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## **Managerial Roles and Performance Measurement Practices in the Kenyan Hotel industry: a Structural Equation Modeling Approach**

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**Wadongo Indeché Billy, Msc.**

Maseno University  
Dept. of Ecotourism, Hotel and Institution Management  
Private Bag  
Maseno, Kenya

**Odhuno Edwin, Phd**

American Hospitality Academy Romania  
International Hotel Management Schools  
Campus Colegiul Astra, Cladire Corp B  
Strada Panselelor nr.23  
Brasov 500419

**Kambona Ouma Oscar, Phd**

Maseno University  
Dept. of Ecotourism, Hotel and Institution Management  
Private Bag  
Maseno, Kenya

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**Abstract:** A cross-sectional study of 124 managers in six hotels in Nairobi and Mombasa, Kenya found a linkage between managerial roles and performance measurement practices using Structural Equation Modeling approach. All the six factors of the measurement model had a strong evidence of unidimensionality, reliability, convergent and discriminant validities. Furthermore, the overall modified model Chi-square, NFI, RMSEA, and the NFI exceeded the obligatory requirements. Hospitality organizations that want to implement effective performance management systems should use managerial roles to influence managers' performance measurement practices. The purpose of this study was to determine the linkage between managerial roles and performance measurement practices in the Kenyan hotel industry.

**Key Words:** Managerial Roles; Performance Measurement Practices; Structural Equation Modeling; Kenya; Hospitality Industry.

## Introduction

The general growth in the Kenyan economy and steady increase in tourism earnings in recent years has led to expansion and new investments in hotels in Kenya. In response to the high market demand for hospitality and tourism products, the Kenyan hotel industry has developed a range of segmented hotel services through star ratings namely Five, Four and Three star hotel properties. The ranges of hotel properties in Kenya require a responsive and flexible performance management in order to remain competitive regionally. Business pressures have created the need for new generic management competencies in organizations (Boam & Sparrow, 1992), need for effective performance measures (Neely, 1999) and need to improve organizational performance (Quinn *et al.*, 1996). Performance management was traditionally defined as the process of financial control, in which the mission and strategy are translated into budgets, and subsequently results are compared with budgets in Kenya (De Waal, 2007). As many Kenyan companies are trying to qualify for national and international awards, they are turning more and more to performance management. With many Kenyan companies making attempts to qualify for the International Organization for Standardization (ISO) standard certifications, and Company of the Year Awards (COYA), performance management has become an important management tool for hospitality industry. Over the years, there has been a considerable degree of concern about the hotel industry regarding designing more effective performance measurement systems. Despite the concerns, hospitality organizations still focus on more traditional forms of performance measures which are narrow and easily quantifiable (Brander-Brown & McDonnell, 1995; Brotherton & Shaw, 1996; Harris & Brander-Brown, 1998). In fact De Waal (2007) contends that overall lack of management skills and expertise often makes organizations in developing countries to concentrate more on introducing and copying performance measurement systems from the western world, which do not suit local circumstances. This raises the question whether key performance indicators developed for the western organizations are suitable for developing countries and specifically in the Kenyan hospitality context. Previous studies have linked several factors influencing performance measurement and examined their effect on various performance measures (Laverty, 1996; Ittner *et al.*, 1997; Keating, 1997; Ryan & Trahan, 1999; Hoque & James, 2000; Rejc & Slapnicar, 2001; Hussain & Hoque, 2002; Abernethy *et al.*, 2004; Sakunasingha, 2006). No study has investigated the linkage between managerial roles and performance measurement practices yet this provides the best opportunity for organizations to improve their performance measurement practices. Studies on performance management in Africa are currently not found in the management literature. Hence such future studies will add to the growing body of management literature (De Waal, 2007). Furthermore most of the above studies were undertaken in manufacturing sector in western countries. Hence there was a need for similar studies in service sector like hospitality in a developing economy. The results arising from this study are essential for the development of key performance measurement systems suitable for Kenyan hospitality industry. The study contributed to new body of knowledge by modeling the linkage managerial roles and performance

measurement practices which has previously been ignored in other studies. Understanding this linkage provides an opportunity for organizations to improve performance measurement practices by emphasizing the appropriate managerial roles. The overall objective of this study was to determine the linkage between managerial roles and performance measurement practices in the Kenyan hospitality industry using structural equation modeling.

## **Review of Literatures**

This section reviews literature regarding the study. The first section discusses performance measurement practices in hospitality. The second section discusses managerial roles. The third section examines the relationship between managerial roles and performance measurement practices.

## **Performance Measures Practices in the Hospitality Industry**

Several performance measurement systems that incorporate financial measures with operational measures of performance have emerged. These models include, “Critical success factors”,(Bullen & Rocket, 1981), “Performance Pyramid”( Lynch & Cross, 1995), “Balanced Scorecard”( Kaplan and Norton,1992) , and Results and determinants Model”(Fitzgerald et al, 1991). Despite the development of performance measurement systems in hospitality industry various researchers (Brander-Brown & McDonnell, 1995; Atkinson & Brander-Brown, 2001; Harris & Mongiello, 2001) have pointed to the reluctance of the hospitality industry to use balanced measures and rely solely on financial measures of performance. Such measures are associated with a number of fundamental weaknesses, including: limitations in their accuracy and neutrality; a dominance of result over determinant measures; an emphasis on the short term often at the expense of strategic issues; little appreciation of the links and relationships between key areas and aspects of an organization; and an overall lack of balance (Wilson & Chau, 1993; Fitzgerald *et al.*, 1991; Kaplan & Norton, 1992). The overview of performance measurement literature has led to the conclusion that non-financial measures have more advantages and that non-financial measures are more directly traceable to the strategy of any firm (Shank & Govindarajan, 1993). Furthermore, Dixon *et al* (1990) argue that where performance reports are dominated by financial measures, performance evaluation is weakened by the inherent limitations of financial information, the measures are typically too irrelevant due to the accounting period delay, and too summarized due to the length of the accounting period. There is a concern that in using inappropriate measures, hotel managers may be ignoring issues, which really matter, potentially to the serious detriment of their organizations performance (Brander-Brown & McDonnell, 1995). According to Beatham *et al.* (2004) businesses have measured their performance in financial terms, profit, and turnover. These financial measures of performance have been the sole measures of a company's success. However several research findings (Harris &

Mongiello, 2001; Atkinson & Brander-Brown, 2001) in performance management are advocating for emphasis on both financial and non-financial dimensions such as competitiveness, service quality, customer satisfaction, organizational flexibility, resource utilization and technology. It is important to note that majority of the above studies identifying key performance indicators have been carried out in western countries. Therefore Such studies need to be carried out in developing economies like Kenya.

