Moderating influence of lean-green practices on the relationship between capital mobilization and performance of medium hotels in the Kenyan cities

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A B S T R A C T

The objective of this study was to investigate the impact of capital mobilization on the operational outcomes of medium-sized hotels located in urban areas of Kenya. The research was grounded in the framework of dynamic capability theory. The study employed a pragmatic research paradigm that utilized mixed methodologies and employed a contemporaneous triangulation research methodology. The sample consisted of 534 medium-sized hotels. The researchers employed a stratified random sampling methodology to ascertain a sample size of 229 hotels. The research was grounded in the theoretical framework of the natural resource-based perspective. In order to examine the goal hypothesis, the researchers calculated the beta coefficient and conducted a t-test to assess the association between capital mobilization and the performance of medium hotels in Kenya. The significance level for this test was set at 5%. The null hypothesis was rejected based on the statistically significant estimated beta value (0.698, \( p = 0.000 \)), indicating a confirmed substantial association between capital mobilization and the performance of medium hotels in urban areas of Kenya. The performance of a firm is influenced by the amalgamation of employees’ knowledge and abilities, which are integrated through various processes and procedures. This integration not only shapes the structure of the organization but also facilitates the generation of value. The study suggests that it would be beneficial to focus on implementing lean-green practices during capital growth, as these practices have been shown to align with improved performance. Additionally, it is recommended to place greater emphasis on incorporating the concept of 5S into entrepreneurship courses at all levels of education.

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I N T R O D U C T I O N

Given the current trend toward a more sustainable and environmentally-friendly economy, the overlap between entrepreneurship and sustainability has become a key research area (Garcia et al., 2019). As a result, entrepreneurial ventures are faced with no option but to develop and deploy a number of strategic avenues to remain relevant and competitive. Studies conducted by the International Hotels Environment Initiative (IHEI) revealed that 90% of the hotel guests prefer to stay in a hotel that cares for the environment (Kularatne, Wilson, Månsson, Hoang & Lee, 2019). A study by Hussain, Al-Aomar, and Melhem(2019) analyzed the impact of lean management practices in United Arab Emirates. The study measured some green practices on a three-performance model comprising economic, social and environmental areas. The study revealed that the greatest impact of lean is on economic performance. Rai, Ansari, Ganguly, Giri, and Rai (2021) studied small home-stay establishments in India and found that implementing lean produces better performance and profitability while those even unknowingly implement lean practices work better.

A study by Han, Chua, and Hyun (2020) in Taiwan on the mechanisms of the hotel waste reduction and water conservation techniques for sustainable and green practices concluded that customer awareness towards environmental concerns is the key attribute for implementation of green practices. Kang et al (2012) carried empirical research in USA. The study was aimed at investigating the...
willfulness of consumers to pay at a premium for green services in luxury hotels. The study established that 37% customers were willing to pay extra for eco-friendly causes.

A study carried on lean-green practices on the sustainable performance of hotel supply chains by Hussain et al (2019) established that Lean techniques have the highest impact on the economic performance of the hotel supply chain and had least impact on the environmental performance. From a theoretical perspective, many authors have highlighted the opportunities of implementing lean thinking in services in general, and hotel industry in particular, and the potential benefits that it can bring (Verdecia, Díaz, & Vega 2022).

Empirical research by Oriade, Osninaeke, Aduhene, and Wang (2021) on sustainable and green practices to be considered by Nigerian and Ghanaian hotels focused on how to improve hotel efficiency and organizational behavior. The study concluded that customer and staff environmental awareness is the most crucial green practice needed. Fuentes-Medina et al (2018) conducted exploratory research on critical performance indicators (CPIs) of hotel industry. The study analyzed the customer needs and established that the attributes of the value chain such as staff training, customer perception, room service, eco-friendly buildings need to be addressed properly. Ramphal, and Nicolaides (2018) carried a study on South African hotels. The study highlighted the major barrier to application of lean was fragmented hotel departments where employees work in diversified groups without coordinated lean management team approach.

