The mediating role of total quality management on co-ordination mechanisms in quality service delivery in Uganda’s Local Governments

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The aim of this paper is to assess the mediating effect of total quality management on the relationship between co-ordination mechanisms and quality service delivery in Uganda’s Local Governments. The findings of this paper are based on a sample of 212 Local Governments in Uganda whose heads of department and section heads formed the unit of inquiry. The paper utilises Med Graph programme, Sobel tests, and Kenny and Baron procedure to test for the mediation effects of total quality management on the relationship between co-ordination mechanisms and quality service delivery in local governments. The findings of the study revealed that total quality management is a significant mediator in the relationship between co-ordination mechanisms and quality service delivery, and heighten the relationship by 29.5% in Uganda’s Local Governments. A partial type of mediation was established. The study was limited by the fact that it relied on cross sectional research design. Future studies could consider assessing similar mediation effects but taking a longitudinal approach. The findings of this study inform management of the necessity to give due attention to total quality management principles in their multi level endeavours to improve on the quality of services that they offer.

Key words: Mediation, co-ordination mechanisms, local governments, total quality management, quality service delivery.

INTRODUCTION

The New Public Management waves of the 1980s in public sector organisations that were in part a response to the ills of traditional bureaucratic paradigm of public administration (Stoker, 2006), have made provision of quality services that meet customer preferences a topical and recurring issue (Hung et al., 2003). This has as well posed a challenge in the contemporary service delivery institutions (Hung et al., 2003). Public sector institutions in general and Local Governments in particular have as a consequence attempted to embrace such a service quality tradition (Ueno, 2010). This is exacerbated by increased pressure by the public for improved quality services (Bailey, 1995; Robinson, 2003).

Based on this, the Ugandan Government has embraced a series of reforms like decentralisation, legislative reforms, performance contract management, and formulation of client charters all geared towards generation of quality services that are compatible with citizen preferences (Office of the Prime Minister, 2005). Despite these interventions like the case globally, quality service delivery is still elusive (African Development Bank, 2003). A study by World Bank revealed that the quality of services that Local Governments deliver is still in variance with client preferences and considered...
pathetic in developing countries, despite decades of foreign aid interventions (World Bank, 2004). Similarly, a study by Uganda Bureau of Statistics on quality of services that Local Governments deliver, revealed poor quality services (National Service Delivery Survey Report, 2008).

Local Governments have thus acknowledged that the challenges of quality service delivery can better be dealt with through appropriate co-ordination mechanisms, and cultivating a culture of total quality management philosophy. A recent empirical study by Kluse (2009) demonstrated that Total Quality Management is a thriving phenomenon in both state and local governments. He adds that leadership commitment and focus on a common organisation vision, among others, are key Total Quality Management elements that translate into significant value that clients derive from Local Governments. Similarly, studies by Pollitt (2003), Ermiliova et al. (2007), Gittel (2006, 2008) and Faraj and Xiao (2006) reveal immense predictive power of co-ordination mechanisms on Quality Service delivery in organisations. These mechanisms are described as how task inter-dependences among activities are managed in a process of role accomplishment (Quinn and Dutton, 2005; Kellogg et al., 2006). Mintzberg (1979) perceives co-ordination mechanisms as strategies through which co-ordination is achieved.

Lam (1997) has observed that integration of various functions and operations (co-ordination) is essential in any total quality management initiative. This initiative reveals concern for quality in a wider perspective that implies quality of products, services, people, processes and environment (Goetsch and Davis, 2010). Once these are embraced, the clients will enjoy quality services, considering the fact that Total Quality Management demands a culture of zero tolerance to defects in the generation of goods and services (Tari, 2005; Talukder and Ghosh, 2004). In the same vein, extant literature on Total Quality Management acknowledges the view that quality efforts need to be co-ordinated inside and across organisation (Black and Porter, 1996; Kaynak, 2003) in order for them to deliver value the service recipients. Oakland (2005) has observed that quality commences with analysis of customer needs (Total Quality Management), and ends when such needs are satisfied (Quality Service Delivery).