### **Managerial Roles**

According to Brophy and Kiely (2002) when using a competency-based approach, the focus is on the behaviors that are necessary to perform the job. Competencies focus on how the job or role is performed by identifying those behaviors that contribute to achieving effective performance. Each individual competency consists of a number of observable behaviors that are relevant to the performance of the role. Therefore it is important to link competencies to managerial roles. Several studies (Miner, 1973; Mintzberg, 1975; Katz, 1974; Quinn *et al.*, 1996) have been previously completed to identify characteristics for successful managers and competencies required to perform managerial roles. Miner (1973) investigated the extent to which a manager's characteristics are related to managerial success rather than examining functions undertaken by successful managers. His study found six major characteristics: favorable attitude towards authority, desire to compete, assertive motivation, disciplinary action to protect the interests of the work group, desire for distinctive position and a sense of responsibility. Mintzberg (1975) found that a manager's job could be viewed in terms of ten roles which he categorized as interpersonal, informational or decisional. Several management competencies that emerged from Mintzberg's (1975) work were considered essential components for effective management. These were developing relationships, resolving conflicts, motivating subordinates, establishing information networks, disseminating information and allocating resources. In addition, he argued that all managers need to be retrospective and examine their own performance and behaviour to ensure continual learning and improvement.

Quinn *et al.* (1996) identified eight managerial roles and twenty-four management competencies linked to each role using (CVF). The intention of the framework (Figure 1) is to provide a comprehensive model that reflects the values and characteristics of four historic models of organizational theory - the Rational Goal Model( maximization of output), Internal Process Model (consolidation and continuity), Human Relations Model (Human commitment) and Open Systems Model (adaptation and change) (Quinn *et al.*, 1996). The CVF conceptualizes that each of the organizational outcomes are crucial parts that make up the larger construct, namely organizational and managerial effectiveness (Quinn *et al.*, 1996). Managers are expected to play all of these roles and to simultaneously consider and balance competing demands that are represented by each set of expectations. They suggest that a manager's world keeps changing and therefore strategies effective in one situation may not be effective in another, particularly in

fragmented industry like hospitality. For the purpose of this study, the roles were grouped according to the desired organizational outcomes as follows: consolidation and continuity (coordinator, monitor), human commitment (mentor, facilitator), maximization of output (producer, director); adaptation and change (innovator, broker).

### **The Linkage between Managerial Roles and Performance Measurement Practices**

Much prior research has established factors influencing adoption of performance measurement systems, and choice of performance measurement tools and practices. (Emmanuel *et al.*, 1990; Laverty, 1996; Ryan & Trahan, 1999; Hoque & James, 2000; Rejc & Slapnicar, 2001; Hussain & Hoque, 2002; Ittner *et al.*, 1997; Keating, 1997; Abernethy *et al.*, 2004; Sakunasingha, 2006). Emmanuel *et al.* (1990) summarizes three main classes of contingent factors that have been identified as influencing the design of an accounting system. These are the environment, organizational structure and technology. Studies by Ryan and Trahan (1999) and Hogue and James (2006) stated positive relationship between the size of the organization and the need for more sophisticated performance measurement tools used to collect information for decision making. Waggoner *et al.* (1999) summarized the following key forces driving change in performance measurement: customers, information technology, the marketplace, legislation (public policy), new industries, nature of the work, and future uncertainty. Rejc & Slapnicar (2001) empirical study of 94 large companies revealed that legal forms and the power of workers' council influence on performance criteria were found to be the most significant contingency factors influencing the way corporate performance is measured and reported within firms.

From the above literature it can be noted that several studies have investigated performance measurement practices in manufacturing settings (Ittner *et al.*, 1997; Hoque & James, 2000; Abernethy *et al.*, 2004; Sakunasingha, 2006). But little is known about this phenomenon in the service sector (Hussain & Hoque, 2002), despite the service sector contributing an important part of gross domestic product and employment in most economies (Fitzerald *et al.*, 1991). Moreover, less is known about what factors affect the design and use of effective performance measurement systems in service organizations (Hussain & Hoque, 2002). While the identified factors are important, the management has no control over the majority of them. Most of the above studies have been carried in the manufacturing sector. Furthermore studies focusing on hospitality industries in developing economies are still lacking

Furthermore various studies (Hart & Quinn, 1993; Denison & Mishra, 1995; Cameron & Quinn, 1999) using CVF have linked managerial roles to various organization performance dimensions variables. The above studies demonstrate that managerial roles are central to performance measurement practices compared to other factors identified in the literature. This is because managerial roles and competencies provide organizations an opportunity to influence their performance through human resource training. However no attempt had been made to investigate the influence of managerial roles on performance measurement practices. Therefore the current study addressed the above

gaps by determining the linkage between managerial roles and performance measurement practices in Kenya using Structural Equation Modeling.

## **Research Methodology**

### **Research Design**

The researcher used a cross-sectional research design to gather primary data. This research design involved administering a questionnaire once to a sample of hospitality managers in Kenya. The study was conducted in Nairobi and Mombasa between September 2007 and December 2007. Mombasa majorly hosts vacation hotels, mostly influenced by the seasonality of tourism while Nairobi has town hotels, which serve both tourists and business clients.

