is considered as the most efficient in allocating scarce capital to its highest value users. This requires that the stock market has the expertise, the institutions and the means to prioritize access to capital by competing users so as to achieve optimum production.

The NSE is an emerging market with opportunities for making high returns with high levels of risk, thus presenting challenges for investors.
given that share prices respond to events including earnings reports, product releases, trade shows, presentations, bonus issues and dividend announcements.

1.3 Research Problem

In the last few years, there have been increased terrorist attacks in Kenya intensifying concerns about the terrorist threat and renewed calls to better understand terrorism including its causes and effects. Some of the research studies that have been done on the relationship between terrorism and the behaviour of the stock markets include Arin, Ciferri and Spacnolo (2008), Chen and Siembs (2004), Eldor and Melnick (2004) and Karolyi and Martell (2006). These studies have been done mainly in the US and other European countries. To the best of my knowledge, no research study has been done in Kenya to establish the effect of terrorism on the stock market.

Studies on the effect of terrorism on emerging stock markets are very important as more and more local and foreign investors participate in these markets.

This research study investigates the effect of terrorism on the Nairobi Securities Exchange (NSE) so as to facilitate informed decision making by institutional and individual investors, policy makers, government and other stakeholders. The research question that the study intends to address is as follows:

**Do acts of terrorism and military attacks have a significant negative effect on the Nairobi Securities Exchange?**

Therefore, the research study will bridge the knowledge gap existing as far as the effect of acts of terrorism on the Kenyan stock market is concerned.
1.4 Objective of the Study

The objective of the study is to establish the effect of terrorism on the Nairobi Securities Exchange. Terrorism could have a positive, nil or negative effect on the securities market.

1.5 Importance of the Study

The study will make a significant contribution to the Government of Kenya as it will provide a lot of insight about the effect of terrorist activities on the Nairobi Securities Exchange and by extension the Kenyan economy. Consequently, the government would be in a better position to devise mechanisms of preventing terrorist attacks.

Terrorism is a wide area of study, to scholars who would like to look into other areas; this study will provide the necessary background and reference to enable them carry out a successful study. This study would form part of the first literature reviews specific to Kenya, thus building the body of knowledge in Kenya.

Policy makers such as the Central Bank of Kenya will find the study useful in making amendments to the existing policies to counter terrorism. The study would provide guidelines for the Central Bank of Kenya and other financial institutions to provide adequate liquidity and make the appropriate macro-economic decisions which would facilitate the stability of the Kenyan stock market.

Investors will find the study findings useful in making informed investment decisions. The study findings can be used in formulating investors’ portfolio diversification strategies against terrorism risk. This would enable investors maximize returns while minimizing losses relating to terrorism.

Insurance and re-insurance companies would find the study useful in assessing risk and compensation with respect to terrorist activities. The insurance sector plays a key role in restoring the financial status of its clients in the event of loss relating to a terrorist attack.
Regulators such as the capital markets authority (CMA) would find the study useful in proactively championing the stability of the capital market. This would be done through the mobilization of financial institutions and the bond and stock markets to provide adequate liquidity.

Financial analysts would find the study useful in providing insights for advising investors on when to buy, hold or sell shares to maximize returns. In so doing, financial analysts would be adding value to investors. The optimal timing of when to transact would facilitate wealth creation by investors.

PART II

THEORETICAL BACKGROUND AND INFORMING LITERATURE

2.1 Introduction

This chapter covers theoretical and empirical literature reviews for studies done both internationally and in the local context. It also provides a summary of the findings.

Sandler and Enders (2002) define terrorism as the premeditated use, or threat of use, of extra normal violence to obtain a political objective through intimidation or fear directed at a large audience.

Acts of terrorism have significant negative effects on the economies in which they occur. For example, the September 11th terrorist attack had significant economic repercussions for the U.S. and the world markets. The New York Stock Exchange, the American Stock Exchange and NASDAQ did not open on September 11th and remained closed until September 17th. The New York Stock Exchange member firms, customers and markets were unable to communicate due to major damage to the telephone exchange facility near the World Trade Centre. When the stock
markets re-opened on September 17, 2001, the Dow Jones Industrial Average (DJIA) stock market index fell 684 points, to 8920, its biggest ever one day point decline (IMF 2002). U.S. stocks lost $1.2 trillion in value for the week. Furthermore, the attacks led to decreased travel and as of 2006, the airline industry had not fully recovered.

The attack on the World Trade Centre in the US led to huge insurance claims with many insurance companies throughout the world having to disclose the impact of the attack in their financial statements (PricewaterhouseCoopers, 2001).

2.2 Theoretical Literature Review

The core objective of terrorism is to influence the government and it is a deliberate act that creates fear, violence and anxiety among people. Terrorism has direct and indirect effects on the economy. Direct effects involve immediate and quick negative responses of economy and businesses such as decline in investments, growth and consumptions of different sectors while long term negative effects on firms, economy and stock markets are known as indirect effects of terrorism and need government policies to be overcome.

Many studies such as by Abadie and Gardeazabal (2003), Chen and Wei (2005) and Johnston and Nedelescu (2005) have proved the relationship of terrorism and stock market to be negative. Worse reactions have been witnessed and attributed to bigger terrorism activities (Drakos, 2009). By diversification, the negative impact of these terrorist activities can be reduced. Terrorism does not have negative impact on currency market (Eldor & Melnick, 2004).

2.2.1 Efficient Market Hypothesis (EMH)

Efficient market hypothesis (EMH) is based on the notion that investors behave rationally, maximize the expected utility accurately and process all the available information (Shiller, 2000). It asserts that financial markets
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are efficient, hence financial assets are correctly priced and implying that one cannot consistently achieve returns in excess of the average market returns given the information available at the time the investment is made.

Stock prices represent random walks through time, the price changes being unpredictable since they occur in response to genuinely new information which by the very fact that it is new, is unpredictable (Shiller, 2000).