Ugandan Local Governments have focused more on co-ordination so as to cultivate a culture of Total Quality Management which is a launch pad to Quality Service delivery (LGA, CAP 243, 1997). The Local Governments Act CAP 243 contains provisions that recognise and facilitate co-ordination of tasks, efforts, and resources. For example, it establishes Technical Planning Committees at various Local Government levels which act as co-ordinating centres thus permitting quality service delivery. Irrespective of this, quality service delivery remains elusive (National Service Delivery Report, 2008). There is therefore glaring uncertainty in respect to whether co-ordination can enhance total quality management, to spur quality service delivery within the realm of Ugandan Local Governments.

While literature validates the affirmation that core total quality management practices have direct and indirect effects on organisation’s quality performance (Ho et al., 2001), sparse empirical studies demonstrating the mediation influence of Total Quality Management on the specific association between co-ordination and Quality Service delivery in Local Governments stimulated this study. This study is thus likely to permit academicians and Local Government practitioners to have a detailed and explicit understanding of the role of Total Quality Management in the relationship between co-ordination mechanisms and quality service delivery in Local Governments in Uganda.

LITERATURE REVIEW

Conventionally, co-ordination has been perceived as an information-processing dispensation hypothesis by scholars of organisational design and contingency theorists (Lawrence and Lorsch, 1967; Galbraith, 1977; 1973). Of late, co-ordination is considered to be a relational process (Gittel et al., 2008) that requires a broad appreciation and factoring in shared understanding of the work, and the perspective in which it is performed (Crowston and Kammerer 1998; Faraj and Xiao 2006). The traditional understanding of co-ordination as specifically an information processing problem (Gittel et al., 2008) necessitated design of suitable and fitting co-ordination mechanisms in order to permit sufficient and necessary information flow among participants in a role achievement (Tushman and Nadler, 1978).

Co-ordination therefore can be described in the context of mechanisms. Well documented mechanisms have been proposed by March and Simon (1958) and Mintzberg (1983, 1998). These authors are in agreement that mutual adjustment, direct supervision, plan and standardization of (work process, output, skills and norms) are the critical and commonly regarded co-ordination mechanism, and accordingly, will inform this study. Based on the works by March and Simon (1958) and Mintzberg (1983, 1998), under mutual adjustment, co-ordination is achieved through informal processes where control of work is a typical function of actors themselves. Direct supervision requires that co-ordination is achieved when actions of one party are controlled and supervised by others (Managers) through a process of issuing instructions and monitoring of their respective actions. Co-ordination by plan requires that the tasks and activities to be executed are pre-determined by actors, while standardization calls for ensuring uniformity of outputs, work processes and employee skills.

Literature indicates that co-ordination is essential in the
implementation of quality improvement projects (Total Quality Management) (Lam, 1997), which later leads to delivery of best quality services and products to the people. Still, abundant Total Quality Management literature reveals that total quality management efforts require co-ordination both within and across organisation (Black and Porter, 1996; Kaynak, 2003), and this synergy permits organisations to deliver quality products and services to the people.

According to Talukder and Ghosh (2004), total quality management reflects both philosophy and a set of guiding standard, or code that signifies the foundations of consistently improving organisations. It thus requires generation and application of qualitative strategies and human resource relevant to all organisation approaches and processes within the organisation geared towards satisfying the client needs. Total Quality Management, therefore, incorporates essential and basic management systems, or approaches such as planning, existing advancements and technical apparatus under a well organised approach, which form the basis for thriving and appropriate total quality management execution (Tari, 2005).

According to Reed et al. (2000), Total Quality Management practices require to be planned and are therefore developed in planning phase which is co-ordination mechanism, before it is subsequently installed in the implementation stage. This planning facilitates Total Quality Management in organisations which in turn guarantee quality assurance on part of both the organisation and the clients. Similarly, direct supervision and regular inspection, which are key co-ordination mechanisms permit error detection in Total Quality Management initiatives and consequently allow ratification, a process that generates best value on part of the clients.