### **Population, Sample and Sampling Procedure**

According to the hotel and restaurant classification criteria schedule of 2003, there are ten five-star hotels in Kenya. The population of the study was composed of 232 hospitality managers in all 10 five-star hotels in Kenya (Republic of Kenya, 2003). Five -star hotels were considered appropriate because they have clear and consistent organizational structures hence the results can be generalized without much error, as the population is relatively homogeneous. Furthermore, for a hotel to be classified as a five-star hotel, it should be managed by a highly trained and experienced person, assisted by several managers with relevant professional qualifications in their respective fields. Also the hotel should have a comprehensive in-house training programmes and a Human Resources Development Manager (Republic of Kenya, 2003). The sample size included 124 hospitality managers. To compile the sampling frame six names out of the ten five-star hotels were randomly selected without replacement from the overall hotel classification list (Republic of Kenya, 2003). The hotels from which the sample was drawn from were identified by letters A, B, C, D, E and F to ensure confidentiality of the hotels. To get the actual participants involved in the study, individual managers were selected proportionately across the six hotels by simple random sample method. Random sampling has the advantage of canceling out biases and providing a statistical means for estimating sampling errors. It is also one of the basic assumptions of SEM. The researcher was confident that the sample accurately represented the population of study, particularly on the dimensions on which the sample was selected.

### **Method of Data Collection**

A self administered questionnaire was chosen for this study as it has the lowest cost, and the hospitality managers read and responded to questions at their own pace and time. Furthermore it provided the greatest sense of anonymity and has lowest chance of introduction of biasness. A questionnaire as a survey instrument was developed to identify the key performance indicators in the hospitality industry based on the Results and Determinants Model (Fitzgerald *et al.*, 1991) and significant management

competencies based on Competing Values Framework (Quinn *et al.*, 1996). The researcher used a five point likert scale in the survey instrument.

**Results and determinants model**

This study utilized a modified results and determinants matrix (Fitzgerald *et al.*, 1991) to explain the endogenous latent variable (performance measurement practices) because it clearly incorporates a balance of measures, both financial and non-financial. Moreover, it attempt to explicitly recognize the relationships and trade-offs between different measures. It is also directed at linking the operational aspects of an organization to its strategic intent (Atkinson & Brander-Brown, 2001). By using six performance dimensions, the model (Table 1.) specifically incorporates both financial and non-financial metrics while balancing internal with external perspectives. Most significantly it combines result measures which reflect the success of an organization's chosen strategy with determinant measures, which focus on those activities and factors necessary to achieve the organization's strategic goals. Kennerly and Neely (2000) emphasize the importance of measurement of other dimensions such as supplier performance and environmental/community perspectives. The two dimensions were included in the initial results and determinants model to give a total of eight performance dimensions. Furthermore performance indicators reflecting the Kenyan hospitality industry characteristics were included in the model as recommended by Haktanir and Harris (2005).

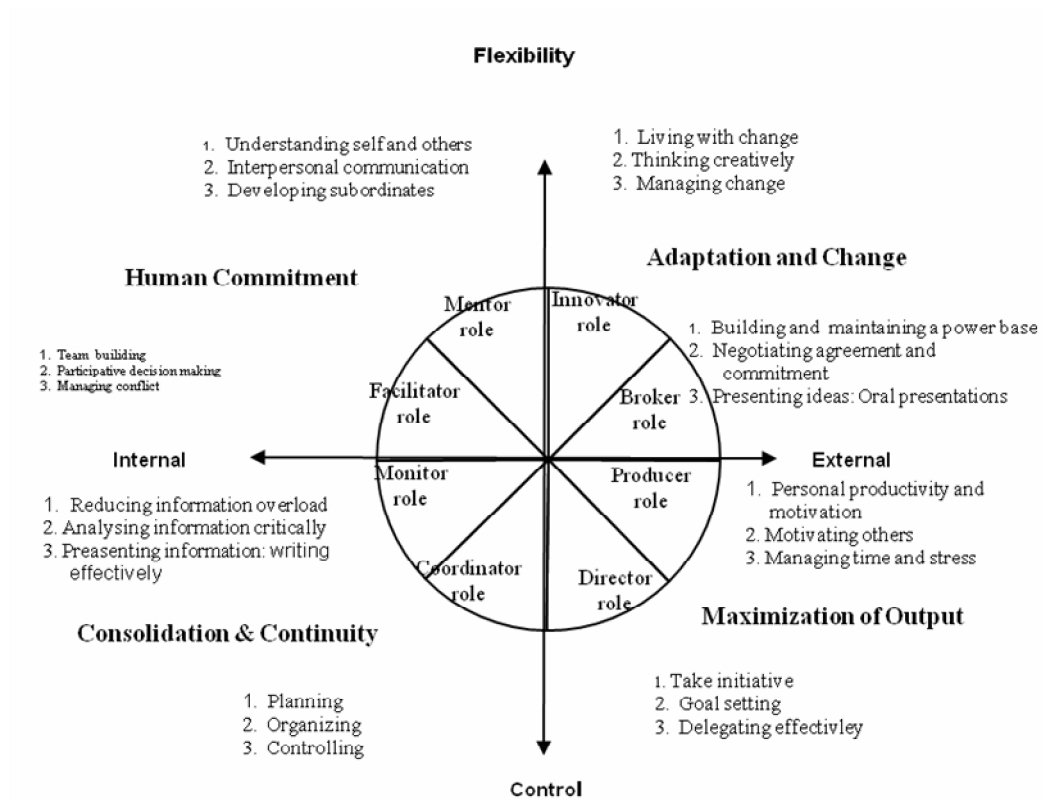
**Table 1**Modified Results and Determinants Model

<b>Performance Dimensions</b>	<b>Performance Indicators</b>
Competitiveness	Market share percentage
	Sales growth percentage
	Monitoring competitors performance by inquiring their occupancy levels
	Customer satisfaction surveys completed by customers
Financial performance	Net profit, and gross profit attained
	Seat turnover, room turnover and inventory turnover attained
	Current assets verses current liabilities ratio
	Labor cost percentage
	Total shareholder' capital investment ( hotel owners financial investment)
	Daily room occupancy
	Total revenue achieved
	Total sales
	Paying suppliers and creditors on time
	Total operating Costs of the hotel or department
	Food and beverage Sales
	Food cost Percentage
	Daily average meal check
	Daily average room rate
Quality of service	Maintaining 5- star hotel classification rating
	Guest evaluations of attitude, behavior and expertise of employees
	Guest evaluations of design- facilities renovations and maintenance
	Guest evaluations of benefits gained such as relaxation, exercise, and refreshment.