There are three forms of the efficient market hypotheses namely the weak, the semi-strong and the strong hypotheses. The weak form hypothesis claims that prices on traded assets reflect all past publicly available information. The semi-strong form hypothesis claims both that prices reflect all publicly available information and that prices instantly change to reflect new public information. The strong-form hypothesis additionally claims that prices instantly reflect even hidden or inside information.

2.2.2 Dividend Signaling Hypothesis

According to the dividend signaling hypothesis, dividend change announcements trigger share returns because they convey information about management’s assessment of the firm’s future prospects.

One of the most important assumptions of the signaling hypothesis is that dividend change announcements are positively correlated with share price reactions and future changes in earnings. Bhattacharya (1979), John and Williams (1985) and Miller and Rock (1985) developed the dividend signaling classic models, showing that in a world of asymmetric information, better informed insiders use the dividend policy as a costly signal to convey their firm’s future prospects to less informed outsiders. So a dividend increase signals an improvement on firm performance while a decrease suggests a worsening of its profitability.

Consequently, a dividend increase (decrease) should be followed by an improvement (reduction) in a firm’s profitability, earnings and growth.
Moreover, there should be a positive relationship between dividend changes and subsequent share price reaction.

2.2.3 The Socio-political Theory

Adolph Wagner advocated that social and political objectives should be deciding factors in choosing taxes. Wagner did not believe in individualist approach to a problem. He wanted that each economic problem should be looked at in its social and political context and an appropriate solution found thereof. The society consisted of individual, but was more than the sum total of its individual members. It had an existence and entity of its own which needed preservation and taking care of. Accordingly, a tax system should not be designed to serve individual members of the society, but should be used to cure the ills of society’s whole. Wagner, in other words, was advocating for a modern welfare approach in evolving and adopting a tax policy. He was specifically in favour of using taxation for reducing income inequalities.

He maintained that private property and inheritance were the result of state policies and not because of any God given rights. The state therefore had the right to control the ownership of property and its inheritance in the interests of the society as a whole. Wagner’s ideas, though much criticized at that time are now the hallmarks of fiscal policies of modern state.

2.3 Empirical Literature Review

Karolyi and Martell (2006) state ‘……stock and bond prices arguably incorporate investor’s beliefs and views about future cash flows and discount rates and because the liquidity of financial markets provides an efficient conduit for these views to be quickly reflected in asset prices’.
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2.3.1 Holiday Effect

This is the tendency for a stock market to gain on the final trading day before an exchange mandated long weekend or holiday such as Christmas. It is the unusually good performance by stocks on the day prior to market-closing holidays. Lakonishok and Smidt (1988) found evidence of anomalies related to returns around the turn of the week, the turn of the month and the turn of the year and holidays in the Dow Jones Industrial Average. Kim and Park in their study concluded that there are abnormally high returns on trading before holidays in the U.S, UK and the Japanese stock markets, even though each country has different holidays and institutional arrangements.

Empirical findings report the presence of abnormally high stock returns on the day before holiday. Abnormal pre-holiday returns on the US have been documented by Merrill (1965) and Fosback (1976).

2.3.2 Weekend Effect

This is the phenomenon in the financial market in which stock returns on Mondays are often significantly lower than those of the immediately preceding Friday, hence the daily returns of the market are not the same for all the days of the week which we would expect in an efficient market (French, 1980).

Lakonishock and Maberly (1990) attribute some of the Monday – Friday differential returns to the different trading patterns of institutions and individuals. Damodaran (1989) explores whether a tendency of corporations to release bad news on Friday after the markets close could account for depressed Monday share prices and reports evidence of only a weak connection.

Miller (1988) attributes the negative returns over weekends to a shift in the broker-investor balance in decisions to buy and sell. During the week,
Miller argues, investors, too busy to do their own research, tend to follow the recommendations of their brokers, recommendations that are skewed to the buy side. However, on weekends, investors, free from their own work as well as from brokers, do their own research and tend to reach decisions to sell. The result is a net excess supply at Monday’s opening.

2.3.3 January Effect

This is the tendency of January stock returns to be higher than stock returns for the rest of the months of the year. This is attributed to savings in the previous year as well as bonuses paid by companies in the month of December.

It is the general increase in stock prices during the month of January. This rally is generally attributed to an increase in buying, which follows the drop in price that typically happens in December when investors, seeking to create tax losses to offset capital gains, prompt a sell-off.

January effect is a calendar-related market anomaly in the financial market where financial security prices increase in the month of January. This creates an opportunity for investors to buy stocks for lower prices before January and sell them after their value increases.

Onyuma (2009) examined the day of the week and the month of the year effects in the Kenyan stock market. He found that the largest positive returns are produced Friday and January, while Monday provided the lowest negative returns. Therefore, the main characteristics of the January effect are an increase in buying securities before the end of the year for a lower price and selling them in January to generate profit from the price differences. The recurrent nature of this anomaly suggests that the market is not efficient.

2.3.4 Other Empirical Studies

Karolyi (2006) discusses what is known and what is not known about the effects of terrorist events on financial markets. It also provides a summary
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of the research that has been done in this area. According to the author, there is still little known about the economic and financial consequences of terrorism.

Arin, Ciferri, and Spagnolo (2008) show interesting results in relation to the effect of terrorist events on the markets’ behaviour based on the evidence from six different financial markets (Indonesia, Israel, Spain, Thailand, Turkey and UK). In their work, the authors investigate the effects of terrorism not only on the stock markets, but also on the stock market volatility. They found that the magnitude of terrorist effects is larger in emerging markets.