Considering the view that Total Quality Management is seen as a management philosophy, Talukder and Ghosh (2004) said its relationship to co-ordination in determining Quality service delivery is apparent. Review of literature deems that the value of Total Quality Management to co-ordination evolves from the view that it is systematic (Anderson et al., 1994) or the philosophy that Total quality management is organization - wide, a philosophy that is shared by multiple Total Quality Management writers (Ishikawa, 1985; James, 1996; Oakland, 2004). For example, Ishikawa’s (1985) study about company –wide quality control established the requirement of dissimilar parts to jointly work together so as to achieve its objective. This reflects the idea of co-ordination. Total Quality Management academic writers and practical managers are in agreement that organisations ultimately profit from joint and supportive effort in pursuit of quality and client satisfaction.

Consistent with this, Oakland (2004) established that Total Quality Management demands effective co-ordination of all parts within the organisation. This finding links positively with the systems theory or view of Total Quality Management implementation that require co-ordination of policies and strategies, processes and human resource for purposes of realising the aim of the organisation which, in this context is quality service delivery.

There is abundant literature that indicates that Total Quality Management and quality service delivery require co-ordination (Oakland, 2004; Ishikawa, 1985). However, as to whether there is sufficient empirical work focussing on the prime influence of Total Quality Management on the relationship between co-ordination and quality service delivery cannot be emphatically said and inferred with certainty.

The mediating role of Total Quality Management on the relationship between co-ordination and quality service delivery is scanty in literature. Previous literature has focused on how co-ordination generates quality service delivery (Gittell, 2006, 2008), but has not sufficiently addressed the mediating role of Total Quality Management on the alliance between co-ordination and Quality Service Delivery in Local Government which is an indication of a knowledge gap that this study aspires to address.

In the circumstances, it is thus hypothesized that:

\[ H_1: \text{Co-ordination and Total Quality Management are positively related in Local Governments} \]

\[ H_2: \text{Co-ordination is positively associated with Quality service delivery in Local Governments} \]

\[ H_3: \text{Total Quality Management positively mediates the relationship between co-ordination and Quality Service Delivery in Local Governments} \]

**METHODOLOGY**

The study embraced a cross-sectional study design to generate answers to the formulated hypotheses. A total sample of 302 Local Governments for this study was selected based on the rule of thumb as suggested by Krejcie and Morgan (1970). This sample was drawn from a total population of 1488 Local Governments in Uganda which are registered members of Uganda Local Government Association. Since Local Governments are staggered under five (5) levels: district council, municipal councils, municipal division councils, town councils and sub county council, the study adopted proportionate sampling technique to select 23 districts, 04 municipal councils, 13 town councils, 35 municipal division councils and 227 sub counties.

Thereafter, using simple random technique, we wrote all names of Local Governments and placed them in marked bowls from where we drew random samples without replacement, until we achieved the number of 302. The unit of analysis was the Local Government whose heads of department and section heads comprised the unit of inquiry. Guided by Gay (1987)’s suggestion, the study accepted a minimum of 3 respondents per Local Government. A total of 212 Local Governments responded, generating a response rate of 70.1 percent which was judged usable for the study.

Since clients are better suited to judge on issues of quality (Fitzsimmons and Fitzsimmons 2006), quality service delivery part of the questionnaire was completed by a total of 1365 respondents enlisted through non probability convenience sampling procedure. Clients leaving public service delivery departments were
intercepted, interviewed, and those willing to participate in the survey were given the tool to complete.

**Questionnaire development**

Dimensions for co-ordination mechanism were based on the works of March and Simon (1958), and Mintzberg (1979) as: plan; mutual adjustment; direct supervision; and standardization. To measure these dimensions, we relied on scales that previous investigators had developed (Cammann et al., 1983; Van de Ven et al., 1976), but modified to suit the study context. We also included a few items based on extensive literature review. These were anchored on a six-point Likert like scale (1-6) rated from Strongly Disagree to Strongly Agree.