Flexibility	Ability to adjust to guest needs and wants
	Ability to meet customer requirements on time
	Delivering guest products and services on time
Resource utilization	Frequency of equipment breakdown
	Number of employee training and development programs
	Level of Information Communication Technology (ICT) Usage
	Employee turnover surveys
Innovation	employee performance appraisal ratings
	Monitoring of Performance of individual employee innovators
Supplier Performance	Number of product and services innovated per year
	Hotel Suppliers delivering on time
Community/environmental perspective	Hotel Suppliers meeting standard purchasing specification
	Number of community service projects
	Number of corporate sponsorships
	Participation in environmental conservation schemes and projects
	Number of environmental projects undertaken by the hotel

### Competing Values Framework (CVF)

The study adopted the ‘Competing Values Framework’ (Quinn *et al.*; 1996) to explain the exogenous latent variable and identify significant management competencies. As hospitality managers need transferable generic competencies, a general framework of management competencies was deemed suitable to this study. The Competing Values Framework emerged from a series of empirical studies on the notion of organizational effectiveness (Quinn *et al.*, 1996). The framework is a theory that was developed initially from research conducted on the major indicators of effective organizations. This model has a sound theoretical and research base and offers an opportunity to examine key managerial roles based on organizational outcomes such as maximization of output, adaptation and change, human relations and consolidation and continuity. The CVF has been used to describe several organizational phenomena: organizational commitment, CEO leadership, human resource management, military leadership, organizational culture, gender in management (Hart & Quinn, 1993). Furthermore, researchers (Walo, 2001; Dimmock *et al.*, 2003; Breen *et al.*, 2004) have utilized CVF in hospitality research. The CVF takes a more general approach to management competencies and skills necessary for managers to be effective, giving it the versatility to be applied to all industry sectors.

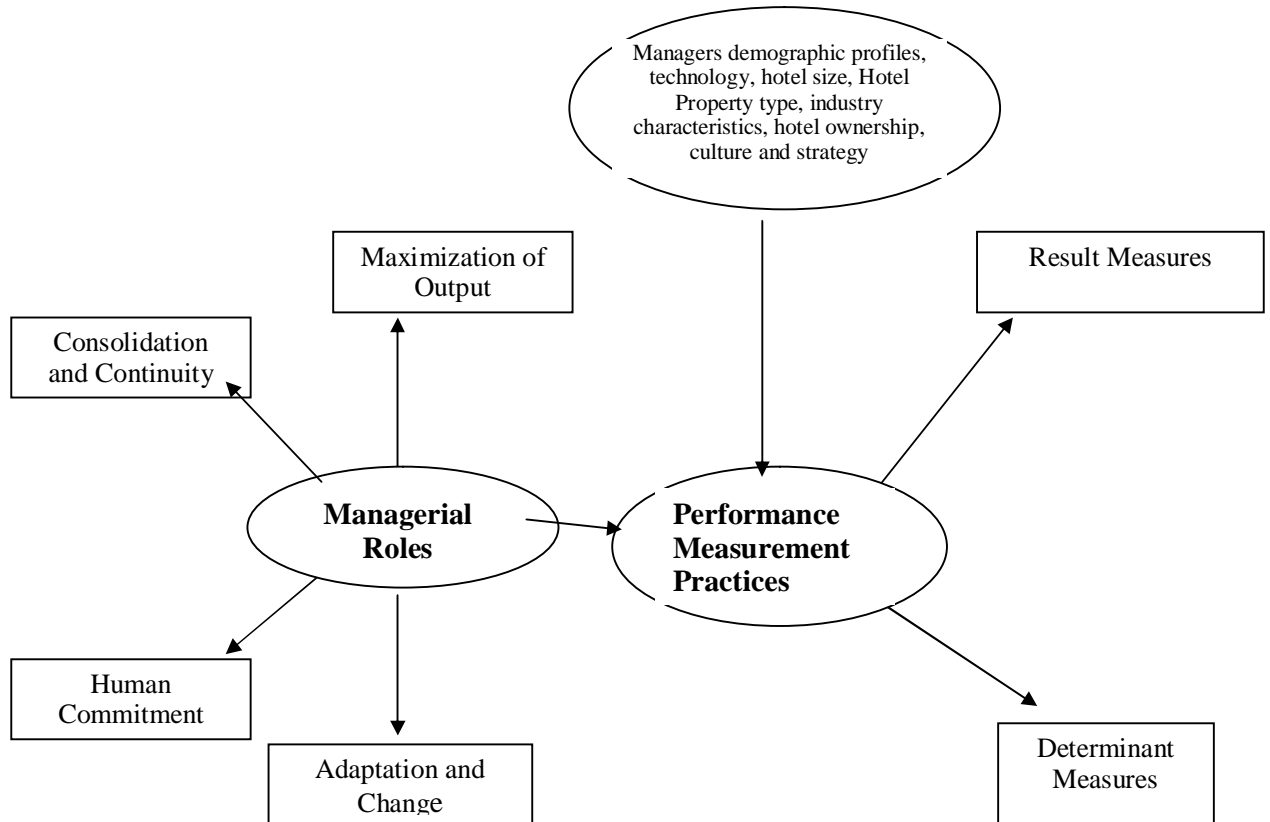


**Figure 1: Competitive Values Framework- Management Competencies**  
 Source: Quinn et al. (1996)

### Managerial Roles versus Performance Measurement Practices Model

A model linking the managerial roles and performance measurement practice was proposed as clearly shown in Figure II based on CVF and Results and determinants model. Managerial roles are the exogenous latent variable measured by maximization of output, consolidation and continuity, human commitment and adaptation and change observed variables. Performance measurement practices are the endogenous latent

variable measured by result measures and determinant measures observed variables. Several other factors such as manager's demographic characteristics, technology, hotel size, Hotel Property type, industry characteristics, hotel ownership, culture and current hotel strategy may influence performance measurement practices. They were not considered in this study but were controlled by explicitly modeling them as exogenous residual in the Structural Equation Model.