Johnston and Nedelescu (2005) examine cases where financial markets are directly or indirectly affected by terrorist acts. They review the reaction of the markets to the 9/11 attacks in the U.S. and attacks in Madrid in March, 2004. The main conclusion of their study is that financial markets are not only confronted with major disruptions caused by the massive damage to property and communication systems, but also with high levels of uncertainty and market volatility, especially in the case of the 9/11 attacks in New York (IMF (2001)). However, there are some differences in the stock market reaction to these two terrorist events. While attacks in Madrid were perceived as mostly having a regional effect, those in New York were seen as having repercussions on the global financial system. The authors view the timing of attacks as a possible explanation for different impacts. Attacks in New York occurred in a period of economic downtown. In contrast, the attacks in Spain happened when the world economy was experiencing growth. I think that the difference in the impact can also be explained by looking at the targets of the attacks. The 9/11 attacks happened in Manhattan, the financial centre, while the bombings in Madrid were targeted at a transport system.

Chen and Wei (2005) examine the U.S. capital market reaction to 7 terrorist and 7 military attacks over the period 1915-2001, using an event
study approach. They apply their analysis to some other capital markets as well, but focus on the impact of only two events: the 9/11 terrorist attacks and Iraq’s invasion of Kuwait in 1990. They find that U.S. capital markets rebound and stabilize quicker after these two events compared to other markets, and that US markets are more resilient now than in the past, which they explain by the strength of the banking and financial sectors in the U.S. One of the main conclusions of their paper is that financial markets are efficient in absorbing the shocks caused by terrorist attacks and can continue to function in an effective way.

Eldor and Melnick (2004) study how stock and foreign exchange markets react to terrorism in Israel. The authors consider 639 terror attacks during the period from 1990 to 2003 and distinguish the data by location, target, type of attack and number of casualties. They show empirically that terrorism has a permanent negative effect on the stock market but not on the foreign currency market. They conclude that these markets are efficient in incorporating news about terrorist attacks and that there is no evidence that markets have become desensitized to the terror over time.

Carter and Simkins (2001) examine the impact of this event on airline stock returns. They test whether market reaction on the first trading day after the attack is the same for each airline or, alternatively, whether it distinguishes among airlines based on firm characteristics. They find that market differentiates among various airlines based on their ability to cover short-term obligations as measured by a ratio of cash and equivalents to total assets. According to their study, airlines with low liquidity are penalized the most. No statistical significance is found for such firm characteristics as size, leverage and firm performance.

Drakos (2004) investigates the effects of terror attacks of 9/11 on a set of airline stocks listed at various international stock markets. The study found that conditional systematic risk has on average more than doubled which would have implications for portfolio diversification and the cost (and ability) of airlines in raising capital.
In their papers, Abadie and Gardeazabal (2003), Abadie and Gardeazabal (2005) study the effects of terrorism on economic activity. Krugman (2003) refers to direct economic damage costs, the budget costs of government responses to terrorism and the cost imposed by the way people respond to fears of terrorism.

The long-term economic impact of terrorism is also studied by Karolyi and Martell (2006). Authors examine the stock price impact of terrorist attacks in which traded firms are targets. They find that the impact of attacks differs according to the home country of the target firm and the country in which the incident occurs. They conclude that in countries that are wealthier and more democratic, attacks are associated with larger share price reactions.

According to Raby (2003), airline, travel, tourism, accommodation, restaurant, postal and insurance industries are particularly susceptible to increased terrorism risks. Regions and economies where these industries are concentrated are likely to suffer most from falls in output and employment.

Ramiah et al (2010) investigate the impact of five recent terrorist attacks (September 11 attacks and bombings in London, Madrid, Bali and Mumbai) on equities listed on the Australian Stock Exchange. They use daily stock returns indexes, returns calculated from the All Ordinaries share price index, and the 10-year bond rate for the period, August 1999 to August 2006, obtained from DataStream. They construct industry portfolios based on the Global Industry Classification Standards (GICS). Following the Global Industry Classification Standard, they analyse how these events affect the different sectors in Australia. Using parametric and non-parametric tests, they investigate the relationship between stock returns for equities listed in these sectors and terrorist attacks. They report significant short term negative abnormal returns around the September 11 attacks and to a lesser extent, the Madrid and London bombings. Their evidence shows a weak
positive equity response to the Bali bombing, and no response from the Mumbai attack in the Australian market. They also document negative industry abnormal returns as high as 37.30% on the day in the Utilities sector. Their findings show that systematic risk of certain sectors increased after the events of September 11 but remained unchanged for the other attacks.

Chesney et al (2010) investigated the impact of terrorism on financial markets. The main focus of their paper is to study empirically the impact of terrorism on the behavior of stock, bond and commodity markets. They consider terrorist events that took place in 25 countries over an 11-year time period and implement their analysis using different methods: an event-study approach, a non-parametric methodology, and a filtered GARCH–EVT approach. In addition, they compare the effect of terrorist attacks on financial markets with the impact of other extreme events such as financial crashes and natural catastrophes. Approximately two-thirds of the terrorist attacks considered lead to significant negative impact on at least one stock market under consideration. The Swiss stock market is affected by the highest number of attacks, the American stock market by the lowest. The airline industry and insurance sector exhibit the highest susceptibility to terrorism, while the banking industry is the least sensitive. This is in contrast to financial crashes which demonstrate a strong negative impact on the banking sector. The analysis of the impact on the aero/defense, pharma / biotech and oil/gas sectors shows both a positive and a negative reaction. These indices behave similarly in case of the natural disasters and financial crashes. They show how the results of this approach can be used for investors’ portfolio diversification strategies against terrorism risk.