Total Quality Management was operationalised to constitute: leadership; process management; process design; continuous improvement; employee involvement; and customer focus. To measure these dimensions, we were guided by works of different scholars including Flynn et al. (1994); Ahire et al. (1996) and Black and Porter (1995). Items from these scales were used but modified to suit this specific study. These items were anchored on a six point Likert like scale ranging from (1-6) rated from Strongly Disagree to Strongly Agree.

Quality Service Delivery was measured using the works of Parasuraman et al., (1988) and Pivot – Core – Periphery (PCP) model as developed by Phillip and Hazlet (1975). In this study quality service delivery dimensions included: responsiveness; empathy; reliability; assurance; tangibles adopted from the works of Parasuraman and deliverables/outcomes as guided by Phillip and Hazlet (1975). Items were anchored on a six point Likert like scale (1-6) ranging from Strongly Disagree to Strongly Agree.

Considering the fact that the tool was modified and that there was addition of new items based on extensive review of literature, we subjected it to content validation by a panel of experts from Local Governments. Results indicated that all the constructs had a Content Validity Index (CVI) above (0.75), well above the threshold of (0.70) as suggested by Nunnally (1978).

We also tested for the reliability of the tool using internal consistence of items procedure with a view of ascertaining whether it consistently measured the variables in the study following the recommendations of Nunnally (1978). The Cronbach Alpha coefficient results of co-ordination, Total Quality Management and Quality Service Delivery were all above the recommended cut off value of 0.70 as suggested by Nunnally; indicating that the scales used were reliable.

We tested for Common Methods Bias (CMB) so as to minimize the potential measurement errors in the process of data collection which if not taken care of, taint or threaten the validity of the findings/conclusions about the associations between measures (Podskoff et al., 2003; Spector, 2006). Being aware of the potential problems of CMB and its likely grave consequences on this study, we adopted Podsakoff et al. (2003)’s recommended solutions to minimize and manage CMB namely; procedural remedies which require use of different scores and sources. In this regard, we collected data from different heads of department and section heads, and from different Local Governments. We also used psychological separation procedure in an attempt to make it appear as though measurement of exogenous variables was not related to the measurement of the endogenous variable. In this respect, scale items were clustered together under different sections so as to make them appear unrelated to the study respondents.

Data were checked and cleaned to ensure its completeness. Data were aggregated to unit of analysis level (Local Government). Through frequency inspection and missing value analysis, MCAR test was not significant and we proceeded to replace missing values using linear interpolation due to its ability to connect data point and ensure continuity without necessarily distorting the data structure (Dodge, 2006).

We screened our data to ascertain whether it conforms to the assumptions of parametric tests. We explicitly tested for the assumptions of normality, equality of variance, linearity and multi-collinearity. Purposely, we tested for multi-collinearity using Variance Inflation Factor (VIF). Tolerance Statistics and Condition Index Value. The multi-collinearity tests generated VIFs for all study constructs below 1.5 and Tolerance statistics well above 0.7 and the Condition Index was < 2 for all study variables. The results demonstrate limited threat of multi-collinearity problem as the values above were below the recommended threshold of VIF <5; Tolerance value > 0.2 and Condition Index of < 30 (Field, 2006).

Mediations tests were done with a view of ascertaining the type of mediation (partial or full) and the degree to which Total Quality Management mediates the relationship between co-ordination and Quality Service Delivery. The Med Graph programme by Jose (2003), a customized version of Sobel – test was used to generate the Sobel z- value and the significance of mediation effect.

**RESULTS**

Two hundred and twelve (212) Local Governments out of 302 Local Governments responded generating a response rate of 70.1 per cent. Of these, 39 percent were District Councils, 1.4% Municipal Councils, 20 per cent Town Councils, 2 percent Municipal Division Councils and 38 per cent Sub County Councils. Of the majority of Local Governments 73.6 percent had existed for more than 9 years, 18.9 per cent between 5-9 years; while 7.5 percent had existed for less than 4 years (1-4).