**Figure III: Managerial Roles versus Performance Measurement Model**

### **Data Analysis and Presentation**

Structural Equation Modeling (SEM) was considered appropriate for this study as it serves purposes similar to multiple regression, but in a more powerful way which takes into account the modeling of interactions, multicollinearity, nonlinearities, correlated independents, measurement error, correlated error terms, multiple latent independents

each measured by multiple indicators, and one or more latent dependents also each with multiple indicators (Fornell & Larcker, 1981; Anderson & Gerbing, 1988; Hair, *et al.*, 1995; Arbuckle, 2006). Structural Equation Modeling was used to investigate the linkage between managerial roles and performance measurement practices. The assessment of the measurement model and the test of the hypothesized relationships represented in the conceptual model were conducted with the use of Analysis of Moment Structures (AMOS 16). The measurement model was first assessed with Confirmatory Factor Analysis (CFA) and the hypothesized relationships tested with structural equation model. CFA involved unidimensionality analysis, reliability analysis and validity analysis. In this study, the sample size of 124 respondents was sufficient for this type of analysis. The scores of level of use and level of importance of performance indicators from each of the performance dimensions were integrated to give a single score of each performance dimension. Similarly scores of level of importance and level of use of management competencies were integrated to get a single score of each managerial role. Given the fact that managerial roles and performance measurement practices constructs are at an advanced stage of research and in view of the increasing acceptance of the Confirmatory Factor Analysis approach, the present study adopted the confirmatory factor analysis to validate the measurement model. A comparative fit index (CFI) of 0.90 or above for the model implies that there is a strong evidence of unidimensionality as recommended by Hair *et al.* (1995). In order to check for unidimensionality, a measurement model was specified for each construct and CFA was run for all the constructs. Individual items in the model were examined to see how closely they represent the same construct (Ahire *et al.*, 1996). A comparative fit index (CFI) of 0.90 or above for the model implies that there is a strong evidence of unidimensionality as recommended by Hair *et al.* (1995). Internal consistency was estimated using a reliability coefficient called Cronbach's alpha (Bornstedt & Knoke, 1982). An alpha value of 0.60 and 0.70 or above was considered to be the criteria for demonstrating internal consistency of new scales and established scales respectively as proposed by Bornstedt and Knoke (1982). To test for discriminant validity the procedures described by Fornell and Larcker (1981) were used. The analysis should show that the average variance extracted for each pair of variables is greater than the squared correlation for the same pair, indicating that each construct is a distinct construct. Furthermore evidence of convergent validity is obtained when the measurement items represented their factors significantly; the critical ratio of every item exceeds the 1.96 value as recommended by Anderson and Gerbing, (1988).

Finally structural equation model using AMOS 16 software was used to test a series of equations at once while adjusting for the measurement error. Structural equation modeling (i) tested a set of regression equations indicating the relationship between managerial roles and performance measurement practices all at once, and (ii) tested if the model is a good fit for the data that was obtained. Model evaluation is one of the most unsettled and difficult issues connected with SEM. According to Arbuckle (2006) goodness of fit tests determine if the model being tested should be accepted or rejected. A set of goodness-of-fit measures (Chi square, Relative Chi square, NFI, CFI, TLI and

RMSEA) were employed to accept the proposed model. The data was presented in tables and figures.

## Results and Discussion

The last section presents findings and discussion regarding linkage between managerial roles and performance measurement practices in Kenyan hospitality industry.

### Reliability Analysis of the Survey Instrument

The results in Table 2 showed a Cronbach's alpha ( $\alpha$ ) above 0.70 for all but one of the scales, indicating an acceptable level of reliability (Norusis, 1993). Most of the alpha values were acceptable since they were  $>0.70$ . Under Performance measurement dimensions scales, the values were  $>0.70$  for all of the dimensions apart from flexibility which had alpha value of 0.64. All of the managerial roles recorded alpha above 0.70. This implies that 35 performance indicators were reliable and consistent measures of performance measurement dimensions apart from three indicators of flexibility dimension. Likewise, 24 management competencies were reliable and consistent measure of the eight managerial roles.

**Table 2.** Reliability Analysis

N= 62 Scale	Alpha Values	No. of Indicators for each measure
<b>Performance Measurement Dimensions</b>		
Competitiveness	0.83	4
Financial performance	0.90	14
Quality of service	0.83	4
Flexibility	0.65	3
Resource utilization	0.71	5
Innovation	0.80	2
Supplier Performance	0.89	2
Community/environmental perspective	0.95	4
<b>Managerial Roles</b>		
The Director role	0.88	3
The Producer role	0.73	3
The Monitor role	0.80	3
The Coordinator role	0.88	3
The Facilitator Role	0.85	3
The Mentors Role	0.90	3
The innovator Role	0.90	3
The Broker Role	0.83	3

### Confirmatory Factor Analysis and Structural Equation Modeling

To assess the measurement model, four analyses were conducted. First, Confirmatory Factor Analysis (CFA) was conducted using AMOS 16 to empirically investigate the suitability of the proposed model to the data. After running the CFA using Amos 16, the overall fit of the model was not acceptable, with  $\chi^2$  of 53.24 (df=8,  $p=0.00$ ), Relative chi square ( $\chi^2/df$  ratio) of 1.452, CFI of 0.87, NFI of 0.85 and TLI of 0.75. All the above measures of model fit indicated that the model was not a good fit for the data hence it was rejected.