Abadie & Gardeazabal (2008) analyzed the effects of terrorism in an integrated world economy. They use a simple economic model to show that terrorism may have a large impact on the allocation of productive capital across countries, even if it represents a small fraction of the overall
The Effect of Terrorism on Kenya’s Securities Market

economic risk. The model emphasizes that, in addition to increasing uncertainty, terrorism reduces the expected return to investment. As a result, changes in the intensity of terrorism may cause large movements of capital across countries if the world economy is sufficiently open, so international investors are able to diversify other types of country risks. Using a unique data set on terrorism and other country risks, they find that, in accordance with the predictions of the model, higher levels of terrorist risks are associated with lower levels of net foreign direct investment positions, even after controlling for other types of country risks. On average, a standard deviation increase in the terrorist risk is associated with a fall in the net foreign direct investment position of about 5% of GDP. The magnitude of the estimated effect is large, which suggests that the “open-economy channel” impact of terrorism may be substantial.

2.4.1 Terrorism and the Stock Market in Kenya

The effect of terrorism on the stock market is a recent area of study that has received attention in advanced economies. However, there are no studies in Kenya on the effect of terrorism on the stock market.

Although Kenya’s Operation Linda Nchi was in response to a provocation by Al Shabaab, Kenya is acting broadly in the collective interest of advancing international peace and security and fighting terror. It, therefore, requires the support of the international community in order to meet its objectives.

Owing to terrorist events, investors may anticipate that future profits of companies within the nation will suffer due to either a drop in exports or due to a drop in domestic demand due to uncertainty about Kenya’s future given the possibility of repercussions against Kenya from other countries. The likely result will be a drop in stock prices. The greater the impact of terrorist strike and the anticipated repercussions, the larger the drop in stock prices. Correlations between acts of terrorism and stock market
Keitany K. Wesley and Baras, J. Lumumba

reactions have been empirically proven. Ahmed and Farooq (2008) examined the effect of 9/11 on the Karachi stock market and found a significant change in volatility during the post 9/11 period.

Due to the interconnectedness of the financial markets, it is reasonable to further assume that other stock exchanges have been affected. Such spillover effects have been noted by Floros (2008) between the Egyptian and Israeli stock exchanges and by Chan and Hooy (2003) between the US, Japan, Hong Kong, Singapore, South Korea, Taiwan, Indonesia, Malaysia, the Philippines and Thailand.

2.4.2 Causes of Terrorism

Kenya is a good target of global terrorism because of a combination of geographic, regional, historical, political, economic and socio-cultural factors. Some of these factors are direct justifications of attacks while others facilitate the attacks. Direct motivations of terrorism in Kenya include (1) the country’s close ties with Israel and western countries, especially the US, (2) its vibrant coastal beach tourism industry that is at odds with the locally dominant Islamic religion and culture and, (3) the perception that the country’s predominantly Christian population is an obstacle to the Islamization of Eastern Africa. Factors facilitating terrorist attacks in Kenya include the country’s (1) coastal geographic situation and strategic location relative to Europe, Asia, and neighboring African countries, (2) porous borders, (3) unstable neighboring countries, especially Somalia and Sudan, (4) relatively open and multicultural society, (5) relatively good transport and communications infrastructure, (6) relatively advanced regional economy, (7) relatively large Muslim population and, (8) the political and socioeconomic deprivation of the coastal population relative to the rest of the country (Otiso, K.,2009).

Moreover, poor security and high levels of corruption have compromised Kenya’s Security. Crucial services related to security such as the police,
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immigration and border security (customs) were commercialized to the extent that they became goldmines for the civil servants who worked in those departments. Hence one is able to slip into the country and do whatever he wants to do provided he has the money to pay bribes to relevant persons (Soke, 2003). Corrupt civil servants such as customs and security officers provide false identity documents to terrorists who move freely, thus threatening lives and property.

Frustration and poverty with the slow pace of social reforms, coupled with poor governance and lack of social services, facilitates the proliferation of terrorist groups that purport to offer solutions to the poor living conditions (Cronin 2002:38). People who live on less than a dollar a day tend to lose hope and engage in acts of terrorism.

Some people in the society have the tendency to dominate over others. In order to realize their wishes, they resort to any kind of activity including terrorism activities to prove their supremacy in society.

2.4.3 Preventing the Effects of Terrorism on the Stock Market in Kenya

Terrorist attacks are facilitated by money laundering. Therefore, banks need to implement the principle of at least knowing your customers (KYC). Banks need to conduct due diligence on their customers so as to identify terrorist financing activities. Essentially, all financial institutions should be extra vigilant so as not to be used to channel terrorist funds.

Financial infrastructure services which are becoming increasingly susceptible to electronic attacks from cyber space should be considered to be infrastructures of national interest and be protected by continuous checks and regulatory oversights.

There is need to get asset clauses in to the UN convention against international corruption. This would facilitate the recovery of assets acquired in corrupt deals which could expose the society to acts of terrorism.
Kenya needs to employ effective and appropriate monetary policies which strengthen banking and the entire financial sector. Consequently, financial institutions would be able to provide liquidity to a shaky and panicky market which in turn stabilizes the market and facilitates its recovery from the effects of terrorist and military attacks.

There is need for teamwork among all the stakeholders as well as a very competent and effective civil society. Terrorism has to be combated by a combination of government, governance, stringent laws, quick and firm system of justice that delivers harsh punishments to the perpetrators. The government, the opposition and other political parties including the people should work in harmony to prevent terrorism. There is need to eradicate the politics of conflict among political parties.

Poverty breeds criminals and terrorists. Poor people tend to engage in acts of desperation, hopelessness and conflict with other people or regions. As such, the government with assistance from the donors and donor countries should take concerted efforts to eradicate poverty in society.

Kenya needs to implement a good governance strategy which includes the reduction of fraud, inefficiencies, inequities and dignified life. If people are sure about their rights and privileges, this will change their mindset towards a positive attitude. The government has to ensure rule of law so that nobody is denied of his just rights. Besides, discrimination against anyone should be stopped.

The government and the private sector should put importance to development plans that will create more jobs for the citizens. Once unemployment is reduced, it will create an environment which will automatically reduce terrorism since citizens will be actively engaged in productive activities.