We performed Factor Analysis with Principal Component Analysis (PCA) so as to unmask data patterns and to reduce it to manageable levels, or smaller number of hypothetical variables with a view of exploring and theoretically testing the theoretical structure of the study area (Field, 2006). The analysis above generated four factors: of co-ordination (plan, mutual adjustment, direct supervision and standardization) explaining 52 per cent of the unique variation in Quality service Delivery. Still, the analysis produced five (5) factors of Total Quality Management (customer focus, employee involvement, continuous improvement, leadership and management support and process design) accounting for 60% of the total variance in Quality Service Delivery. For Quality Service Delivery, five factors were extracted explaining 65 percent of the variance.

**Correlation and regression analysis**

The analysis of correlation of coefficient was tested using Pearson correlation matrix. The rules as suggested by Hair et al. (2003) were used to characterize or typify the strength and potency of the relationship between the study variables. Put simply, Pearson’s bi-variate correlation coefficient was relied on to purely determine the association between independent variables quality service delivery, the dependent variable.
Table 1. Zero-order correlation between co-ordination, total quality management and quality service delivery.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Co-ordination</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Total Quality Management</td>
<td>0.414**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Quality Service Delivery</td>
<td>0.460**</td>
<td>0.463**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

N = 212; Note ** correlation is significant at less than 0.01 level (2 tailed).

Table 2. Results of OLS regression of co-ordination, TQM on QSD.

<table>
<thead>
<tr>
<th></th>
<th>Unstandardised</th>
<th>Standardised coefficient</th>
<th>Model F</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Intercept (Constant)</td>
<td>-.062</td>
<td>.022</td>
<td>.185</td>
<td>.002</td>
<td>-.008</td>
<td>.002</td>
</tr>
<tr>
<td>LG Type</td>
<td>.004</td>
<td>.022</td>
<td>.185</td>
<td>.002</td>
<td>-.008</td>
<td>.002</td>
</tr>
<tr>
<td>LG Tenure</td>
<td>.017</td>
<td>.037</td>
<td>.037</td>
<td></td>
<td></td>
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<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept (Constant)</td>
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<td>.039</td>
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<tr>
<td>LG Type</td>
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<tr>
<td>LG Tenure</td>
<td>.018</td>
<td>.038</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TQM</td>
<td>.509</td>
<td>.464</td>
<td>19.238**</td>
<td>.217</td>
<td>.206</td>
<td>.215</td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept (Constant)</td>
<td>-.103</td>
<td>.464</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LG Type</td>
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<td>.052</td>
<td></td>
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<tr>
<td>LG Tenure</td>
<td>.026</td>
<td>.055</td>
<td></td>
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<tr>
<td>TQM</td>
<td>.360</td>
<td>.329</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>COORD</td>
<td>.276</td>
<td>.329</td>
<td></td>
<td></td>
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</tbody>
</table>

N = 212; ** p < .01; LG Type = Local Government type; LG Tenure = Local Government tenure; COORD = Co-ordination

The results are illustrated in Table 1. The results in Table 1 demonstrate that co-ordination mechanisms have a positive and a significant relationship with the Quality of services that Local Governments deliver to the public. ($r = 0.460, p < 0.01$). Also multiple regression analysis results in Table 2 reveal that 8.9 percent of the unique variance in Quality Service delivery was attributed to co-ordination ($R^2 = 0.089, F = 22.878**$). These results support hypothesis (H2). It is also apparent that positive and significant relationships between co-ordination and Total Quality Management exist in Local Governments ($r = 0.414, p < 0.01$). This finding is reinforced by results of multiple regression analysis in model 2 as indicated in Table 3 that revealed that 17 percent of the unique variance in total quality management is attributed to co-ordination ($R^2 = 0.171$) thus supporting (H3).