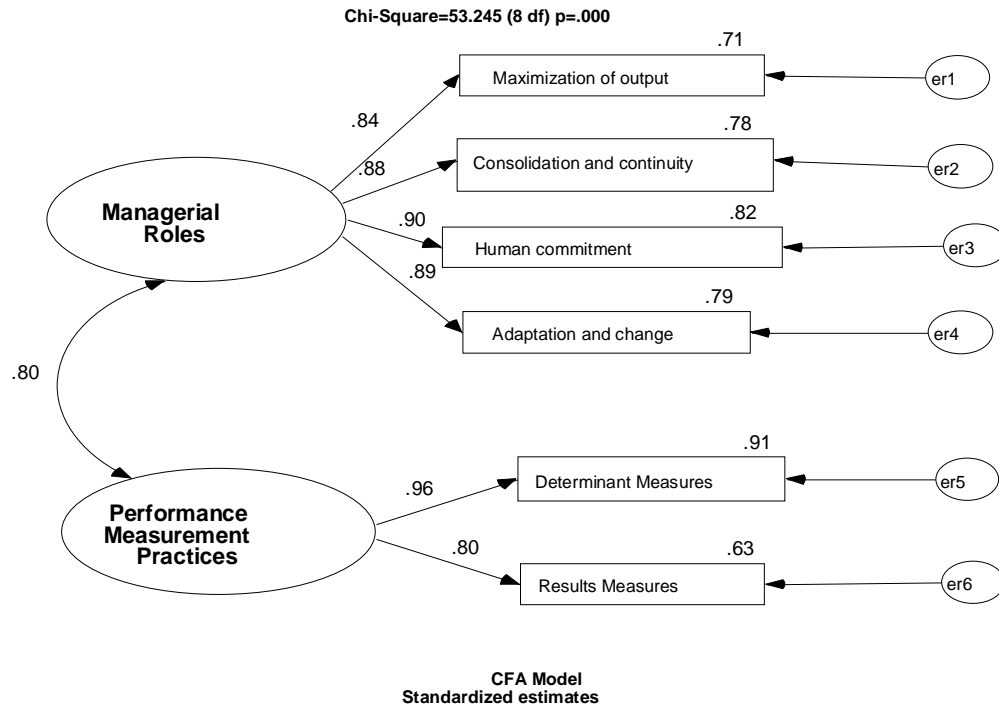


Figure III Managerial roles vs Performance Measurement Practices CFA model

SEM allowed the researcher to re-specify the model based on the modification indices provided. Relevant modification indices are presented in Table 3. It can be noted from table 8 that measurement error terms of the observed variables are correlated. Correlated error terms of observed variables is one of the assumptions of SEM. Based on the theory governing managerial roles and performance measurement, Er 1 and Er 2, were correlated because maximization of output and consolidation and continuity roles both fall under control on CVF (refer to Figure I) . Er 3 and Er 4, are correlated since human commitment and adaptation and change fall under flexibility on the CVF. Er 2 and Er 6

as well as Er 4 and Er 5 are correlated due to the external and internal orientation respectively. Amos 16 was run again and the resultant model is displayed in Figure IV.

Table 3. Modification Indices for Covariances

	M.I.	Par Change
Er1 <--> er2	11.676	.055
er4 <--> er3	8.702	.051
er6 <--> er2	14.900	.068
er5 <--> er4	5.475	.041

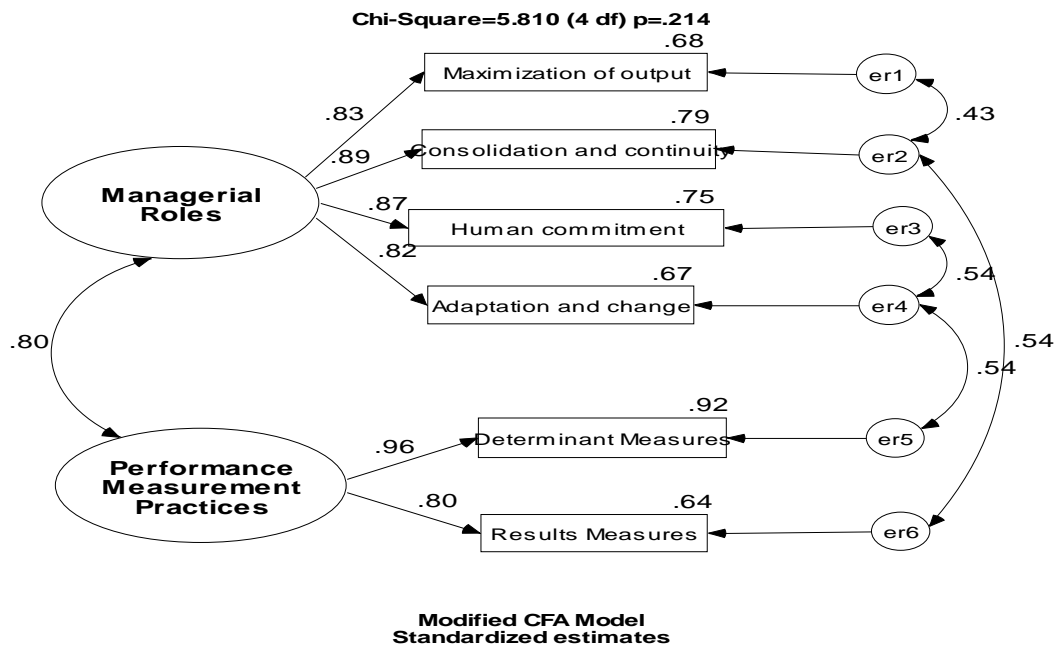


Figure IV Managerial roles vs Performance Measurement Practices modified CFA model

The above model indicates that the overall fit of the CFA model was acceptable, with  $\chi^2$  of 5.81 (df=4,  $p=0.21$ ), Relative chi square ( $\chi^2/df$ ), ratio of 1.45, and the comparative fit index (CFI) of 0.99. In order to test for unidimensionality, CFA was conducted on measurement models for each of the two variables namely organizational performance

measures and managerial roles. In relation to this study, the CFI indices for the two latent variables were above the 0.90 level which indicated evidence of unidimensionality.