2.5 Summary

From the above literature review, terrorism generally has an adverse effect on the stock market. This study is different from prior studies in several respects. First, most prior studies examine only one or two terrorist events
The Effect of Terrorism on Kenya’s Securities Market

I examine three major terrorist events in Kenya and provide substantial evidence of the impact of terrorism.

Second, prior studies are mainly US based and examine impact on the US financial Market. This study focuses on the Kenyan financial market. Karolyi (2006) states that most studies in this area are ‘limited in scope and are hampered by the limits of the databases used…most of them have focused on events surrounding the Sept 11…’.

To the best of my knowledge, this is the first time an investigation of the impact of terrorist attacks within the East African region on the Kenyan stock market is being conducted. Terrorist attacks have been on the increase over time, particularly due to the instability in our neighbouring countries such as Somalia as well as the close ties with Western countries such as the US.

In conclusion, a deep understanding of terrorism and its effects on the NSE is a prerequisite for designing successful policies to prevent terror, to alleviate the costs of terrorism or to reduce an economy’s vulnerability to attacks.

PART III

METHODOLOGY

3.1 Introduction
This chapter outlines the methodology to be used to conduct the study. It consists of the research design, population of interest, data collection methods as well as data analysis techniques. For the purposes of this study, event study methodology is used.

3.2 Research Design
A Research design refers to the way in which the study is designed, that is, the method used to carry out a research. Since the study focuses on the
effect of events being terrorism on the stock market, the event study methodology has been used as applied by Fama, Fisher and Jensen (1969), Brown and Warner (1980), Brown and Warner (1985), Lyon, Barber and Tsai (1999), Chen and Siems (2004) and Abadie and Gardeazabal (2003).

When implementing this methodology, a test is conducted on the hypothesis regarding the abnormality of market’s returns due to specific events. This methodology is based on the efficient market hypothesis which states that stock prices adjust to new information according to previous studies by Fama, Fisher and Jensen (1969) and MacKinlay (1997).

3.3 Population of Interest

Kisulu and Tromp (2006) define a population as a group of objects which provide the sample that is being studied. The objects usually have similar characteristics. The population of the study was all the listed companies at the Nairobi Securities Exchange for the period 1998 to 2012 as represented by the NSE 20 share index. There were fifty four (54) listed companies. Those that joined the NSE later than 1998 and those that had since been suspended were not included in the study.

3.4 Data Collection Methods

Secondary data was used for this study. Data was obtained from the NSE. Daily individual stock prices as well as the NSE 20 share index are tabulated and stored by the NSE. For testing purposes, the event period consists of sixty one (61) days (days -30…. , 0 day of terrorist attack, ….+30) around each terrorist attack date.

The author visited the NSE head office located on 1st Floor of Nation Centre, Kimathi Street in Nairobi and upon request, was granted access to data on the daily NSE 20 share index for a period of sixty one (61)
days for each of the three terrorist events. The data was compiled in excel format and analyzed using means and variances to derive abnormal returns (AR) and cumulative abnormal returns (CAR) as shown in appendices I, II and III. The data was then transferred to Statistical Package for Social Sciences (SPSS) for further statistical data analysis.

### 3.5 Data Analysis

This study examines the effects of terrorism events on the Nairobi securities exchange. For this purpose, the study focused on three main terrorist events namely, the 1998 bombing of the US embassy in Nairobi, the 2002 bombing of Paradise hotel in Kikambala and the 2011 kidnapping of tourists and aid workers prompting the Kenya Government to respond and send Kenya defense forces to Somalia under “Operation Linda Nchi.”

Event-study methodology was used to measure the magnitude of the effect of considered extreme events on the behavior of stock, bond and commodity markets. To examine whether an event has any impact on the market, the event-day abnormal returns (ARs) and the cumulative abnormal returns (CARs) are measured and their statistical significance tested accordingly. An abnormal return (AR) is defined as the actual return (determined using arithmetic percentages) less the return predicted by the bank’s beta, given the market return. The abnormal return represents the part of the return that is not predicted and is, therefore, an estimate of the change in bank value on a day, which is caused by the terrorist event. An investigation was conducted on whether there were abnormal returns around each terrorist attack date. Terrorism effect exists only if the abnormal returns are significant.

Abnormal returns on the indices were computed using a mean-adjusted return approach as described by Brown and Warner (1985). Daily excess returns were measured by the mean-adjusted returns approach, that is, for each day at and following the event, the abnormal or excess return from the stock index were calculated by the following equation.
\[ \textbf{AR}_t = R_t - R \]

Where
\( \textbf{AR}_t \) is the excess of the expected return for index at time \( t \),
\( R_t \) is the return on index at the time of event \( t \),
\( R \) is the average return on the index taken over the interval of 30 days in the estimation window.

\[ R = \sum R_t \]

When implementing this methodology, a test is conducted on the hypothesis regarding the abnormality of markets’ returns due to specific events. This methodology is based on the efficient market hypothesis, which states that stock prices adjust to new information (Fama, Fisher, and Jensen (1969), MacKinlay (1997)).

Cumulative abnormal returns (CARs) are also analyzed over the interval of 31 days in the post-event window. The CAR corresponding to an event that is happening at time \( t \) (\( j=0 \)) is computed as

\[ \textbf{CAR}_t = \sum \textbf{AR}_t \]

In contrast to event-day abnormal returns, which show the immediate investors’ reaction on the terrorist event, the 31-day CARs provide an indication of the market response to the event 31 days following the attack. Usually, in event studies, the values of CARs are of more interest than the values of ARs. This is because significant negative CARs would reveal that an event had a strong impact on the markets, and insignificant negative CARs would indicate the markets’ resilience to this event and their ability to recover quickly. The statistical significance of abnormal and cumulative abnormal returns were tested using the t-test statistics described by Brown and Warner (1985).
PART IV
DATA ANALYSIS AND INTERPRETATION

4.1 Introduction
This chapter presents the results of the analysis and findings of the study with reference to the study objectives. The first section gives a summary of the data analysis method used. The second part gives the findings of the study and it includes relevant tables and figures that help to explain the results of the data analysis. The last part gives a summary of findings and interpretation of the results.