Omune, Kambona, Wadongo, and Wekesa, (2021) carried descriptive research in Kenya focusing on the implementation of environmentally friendly practices by considering energy savings, waste management and water conservation practices. Their study recommended for training and awareness programs for hotel employees in green and environmental practices. The study also recommended subsidization of inventories related to recycling and waste management as a panacea.

The challenges within the tourism sector have made the hotel industry face tough times in the past twenty years (Nzioka & Njugu, 2017). According to Njau et al., (2019), Kenyan hotels faced a threat to their existence because of the various challenges since a good number of tourists preferred destinations in South Africa, Tunisia and Morocco, Aladag et al., (2020) studied factors affecting the performance of hotels and restaurants and established gaps that exist in strategic plans, employee skills and knowledge and customer satisfaction. Lee, (2018) found out the shortage of competent manpower as the main challenge, a study on safety measures was done because it was a major contributor to drop in international visitor arrival, customer focus to reassure them of improved services, retrain staff to align their orientation to changes in the environment and redefine priorities through strategic planning. Demand for hotel services are seasonal hence making the staff and facilities be underutilized during low seasons. The decreased world tourism hugely influenced sales in hotels and hotel operators faced threats because hotels in Kenya hugely depend on the International Tourism Market and a low bed occupancy capacity of 10-20% was observed. Many employees were laid off since many hotels closed down and thus need to establish if there is mediating role of lean-green practices on relationship between capital mobilization and performance of medium hotels in Kenya.

While implementing sustainability strategies in the hotel industry has been associated with positive results Rakicka (2016), a study in Kenya by Omune et al (2021) revealed that the highly implemented environmental management practices are; reviewing and monitoring of energy bills by 71.42% and ensuring taps are not opened unnecessarily 85.70% but the least implemented practice in Kenya by Omune et al. (2021) carried descriptive research in Kenya focusing on the implementation of environmentally friendly practices by considering energy savings, waste management and water conservation practices. Their study recommended for training and awareness programs for hotel employees in green and environmental practices. The study also recommended subsidization of inventories related to recycling and waste management as a panacea.

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**Literature Review**

**Theoretical Background**

Study was based on Resource-Based View (RBV). The RBV was a concept first recognized by (Wernerfelt, 1984) and has even since developed into a strategic thought of growth. Firms develop their competitive advantage from their ability to collect and develop an appropriate blend of resources depending on the resource-based view. Some management experts’ advice that a firm’s internal operations should aim at creating resource bundles that would help them in building a sustainable competitive advantage where competitors will not be able to imitate the unique resource combination since gaining benefits in sustainable competition requires continuous working on exploitation or creation of new resources (Dutot et al., 2014).

Mu et al., (2018) also place consideration on a fact which is usually agreed upon by most strategic managers and specialists. Many Firms that operate under financial distress and instability witness an extremely unstable environment. This environmental distress includes local economic conditions to regional politics, in which all areas of society face chaos in and after political instability. In order for Firms to match such an environment, the internal capabilities of the organization must be supple, adaptive and varied (Boohene, 2018). The resource-based view of an organization allows diversifying its income through identifying is applicable resources and with appropriate utilization of each. For many Firms, the degree of income diversification depends on the number of resources available in the organization, how are the resources to be utilized, the percentage of, percentage of total income being earned from self-financing and percentage of self-financing depending on the largest customer or largest selling product or service, (Scott-Kennel & Giroud, 2015).
The resource-based theory squabbles over the fact that organizations gain a competitive advantage by building up and utilizing resources that are exceptional and tricky to copy and substitute. Its existing importance is explained not only by its supremacy in academic literature and journals but also by its importance placed in the strategic studies taught to students and undergraduate, masters’ and executive practitioners (Obeidat, 2016). The ability to develop an effective blend of resources makes firms develop their competitive advantage. This theory emphasizes the saying that “the whole is better than the sum of its parts” since strategic resources can be developed by taking many strategies and resources that could be copied individually and in a way that can’t be copied bundle them together.