From Table 4 the values of composite reliability, variance extracted, and Cronbach's  $\alpha$  greatly exceeded the minimum acceptable values which are, 0.7, 0.5, 0.7, respectively, indicating the reliability of measures and therefore yielded very consistent results. Squared multiple correlations ( $R^2$ ) for each measurement item, composite reliability, and variance extracted for each factor were used in this study to test the construct reliability. The first run of the modified measurement model showed that the  $R^2$  for all the measurement items was greater than 0.5 as shown in Table 10 indicating a good reliability level.

Evidence of convergent validity was obtained as the measurement items represented their factors significantly; the critical ratio of every item exceeded the 1.96 value as indicated in Table 5. To test for discriminant validity, the average variance extracted and squared correlations were used. The analysis showed that the average variance extracted for each pair of variables was greater than the squared correlation for the same pair as shown in Table 4 and 5 respectively.

**Table 4** Variance extracted, composite reliability and Alpha values for the constructs

<b>Construct</b>	<b>Variance Extracted</b>	<b>Composite reliability</b>	<b>Cronbach's alpha</b>
Results measures			0.92
Determinants measures			0.86
Consolidation and continuity			0.82
Adaptation and change			0.90
Human commitment			0.91
Maximization of output			0.91
Managerial roles	0.52	0.81	0.93
Performance measurement practices	0.63	0.77	0.86

From Table 5 it can be said that determinant measures are better indicators of performance measurement practices than result measures. Performance measurement practices seem to explain more variance in determinant measures. This means that determinant measures are good indicators of performance measurement practices.

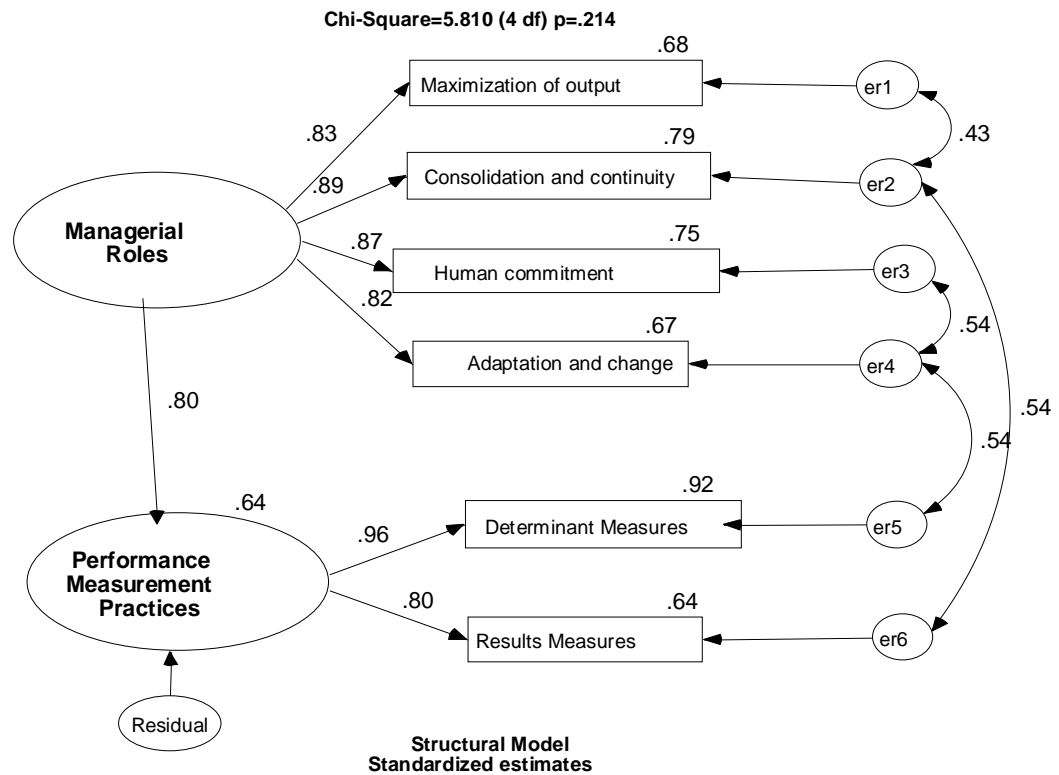
**Table 5.** Standardized Regression Weights and Squared Multiple Correlations for Measurement Model

<b>Observed Endogenous variable</b>	<b>Latent Exogenous variable</b>	<b>Beta</b>	<b>C.R.</b>	<b>R<sup>2</sup></b>
Maximization of output	<--- Managerial Roles	0.83***	6.57	68
Consolidation and continuity	<--- Managerial Roles	0.89***	10.80	79
Human commitment	<--- Managerial Roles	0.87***	7.03	75
Adaptation and change	<--- Managerial Roles	0.82***	6.57	67
Results measures	<--- Performance measurement practice	0.80***	7.10	64
Determinants measures	<--- Performance measurement Practice	0.96***	7.10	92

\*\*\* Correlation is significant at the 0.001 level

### **Goodness of Fit tests**

After assessing the measurement model, the structural model was specified as given in Figure V below. After analysis the overall fit indices for the proposed structural model (refer to Figure V) were  $\chi^2 = 5.81$  (df=4,  $p=0.21$ ),  $\chi^2/df$  ratio of 1.45, the CFI of 0.99, Normed fit Index (NFI) of 0.98, Tucker-Lewis Index (TLI) of 0.98 and Root Mean Square of error Approximation (RMSEA) of 0.08. These values indicated that the model fits the data reasonably well as discussed in section 2.6.4 (refer to section 2.6.4)



**Figure V: Managerial Roles vs Performance Measurement Practices Structural Model**

Managerial roles were significantly related to the performance measurement practices. The standardized beta value of 0.80 for managerial roles confirmed the positive relationship between managerial roles and performance measurement practices. The t-statistic for Managerial roles ( $t=6.36$ ) indicates that the relationship is significant ( $p<.0001$ ). The  $R^2$  was 0.64, indicating that the predictor variable (managerial roles) explains about 64 percent of the variation in performance measurement practices. This study found a linkage between the managerial roles and performance measurement practices.