4.2 Data Analysis
The objective of the research study was to establish the effect of terrorism on the Nairobi Securities Exchange (NSE). To achieve this objective, event study methodology was used for the three terrorist events. The study analyzes the performance of the securities market before and after the terrorist events.

Secondary data obtained from the NSE was compiled and analyzed in Excel format and then transferred to Statistical Package for Social Sciences (SPSS) for further statistical data analysis. Parametric t-test was used to establish the statistical significance of the abnormal returns (AR) and the cumulative abnormal returns (CAR) over the event window period.

The event period was determined relative to the date of the terrorist event and covered 61 days consisting of 30 days before the event and day 0 being the event day and 30 days after the event. The event period is considered reasonable for the purposes of examining the effect of terrorist events on the Nairobi Securities Exchange (NSE).
4.3.1 Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)

In this study, event study methodology is used to measure the magnitude of the effect of terrorism on the NSE. Measurement was done for event-day abnormal returns (AR) and cumulative abnormal returns (CAR) for each of the three terrorist events as per appendices I, II and III and statistical significance tests done for each of the three terrorist events. The hypothesis test was conducted as follows:

Null Hypothesis: Terrorism has no effect on the Nairobi Securities Exchange
Alternate Hypothesis: Terrorism has an effect on the Nairobi Securities Exchange.

4.3.2: Statistical Test at 5% Level of Significance

(i) T-Test for the abnormal returns (AR)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR98</td>
<td>42</td>
<td>-.3300</td>
<td>.79242</td>
<td>.12227</td>
</tr>
<tr>
<td>AR02</td>
<td>39</td>
<td>4.8536</td>
<td>4.88018</td>
<td>.78145</td>
</tr>
<tr>
<td>AR11</td>
<td>43</td>
<td>.3158</td>
<td>2.61044</td>
<td>.39809</td>
</tr>
</tbody>
</table>

The descriptive statistics for the variables have been provided as the number of observations (N), the mean and the standard deviation for the 1998, 2002 and 2011 terrorist events abnormal returns (AR). The standard error is the estimated deviation of the mean of the sample used for the statistical test. For the 1998 terrorist event abnormal returns (AR), the standard error of the sample mean is merely 0.122 which is relatively small. Therefore, there is a high likelihood that the sample mean is close to the population mean. Equally, the standard error of the sample mean for the
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2011 terrorist event abnormal returns (AR) is 0.398 which is relatively small meaning that it too adequately represents the population mean. However, the standard error for 2002 is relatively very high at 0.781 which indicates that it is not adequately representative of the population mean.

<table>
<thead>
<tr>
<th>Test Value = 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>$t$</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>AR98</td>
</tr>
<tr>
<td>AR02</td>
</tr>
<tr>
<td>AR11</td>
</tr>
</tbody>
</table>

This output gives the t-test value, the degrees of freedom and the two-tailed significance. Since the p values for 1998 and 2002 abnormal returns are 0.003 and 0.000 respectively which are less than 0.05, the null hypothesis is rejected. However, for 2011 abnormal returns (AR), the p value of 0.508 is greater than 0.05 and therefore, the null hypothesis cannot be rejected. The t-statistical test at 5% level of significance indicates that event-day abnormal returns (AR) were significant for 1998 and 2002 terrorist events and insignificant for the 2011 terrorist event during the event window period.

(ii) T-Test for the Cumulative Abnormal returns (CAR)

One-Sample Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR98</td>
<td>42</td>
<td>-7.7557</td>
<td>5.15894</td>
<td>0.79604</td>
</tr>
<tr>
<td>CAR02</td>
<td>39</td>
<td>63.1885</td>
<td>55.35185</td>
<td>8.86339</td>
</tr>
<tr>
<td>CAR11</td>
<td>43</td>
<td>-9947</td>
<td>14.06274</td>
<td>2.14455</td>
</tr>
</tbody>
</table>

The descriptive statistics for the variables have been provided as the number of observations (N), the mean and the standard deviation for the 1998,
2002 and 2011 terrorist events cumulative abnormal returns (CAR). The standard errors of the samples for the 1998, 2002 and 2011 terrorist events cumulative abnormal returns (CAR) are 0.79604, 8.86339 and 2.14455 respectively.

The t test values for the 1998, 2002 and 2011 terrorist events cumulative abnormal returns (CAR) are calculated as -9.806, 7.124 and -0.487 respectively. Since the p values for 1998 and 2002 cumulative abnormal returns are 0.000 and 0.000 respectively which are less than 0.05, the null hypothesis is rejected. However, for 2011 cumulative abnormal returns (CAR), the p value of 0.629 is greater than 0.05 and therefore, the null hypothesis cannot be rejected.

As per the t-statistical test for the cumulative abnormal returns (CAR), only the 2011 terrorist event was found to be insignificant while the 1998 and 2002 terrorist events were found to be significant at 5% level of significance. This means that the NSE 20 share index as well as the individual stock returns for the 1998 and 2002 terrorist events deviated significantly from their means while those for the 2011 terrorist event showed no significant deviation from their means meaning the stock market may have viewed the event as inconsequential.