As such the strategy reduces costs through minimizing inputs, simplifying the processes and reducing the costs of compliance. Camara (2018) argued that lean-green practices in service provision or manufacturing are complementary in that waste elimination will enhance a firm’s ability to successfully implement green practices. Implementation of Lean-green requires strategic focus, culture modification and significant investment. More lean leads to more green and vice versa. This makes the theory relevant in this study by directing the competitive advantage created by lean-green practices to be analyzed as a moderator variable of the relationship capital mobilization and performance.

Empirical Review

Capital Mobilization and Firm Performance

Since 1980s the world economy has shifted from industrial to knowledge based economy where managers changed from leveraging on tangible assets such as properties, equipment and raw materials as the major source of value creation (Guthrie et al, 2012). This argument was supported by Hejazi, Ghanbari, & Alipour (2016) who observed that intangible assets are not recorded in financial statements but constitute a high portion of the market value of the organization. As organizations enter into the knowledge era, they need to understand that they should use their three kinds of capital namely physical, financial and intellectual capital to gain advantages over their competitors (Monzari, Kazemi, Nazem & Pooya 2012). Intellectual capital (IC) has generated great interest among academicians and practitioners owing to its recognition as an intangible asset that is linked to superior performance and competitive advantage of a firm.

Organizational knowledge and IC has come to be recognized as the driving forces of competitive advantage and value creation because they do not decrease in value after usage (Hejazi, et al., 2016). Ling and Huang (2012) observed that IC has emerged as a key factor for future success and long-term profitability in the age of knowledge based economy where tangible assets are slowly being replaced by intangible assets. IC is a multi-dimensional concept that resides at individual level, network and organization. The intellectual capital of an organization has been reported to be three to four times over the organizations book value (Yang & Lin, 2009).

Measuring intellectual capital allows for collecting and reporting all the information related to intangible assets which are not included in traditional financial statements (Hejazi, et al, 2016). However, the concept of IC is still unknown to many because it is difficult to measure in explicit terms (Lytras & Pablos, 2009). Joia (2007) highlighted the multidimensional nature of intellectual capital, meaning that definitions are not always very clear and there are no boundaries of what people mean when they talk about IC. Intellectual capital is one mostly under researched of the three critical resources besides physical and financial capital of an organizations.

IC is also taken to mean the knowledge and other intangibles that produce or create value in the present as well as other intangibles that will create value in the future (Marti 2007). IC therefore can be viewed as a set of knowledge assets acquired and controlled by the business for value creation (Alipour, 2012). It is a strategic asset that can increase the profitability through value creation.

Intellectual capital is captured in three areas namely human capital implicating the knowledge embedded in workers, structural capital or the knowledge embedded in the organization and its systems and finally the relational capital implying knowledge embedded in customers and other relationships external to the organization. Human capital has come to be known as the most important asset and resource for creativity and innovation (Chistaz, Tajpour, Hosseini, Khorram & Zorrieh 2019). It is made up of competences, attitudes, and intellectual agility, meaning the sum of employees’ capacity to create both tangible and intangible assets using their ideas and knowledge (Hajezi et al, 2016). Crook, Todd, Combs and Woehr (2011) in their meta-analysis of the relationship between human capital and firm performance, found the two being more strongly related, particularly when the human capital is firm-specific. This leads to higher productivity and income as well as market value.

The results of having higher human capital are: increased organizational performance (Lim et al., 2010), sustaining organization competitive advantage Kim et al., (2010), and source of creativity and innovation Ramezan, (2011). Slavkovic and Ognjanovic, (2018) sought to analyse the interdependence of human capital components and business performance of the hotels in Serbia. The research confirmed the influence of human capital on the non-financial performance of hotel companies.

Ullah, Mehmood, Amin and Abbas (2022) study sought the impact of human capital skills on organisational performance in the hospitality industry. Data was collected from 356 managers working in small and middle-level hotels located in the four districts of Saudi Arabia. The results demonstrated that human capital capacity, human capital knowledge and human capital skills have a significant positive relationship with organizational performance. Results also confirmed a moderation effect of innovative leadership
between human capital knowledge and organizational performance. However, the moderation effect of innovative leadership between human capital capacity and human capital skills with organizational performance was not confirmed. The study concluded that human capital should focuses on the economic value of what the employees can produce. This study sought to establish the change in performance brought by incorporating lean-green practices on skills and knowledge of human capital among the medium hotels.