The study adopted a different view of the managerial roles. It did not attempt to measure the level of use or importance of specific roles in the sample, but rather focused on managerial roles, by measuring its general contribution to the overall performance measurement practices in the Kenyan hospitality industry. The results indicate that managerial roles can significantly predict performance measurement practices in the Kenyan hospitality industry. Managerial roles explained a great variance in performance measurement practices.

The modern corporate environment has initiated many changes in all organizational functions that have inevitably affected the performance of managerial roles. The latter is now facing a major challenge that has to do with the content of managerial work. There is a shift of emphasis from the traditional managerial roles to outcomes of managerial roles, making stakeholders interested in the way in which managerial roles contributes to the organizational success and performance. Neely (1998) argue that manager's measure for two main reasons. Either they want to know where there are and what they have to improve; or they want to influence their subordinate's behaviors. Bourne *et al.* (2000) argue that unless action is taken based on the results attained then the measures are meaningless, costing money to obtain and not adding value to business. Performance measurement therefore, must be part of a system, which reviews performance, decides on actions and changes the way in which the business operates. Hospitality business pressures challenge managers to achieve competence in their managerial performance. Competent managerial qualities are needed to determine strategic directions for an organization take and to creatively solve business problems (Scheule & Sneed, 2001). According to Wynne and Stringer (1997) competencies are the bond that binds an organization together, taking a holistic look at the people, purpose, processes and performance. They also enable organizations to understand and better measure performance. Therefore managerial roles such as maximization of output, consolidation and continuity, Human relations and adaptation and change influences performance measurement practices of hospitality managers. To implement performance measures managers need to apply managerial roles in different situations.

This study sheds light on the widely held view that managerial roles and management competencies influence the performance measurement practices in the hospitality industry. By examining how managerial roles influence the choice performance measures by managers, the results provide some insight into the prediction associated with managerial roles. The critical impact of managerial performance on an organization's effectiveness is now common ground (Quinn *et al.*, 1996). However an insight into managerial performance can be gained through an analysis of the roles managers play and their level of effectiveness.

Mintzberg (1975) claimed that measuring organizational performance is one of managers tasks, managerial roles can influence how the managers goes about measuring performance. Managers play these roles in varying degrees depending on their level in the hierarchy and the nature of their position. Since managerial roles are not static, same managers apply different roles in different situations to achieve different outcomes. The findings confirmed what the literature has speculated but provided little empirical evidence. It is assumed that managers with ability to achieve high performance in all four managerial roles would have a better impact on overall firm performance compared to those with low orientation in any four managerial roles. Earlier studies on the CVF have confirmed that focus on all managerial roles leads to better performance (Hart & Quinn, 1993; Quinn *et al.*, 1996)

Therefore, the findings of this study extend the application of Competing Values Framework by Quinn *et al.* (1996) that had not been applied in performance measurement

subfield, yet several authors argue that the model can be used to improve organizational performance. It is clear from the diagrammatic representation of the model and its description that the CVF should not be regarded as something that is static. The presence of so many contradictory behaviors implies a dynamic tension, and Quinn intended the model (Refer to Figure 1) to be an explication of a very active process involving managers moving from one quadrant to another very quickly, perhaps on an incident-by-incident basis, or hour by hour. The concept emphasizes the point that modern hotel managers must be able to demonstrate a diverse range of behaviors in response to rapidly changing circumstances.

### **Conclusions and Recommendations**

To sum up, there is a linkage between managerial roles and performance measurement practices in the Kenyan hospitality industry. All the six factors of the measurement model had a strong evidence of unidimensionality, reliability, convergent and discriminant validities. Furthermore, the overall modified model Chi-square, NFI, RMSEA, and the NFI exceeded the obligatory requirements. Therefore the proposed model was a good fit for the data.

### **Recommendations**

The hospitality managers need to rethink about the choice of their performance indicators. They need to incorporate both financial and non-financial performance measures in their performance measurement systems. They need to use balanced range of measures, which are linked to the company's objectives and strategic intent. The hotels need to invest in comprehensive performance management systems that will enable the managers to capture both financial and non financial data.

Management development programs and training schedules should be structured so that managers are exposed to a range of opportunities that will enhance the development of their general management competencies. This will help broaden managers' learning and develop a wide range of competencies. It will be important to ensure the significant competencies are addressed in hospitality management curricula. It is suggested that consideration should be given to assessing the effectiveness of teaching these generic management competencies in the current hospitality curricula.

The management can invest in managerial roles that will influence the choice of desired performance indicators. Hospitality organizations that want to implement effective performance management systems can use managerial roles to influence managers' performance measurement practices. Hospitality organizations that want to improve performance measurement practices need to invest in management training programs that will make their managers perform managerial roles effectively. Finally a comprehensive performance measurement framework tailored to the Kenyan hospitality industry taking into account Kenyan industry characteristics need to be developed.

### **Suggestions for Further Research**

The literature review revealed there is a severe lack of Kenyan based research in tourism and hospitality industries that investigates factors influencing performance measurement practices. Thus, continuing research in this area is warranted. The proposed model was developed through model development approach. There is need to use cross-validation strategy with a different data set to test the model. Further research may focus on studying the criticality of the proposed model in other sectors of the service industry. Furthermore, there is need for research which aims to propose a broader model inclusive of all other factors such as gender, demographic characteristics, strategy, organizational size, hotel property and product lifecycle that influence performance measurement practices in hospitality industry in a single model.

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