Mediation tests

Mediation tests were computed to determine whether the conditions suggested by Baron and Kenny (1986) are satisfied. The Med Graph programme, a customised version of Sobel test was used to generate the sobel z-value and the significance of mediation role of Total quality management on the alliance between co-ordination and quality service delivery. The results are displayed in Table 4 and Figure 1 correspondingly. From Table 4 and Figure 1, it is evident that the three conditions for mediation as suggested by Baron and Kenny (1986) are satisfied. First, the effect or relationship to be mediated is existent ($R^2 = 0.212; F = 56.333; p < 0.01$). Secondly, there exists a significant relationship between co-ordination and the mediator (Total Quality Management) ($R^2 = 0.171; F = 14.407; p < 0.01$). Thirdly, the beta coefficient of the mediator (Total Quality Management) is significant in regression model 3 ($\beta = 0.329; p<0.01$) considering both Co-ordination and Total Quality Management as independent variables. Lastly, there is a reduction in the total effect of Co-ordination on Quality Service Delivery in regression model 3 from (standardized beta 0.460 to 0.324) than in regression model 2 ($\beta = 0.460, p<0.01$).
Table 3. Results of OLS regression of co-ordination on total quality management.

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Variable</th>
<th>Unstandardised</th>
<th>Standardised</th>
<th>Model F</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>∆R²</th>
<th>F</th>
<th>R²</th>
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<td>Intercept (Constant)</td>
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<td></td>
<td>LG Type</td>
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<td>-.036</td>
<td>.136</td>
<td>.001</td>
<td>-.008</td>
<td>.001</td>
<td></td>
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<tr>
<td></td>
<td>LG Tenure</td>
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<td>.030</td>
<td>-.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>LG Type</td>
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<td>-.014</td>
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<tr>
<td></td>
<td>LG Tenure</td>
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<td>.027</td>
<td>.021</td>
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<tr>
<td></td>
<td>COORD</td>
<td>.317</td>
<td>.048</td>
<td>.414</td>
<td>14.407**</td>
<td>.172</td>
<td>.160</td>
<td>.171</td>
<td></td>
</tr>
</tbody>
</table>

N = 212; ** p < .01; * p < .05; LG Type = Local Government type; LG Tenure = Local Government tenure; COORD = Co-ordination.

Table 4. The mediating effect of TQM on the alliance between co-ordination and QSD.

<table>
<thead>
<tr>
<th>Model 1</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant co-ordination</td>
<td>.005</td>
<td>.017</td>
<td>.414**</td>
</tr>
<tr>
<td></td>
<td>.316</td>
<td>.048</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 2</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant co-ordination</td>
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<td>.018</td>
<td>.460**</td>
</tr>
<tr>
<td></td>
<td>.051</td>
<td>.051</td>
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<td></td>
<td>.385</td>
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</table>

<table>
<thead>
<tr>
<th>Model 3</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant co-ordination</td>
<td>-.009</td>
<td>.017</td>
<td>.324**</td>
</tr>
<tr>
<td>Total Quality Management</td>
<td>.271</td>
<td>.053</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.360</td>
<td>.070</td>
<td>.329**</td>
</tr>
</tbody>
</table>

N = 212; ** p < .01; * p < .05.

Figure 1. The Med Graph illustrating mediation of Total Quality Management on Co-ordination, and Quality Service Delivery. Type of Mediation: Partial; Sobel z-value = 4.052808 significance. 0.0005; Direct: 0.324; Indirect: 0.136.

The results of Sobel’s z value as indicated in Figure 1 point to partial type of mediation, in view of the fact that the supreme effect of Co-ordination on Quality Service Delivery reduced to a considerable and significant level (β = 0.460** to β = 0.324**). These results demonstrate significant mediation of Total Quality Management in the association between co-ordination and quality service delivery. Finally, the ratio index or proportional index of
29.5 percent derived by \((0.136/0.460*100)\) means that 29.5 percent of the effect of Co-ordination on Quality Service Delivery goes through Total Quality Management while the 70.5 percent of the effect is direct. Based on these results, hypothesis three \((H_3)\) is accepted.