The second component of IC is structural capital which relates to routine knowledge like database, procedures, publications, and organizational culture. An enterprise with strong structural capital will create favorable conditions to utilize human capital and allow human capital to realize its fullest potential, to boost its innovation capital and customer capital (Liu 2010). As such structural capital of a firm translates to innovations and energy within a company’s property and capitalizes on those innovations to create wealth. Structural capital enables creation of systems for acquiring knowledge (Crossan, Lane & White, 1999), and consequently SMEs which accumulate, share, and effectively use intellectual capital and organizational knowledge can be more successful, (Hejazi et al, 2016).

Sainaghi and Baggio (2014) study sought the the influence of structural social capital, testing six hypotheses using the Livigno hotel in Italy using 84 cases. The results found that structural social capital had the strongest positive determinant of hotel performance, compared with weaker and generally not significant relations linking occupancy and control variables involving category, size and location. Apart from the study revealing multifaceted nature of structural and social capital, the study also found a correlation between structural social capital and performance during off-peak periods.

Finally, the last component of IC is relational capital also referred to as social capital which is institutional relationships and regulations which shapes the quality and quantity of social interactions in the society (Abadi, Ataei & Movahedi, 2017). This kind of capital includes the relations with customers, suppliers, shareholders, the rivals, community, the official institutions, and society. It is the main determinant in the conversion of IC into market value, due to acting as a bridge and catalyst on the operations of IC. Relational capital includes both current value and potential future value of the organizational relationships with customers. Relational capital generally involves customer satisfaction, customer loyalty, negotiating capacity, company image, and interaction with supplier’s distribution channels and licensing agreements. It can be the foundation for capturing insight into the future need for customer services. Because it enhances the firm’s quality of group work and richness of information exchange among team members (Subramaniam & Youndt, 2005 as cited by Hejazi et al, 2016). Relational capital therefore leads to novel opinions and creativity (Chitsaz, et al, 2019). And as such relational capital is an investment with expected substantial returns.

A study by Raza (2020) on SMEs in Khyber Pakhtunkhwa Province revealed that there is a positive relationship between a firm’s Customer relational capital and Firm Performance. From the study results, it was found that engaging in positive relationship with the suppliers increases the level of firm performance. Another study by Iazzolino, Chiappetta and Chiappetta (2018) on Italian firms analyzing dimension of the internal relational capital revealed a positive influence of the internal relational capital (IRC) and of the external relational capital (ERC) on performance. The research further suggested that an effort has to be devoted not only to improving relations with external stakeholders, but also to developing intra firm relations.

Nho, Thong and Trung (2020) study of effects of intellectual capital on information communication technology firm performance in Vietnam revealed the interrelationships between the dimensions of IC and its moderating role on the performance. The study involved a survey of 350 information communication technology (ICT) firm’s directors and managers, which was used to analyse the impacts of intellectual capital dimensions on firm performance, the indirect effects of organizational capital on performance via human and social capital, and the moderating role of environmental uncertainty. The findings indicated that all dimensions of intellectual capital had direct impact on firm performance. In addition, the study found that the human and social capital mediated significantly the relationship between firm performance and organizational capital, and the environmental uncertainty moderated significantly the relationship between intellectual capital dimensions and firm performance.

Hotels Performance

Kenya’s hospitality sector is expected to remain vibrant supported by growth in international tourists’ arrivals and positive economic growth (Kenya Bureau of Statistics, 2014). The number of registered rated hotels in Kenya is approximated to be 211 and the figure is increasing day by day (TRA, 2019). The Government of Kenya (2013) National tourism strategy 2013-2018 rank Tourism as the most important industry in Kenya after agriculture. A study by McClanahan, Mwaguni and Muthiga (2005) reported that hotel sector is responsible for 14% of GDP and 12% total employment in the country and the sector is predicted to grow at 3.7% per annum for the next decade.