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR02</td>
<td>7.124</td>
<td>38</td>
<td>.000</td>
<td>63.1385</td>
<td>45.1955 to 81.0815</td>
</tr>
<tr>
<td>CAR11</td>
<td>-.487</td>
<td>42</td>
<td>.629</td>
<td>-1.0447</td>
<td>-5.3725 to 3.2832</td>
</tr>
</tbody>
</table>
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Figure 4.1 demonstrates that the NSE 20 share index started decreasing from a high index of 2,954.19 on the 32\textsuperscript{nd} day before the 7th August, 1998 terrorist event and achieved the lowest index of 2,829.80 on the 9\textsuperscript{th} day before the event, meaning a drop of 124.39 points. Thereafter, there was a gradual increase in the NSE 20 share index up to the 9\textsuperscript{th} day after the terrorist event when a high index of 2,925.49 was recorded implying an increase of 95.70 points. This was followed by a gradual decline up to the 19\textsuperscript{th} day after the terrorist event when a low index of 2,834.17 was recorded meaning a decline of 91.3 points. This can be interpreted to mean that there was a significant drop in the NSE 20 share index around the 1998 terrorist event date.
Figure 4.2 shows that there was a gradual increase in the NSE 20 share index from 1,039.82 on the 32nd day before the 28th November 2002 terrorist event up to 1,249.52 on the 10th day before the terrorist event, representing an increase of 209.43 points. This was followed by steady decline from a high index of 1,249.52 on the 10th day before the terrorist event to a low index of 1,141.62 on the last day before the terrorist event meaning a drop of 107.63 points. Thereafter, the NSE 20 share index started increasing gradually to reach a high index of 1,298.86 representing an increase of 157.24 points. This can be interpreted to mean that there was a significant drop in the NSE 20 share index around the 2002 terrorist event date.
According to Figure 4.3, the NSE 20 share index started increasing from a low index of 3,357.66 on the 29th day before the 2011 terrorist event and attained a high index of 3,507.77 on the 21st day before the event, meaning an increase of 150.11 points. Thereafter, there was a sharp decline in the NSE 20 share index to a low of 3,273.05 on the 6th day before the terrorist representing a decrease of 234.72 points. The NSE 20 share index remained low up to the 6th day after the terrorist when the NSE 20 share index was 3,309.05 which was followed by a sharp increase to attain 3,540.03 points on the 12th day after the terrorist event, meaning an increase of 230.98 points. Thereafter, the NSE 20 share index dropped to a low of 3,374.37 on the 21st day after the terrorist event. This can be interpreted to mean that there was a significant drop in the NSE 20 share index around the 2011 terrorist event date.

From the above figures, it can be observed that there was a decline in the NSE 20 share index around the terrorist event dates, meaning that the
terrorist events under study had a negative effect on the Kenyan stock market.

**Figure 4.4: Linear Plot for the Abnormal Returns of NSE 20 Share Index: AR (%)**

According to Figure 4.4, the abnormal returns (AR) dropped gradually from a high of 0.92% on the 20th day before the 1998 terrorist event to a low of -1.61% on the 9th day before the terrorist event. Thereafter, the 1998 abnormal returns (AR) increased to 0.03% and -0.33% on the terrorist event day and the following day respectively. As for the 2002 terrorist event, the abnormal returns (AR) dropped from a high of 10% on the 10th day before the 2002 terrorist event to a low of 0.52% on the last day before the terrorist event. Thereafter, the abnormal returns (AR) increased steadily to a high of 14.37% on the 16th day after the terrorist event. Similarly, the 2011 terrorist event abnormal returns (AR) dropped from a high of 4.28% on the 21st day before the terrorist event to a low of
The Effect of Terrorism on Kenya’s Securities Market

-2.7% on the 6\textsuperscript{th} day before the terrorist event. The abnormal returns (AR) remained negative around the terrorist event day until the 7\textsuperscript{th} day after the terrorist event after which the abnormal returns turned positive and a high abnormal return (AR) of 5.24\% achieved on the 12\textsuperscript{th} day after the terrorist event. This provides evidence of decline in abnormal returns (AR) around the terrorist event days.

Figure 4.5: Linear Plot for the Cumulative Abnormal Returns: CAR (\%)

\[\text{CAR} \]

\[\text{Days} \]

Source: Drawn by the author from the data collected from the NSE

According to Figure 4.5, the cumulative abnormal returns (CAR) dropped gradually from 2.42\% on the 19\textsuperscript{th} day before the 1998 terrorist event to a low of -13.72\% on the 2\textsuperscript{nd} day after the terrorist event. This was followed by a gradual increase to achieve high of -7.82\% on the 10\textsuperscript{th} day after the terrorist event. The 2002 terrorist event cumulative abnormal returns (CAR)
increased from a low of -12.86% on the 18th day before the terrorist event to a high of 72.66% on the terrorist event day. The cumulative abnormal returns (CAR) continued to increase steadily to a high of 189.25% on the 16th day after the terrorist event. For the 2011 terrorist event, the cumulative abnormal returns (CAR) dropped from a high of 17.87% on the 15th day before the terrorist event to a low of -13.52% on the terrorist event day. The cumulative abnormal returns (CAR) dropped further to a low of -25.36% on the 7th day after the terrorist event. This shows that there was a decline in cumulative abnormal returns (AR) around the terrorist event days.

4.4 Summary of the Findings

From the analysis, terrorism has a negative effect on the Nairobi Stock Exchange. Therefore, the null hypothesis is rejected and the alternate hypothesis accepted. The t-statistical test at 5% level of significance indicates that event-day abnormal returns (AR) were significantly negative for 1998 and 2002 terrorist events and insignificant for the 2011 terrorist event. As for the cumulative abnormal returns (CAR), only the 2011 terrorist event was found to be statistically insignificant while the 1998 and 2002 terrorist events were found to be statistically significant at 5% level of significance.

Figures 4.1, 4.2 and 4.3 clearly demonstrate that the NSE 20 share index declined around the terrorist event dates, meaning that the terrorist events under study had a negative effect on the Kenyan stock market.

According to the cumulative abnormal returns (CAR) linear plot (Figure 4.5), there was a significant decline in cumulative abnormal returns (CAR) of the market returns around the terrorist event dates. The abnormal returns (AR) linear plot (Figure 4.4) indicates that the 2011 terrorist event and military attack registered the largest drop in abnormal return (AR) followed by the 1998 terrorist event and finally the 2002 terrorist attack.