**DISCUSSION AND CONCLUSION**

This study sought to explore the mediating role of total quality management on the relationship between co-ordination and quality service delivery. The findings confirmed the hypothesized assertion that total quality management is a positive and significant mediator of co-ordination and quality service delivery and met Baron and Kenny (1986)’s mediation guidelines. This is apparent considering the fact that co-ordination of resources and actor’s efforts require a culture where all stakeholders are involved. This fits well with the works of Ishikawa (1985) and Oakland (2004) where they posited that Total Quality Management is an organisation wide philosophy.

The mediation results further demonstrate that the indirect effect of the mediator (Total Quality Management) was weaker than the direct links of variables as evidenced by Ratio Index of only 29.5 percent. Total Quality Management partially mediated the relationship between co-ordination and quality service delivery. This is further evidenced by the Sobel z-test that revealed that the indirect influence of the predictor variable on the endogenous variable through the mediator (Total Quality Management) was considerably different from zero \((z = 4.052; p < .01)\) indicating a partial type of mediation.

These results show that Total Quality management through its attributes of customer focus, employee involvement, leadership, process design and process management could facilitate co-ordination mechanisms like planning, monitoring and supervision and standardization of work processes, norms, skills and output which consequently can improve on the quality of service that Local Governments deliver.

Finally, while Total Quality Management is regarded as a key factor in the delivery of quality services by organisations, especially considering the fact that earlier Total Quality Management scholars initially postulated that it would realise excellence in implemented quality initiatives, the partial rather than full mediation results is in variance with this.

This finding lends testimony to managers, that in pursuance of delivery of quality services, attention must be stretched beyond Total Quality Management practices mentioned in this study to embrace other factors such as reforming communication practices through the improvement of both formal and informal lines of communication, besides embracing positive service delivery culture.

**CONCLUSION AND IMPLICATIONS**

The findings of this study reveal that co-ordination, works through Total Quality Management in influencing the quality of services that Local Governments deliver. Total quality management heightens the relationship of co-ordination and quality service delivery. Given the fact that the standardized beta coefficients of co-ordination are not reduced to zero once Total Quality Management is introduced, this points to partial type of mediation and the necessity for Local Government Management not to totally abandon co-ordination mechanism considering its greater influence on the quality of services that Local Government deliver to its clients.

The study proposes fundamental aspects that management need to pay attention to. The findings to this study imply that Local Government management ought to focus and embrace a culture of Total Quality Management with focus on zero tolerance (policy of not tolerating undesirable or defective products and/or services disbursed to its clients for consumption) to defect items and services that is, services that do not meet client preferences. In emphasising this, Local Government Management needs to invest more in quality related initiatives (like employee involvement, design of their work processes and systems, among others) at the Local Government level, in view of the fact that Total Quality Management was found to be a significant mediator of co-ordination on quality service delivery. Secondly Local Government authorities need to streamline co-ordination mechanisms which are precursor to total quality management and quality service delivery. Finally Local Governments could succeed in its quality service delivery efforts when they align co-ordination mechanism in quality oriented environment.

**Study limitations**

The study had a number of limitations: first, this study employed across-sectoral research design where data was collected at one point in time. It is likely that respondent’s views may change over time/years. Future studies may therefore consider embracing longitudinal studies to mitigate the potential effects of this. Secondly the study targeted only Local Governments that are registered members of Uganda Local Government Association (ULGA) in Uganda. Therefore, it is likely that our findings are limited to Local Governments in Uganda. Finally, while testing for the mediating effect of Total Quality Management on the relationship between co-ordination and quality service delivery, all items of different Total Quality Management dimensions in this study were integrated into one single index score (Total Quality Management construct). Future studies should consider finding out which specific dimension of Total Quality Management is more relevant as significant predictor in mediating the relationship between Co-ordination and Quality Service Delivery.

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