The Class, elegance, ambiance and quality services are the major distinguishing factors of the hotels. The managements of hotels in Kenya have further perfected this pursuit by focusing their attention on achieving to be star rated hotel by the (TRA, 2019). Performance of a hotel has traditionally been measured by looking at the revenues or the profits made at the end of the year, or using key financial ratios (Wadongo, Odhuno, Kambona & Othuon,2010). Despite the development of performance measurement systems in the hospitality industry, various researchers (Atkinson & Brander-Brown, 2001) pointed out on the reluctance of the hospitality industry to use balanced measures and rely solely on financial measures.

The performance of hotel organization is not complete especially for hotels with various goals of retaining of tourists, profitability, ability to adapt ever changing environment and meeting demands of consumer behavior among other goals (David, 2012). The
changes in performance measurements practices should incorporate the changes in business environment and environmental variables in Kenyan hotel industry (Wangui, 2013). Hotel performance as generally been conceptualized based on monetary measures. In any case, different researchers have worried for more extensive execution develop that fuses parts of non-budgetary estimates (David, 2012). Performance of hotel is described as the achievement of a particularly activity compared with the presser standards of completeness, efficiency, accuracy, and cost effectiveness this Simply implies the level at which a task is achieved (Haybe, 2015).

**Lean-Green Practices**

Lean methodology has its origin in the production system used at Toyota (Womack et al., 2007). Its focus on waste reduction and value-added maximization has led to a tremendous impact on the effectiveness of both production and service systems (Shurrab et al., 2018). Lean in hotel management has also generated a great deal of interest given the improvement potential. To keep up with the growing demand and maintain reasonable profit margins, the hotel industry and service sector have been under pressure to utilize lean techniques to reduce cost and improve effectiveness (Suárez-Barraza et al., 2012). However, as pointed out by Vlachos and Bogdanovic (2013), there is still scarce evidence of lean application particularly in the hotel industry.

Green practices have been recognized as an important component of corporate sustainability strategy, but it is an open question whether their impact on performance is significantly positive or negative (Abualfaraa et al., 2019). Lean companies have also been aligned with sustainable and green practices, with some studies claiming that lean organizations have stronger long-term financial performance and higher customer retention rates (Hassan & Pasha, 2022). A comprehensive literature review found that there is limited evidence about the relationship between lean management principles and environmental or social performance outcomes (Agyabeng-Mensah et al., 2020).

According to the Thekkooote, (2022), lean manufacturing can be considered as a green manufacturing. Lean-green synergy was discussed as a possible mediating factor to improve the performance of companies of future (Cherrafi et al., 2018). Green practices can be achieved by green management, systematic, strategic and operational strategies (Bhattacharya et al., 2019). It is important to highlight that independently, both lean and green practices are not sufficient to address all environmental problems; in parallel alignment, these two approaches can more effectively achieve sustainable development objectives (Afum et al., 2021). Lean-green synergy is proved to be a powerful tool for sustainable performance (Waqas et al., 2022). This synergy contributes to increase lean efficiencies and reduce waste.

**Methodology**

The study adopted pragmatism research philosophy because it enabled the researcher to use mixed method and ally triangulation. The target population was of 534 medium hotels adapted from Booking.com (2021) in the Kenyan cities from which a sample of 229 top managerial participants were drawn. The study adopted stratified random methods because the Kenyan cities at that time were three. The medium hotels categories comprised of those hotels whose accommodation capacity ranged from 26 beds to 100 beds. By adopting this criterion 93 hotels were picked form Nairobi, Mombasa 347 and Kisumu 94 making a population of 534 medium hotels from which a sample was drawn. The names of all hotels were written on separate pieces of papers and placed in three baskets depending on the city’s total hotel enumeration. From the Nairobi basket 40 papers were picked randomly, 149 from Mombasa and 40 from Kisumu basket respectively making a total of 229.

The sample size was determined through an applying scientific formula which objectively provided the representation of target population. The sample size for this study was determined using the formula for estimating sample sizes provided by Yamane (1967) that states \( n = \frac{N}{1+N(e)^2} \). Where \( n \) is the sample size, \( N \) is the target population and \( e \) is the level of precision which in this case was 5%, and it is the accepted level of significance in social science research. The application of the formula led to \( n = \frac{534}{1+534(0.05)^2} = 229 \). The inclusion of all cities was a form of data triangulation.