The three terrorist events are also deemed significant since they led to
loss of human lives, serious injuries to individuals as well as destruction of property or infrastructure. For instance, the 1998 US Embassy bombing in Nairobi led to the death of over two hundred persons, foreigners included and thousands were injured while the 2002 terrorist attack led to the death of over ten people, foreigners included and dozens were injured.

PART V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter presents the conclusion of the research study and the implications of the findings, limitations encountered in the course of the study as well as suggestions for further research. This research study sought to establish whether terrorism has an effect on the Nairobi Securities Exchange.

5.2 Conclusion
During the 1998 terrorist attack, the abnormal returns (AR) dropped by -0.33% on the following trading day while for the 2011 terrorist event, the abnormal returns (AR) dropped by -2.21% on the following trading day. On the 20th trading day after the 2011 terrorist event, the abnormal returns (AR) had dropped by -0.95% while the cumulative abnormal returns (CAR) had dropped by -13.87%. On the 5th trading day after the 2011 terrorist event, the abnormal returns (AR) had dropped by -1.76% while the cumulative abnormal returns (CAR) had dropped by -22.68%. These results suggest that terrorist activities indeed lead to significantly lower returns at the NSE.

The t-statistical test shows that out of the three terrorist events, two events (67%) namely the 1998 and 2002 terrorist events had negative
abnormal returns (AR) that were significantly different from zero at 5% level of statistical significance while the 2011 terrorist event (33%) abnormal returns were noted to be statistically insignificant. Equally, the cumulative abnormal returns (CAR) for the 1998 and 2002 terrorist events were found to be statistically significant while those for the 2011 terrorist event were established to be statistically insignificant at 5% level of statistical significance. This may imply that Nairobi stock exchange market viewed the 2011 terrorist event as inconsequential and hence rebounded and stabilized immediately, hence the insignificance of cumulative abnormal returns (CAR) of the 2011 terrorist event. While the event-day abnormal returns (AR) are interesting in that they show immediate investors’ reaction to terrorist and unexpected military attacks, the cumulative average abnormal returns (CARs) provide a stronger indication of the capital market’s resilience and ability to bounce back from the attacks.

Furthermore, the data for the 2011 terrorist event may not have been accurately documented, hence the inconsistency of the results. The accuracy and the quality of the data collected from the NSE could not be independently confirmed and may have had errors. This may be responsible for the inconsistency of the study results.

In conclusion, terrorist activities indeed lead to significantly lower stock returns at the Nairobi Securities Exchange market on the day of terrorist attack occurrence. It is evident that there are significant short term negative stock returns around the terrorist event dates as evidenced by the decline in the NSE 20 share index, abnormal returns (AR) and the cumulative abnormal returns (CAR) around the terrorist event dates. In view of the above results, terrorism has a negative effect on Kenya’s stock market.

5.3 Recommendations

From the study, it can be observed that terrorism affects the performance of the stock market and hence shareholders and other stakeholders should
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not overlook terrorism events. Terrorism negatively affects transactions processing in the market place and impedes the buying and selling of securities by instilling fear as well as destroying infrastructural facilities.

Retail and corporate investors are advised to diversify their portfolio as a strategy against terrorism risk. This would enable investors maximize returns while minimizing losses relating to terrorism. Certain sectors of the economy such as tourism, hospitality, airline and insurance are more susceptible to terrorist attacks than other sectors.

The government is advised to work towards preventing and combating any terrorist attacks since such attacks disrupt economic activities as well as scare away foreign investors and the much needed foreign direct investment. The government needs to invest in intelligence gathering mechanisms as well as security equipment and personnel for combating terrorism.

To facilitate market stability, policymakers and regulators are advised to be knowledgeable on the effect of terrorism and related military attacks and, thus, proactively share information in a timely and proactive manner so as to build a strong and resilient market better able to absorb shocks brought on by such events. Financial and banking institutions should be strengthened to provide the necessary liquidity in the market should there be shortage or panic attributed to acts of terrorism.

5.4 Limitations to the Study

Terrorism is a fairly recent phenomenon in Kenya which appears to have no readily available and adequate data which may have affected the results of the research study, particularly for the 1998 and 2002 terrorist events.

For the 2002 terrorist event, the sample mean may not be representative of the population mean which may have affected the results of the study. The event window period of sixty one (61) days may not have been sufficient to cover the terrorist event; hence the data collected and used in the study may not have been accurate leading to inconsistent results.
Other factors other than terrorism may have affected the performance of the stock market during the period of study and consequently the results of the study may have been affected. Such factors include inflation, climatic conditions, elections and technological advancement.

5.5 Suggestions for Further Research

There is need for more robust research studies to establish the effect of terrorism on the stock market, particularly in emerging stock markets such as the Nairobi Securities Exchange and be able to reach an ultimate conclusion.

Further research needs to be conducted to establish the effect of terrorism on other sectors of the economy such as financial institutions as well as the insurance and re-insurance sector. Such sectors play a critical role in the growth and development of a nation and require protection from harm, hence the need for a clear understanding of the effect of terrorism on the sectors.

There is need for robust research studies that would cover longer event window periods and clearly show the effect of terrorist attacks on the stock market and the overall economy. Terrorist events have both short term and long term effects on the securities market. Owing to Kenya’s strategic location bordering Somalia and its cordial relationship with Western countries, it remains exposed to acts and threats of terrorism, thus necessitating further studies on the effects of terrorism.

In addition to event study methodology, it is suggested that other approaches be adopted such as the filtered GARCH-EVT approach and the non-parametric methodology for use in the study of the effect of terrorism on the stock market. GARCH-EVT approach enables one to study the event-day effect only, though it is computationally intensive.
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REFERENCES


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Nairobi Securities Exchange website. Its history, governance, vision and mission.


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