The researcher collected the data using questionnaire and a checklist. This helped to improve on accuracy and also to arrive at a holistic view as well as avoiding the biases of single methods (Denscombe, 2008). The researcher distributed 229 questionnaires to the respondents in senior management out of which 205 questionnaires were fully filled when returned. Data was analysis was based on the 205 returned questionnaires representing a response rate of 87.5%. Sekaran (2004) argues that any response rate above 75% is classified as best and appropriate for any study.

To assess the appropriateness of factor analysis in measurement scale development of the questionnaire items KMO test was conducted and a value of 0.817 which tends to be close to 1 was obtained as shown in Table 1. This indicating that there was sufficient relationship among the variables worth investigation.

Validity and reliability measures were undertaken to ensure that the instruments used were accurate and consistent (Bryman and Bell, 2011, Biggam, 2011). Convergent, discriminant, content and criterion related validity were used to ascertain the credibility of the research procedure. The factor analysis results were used to determine average variance extracted to test convergent validity of the
Moderated multiple regression was used. A moderated multiple regression is a three stepwise regression where the moderating variable is introduced in step two and the interaction term a product of capital mobilization and performance of medium hotels in the Kenyan cities. This hierarchical multiple moderated regression was significant while the other fit measures showed that the model adequately fitted the observed data. The absolute measure of the goodness of fit indices indicates a good fit between the data and the model. The likelihood Chi-square difference test because the method allows the researcher to compare two models, one in which the constructs are correlated and one in which they are not. The difference test result was significant (p<0.05) which means that the two constructs present discriminant validity as shown in Table 3. The content validity was addressed by constructing a measuring scale in line with the literature and pre-testing the research instruments during piloting. The lean observational indicators were extracted from Green Design Guide pamphlet.

Reliability was tested using internal consistency technique. The test for reliability measures consistencies of correlation analysis to avoid Type 1 and Type 11 errors (Osborne, Christensen & Gunter, 2001). To assess the reliability, this study used Cronbach alpha as it assesses the internal consistency. The reliability statistics for the variables was 0.878 above 0.7. This was sufficient confirmation of the reliability of the data collection tool as shown in Table 4.

A normal residual curve on residuals was used to test the normality of the data. The study adopted the ANOVA test of linearity. The ANOVA test statistics of the inverses of both dependent and independent variables were significant and hence linearity was confirmed as shown in Table 5. Homoscedasticity was tested using the regression standardized residuals plot. This study tested the analysis variables for multi-collinearity using the multi-collinearity statistics of Tolerance and Variance Inflation factors (VIF). The highest VIF was 2.086 and the lowest 1.449 all the variable had a VIF less than 3, while highest tolerance level was .690 and the lowest .479 and all the variables had a tolerance value above .2 cut off limit as shown in Table 6. Therefore for all the independent variables had no multi-collinearity issue.

After conducting the required tests to ascertain conformity with factor, data analysis was subjected to the linear and multiple regression analysis to establish the relations between independent and dependent variables. To examine the influence of lean-green practices on the relationship between networks and performance of medium hotels, a moderated multiple regression was used. Moderated multiple regression (MMR) models was employed because the dependent variable (firm performance) is continuous, as recommended by Lucky (2012) using step-by-step method (Field, 2009). The goodness of fit test were carried out by use of Root Mean Square Error of Approximation (RMSEA) because it is sensitive to the number of parameters being estimated and insensitive to the sample size. Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) were also computed to validate the goodness of fit.

Findings and Discussions

Influence of lean-green practices on the relationship between capital mobilization and performance of medium hotels in Kenyan Cities.

The influence of lean-green practices on the relationship between capital mobilization and firm performance was explored. The goodness of fit indices indicates a good fit between the data and the model. The likelihood Chi-square ($\chi^2=193.74$; df=103, $p=0.000$) was significant while the other fit measures showed that the model adequately fitted the observed data. The absolute measure GFI was 0.905, incremental CFI was 0.965, TLI was 0.953 and parsimony RMSEA was 0.066 indicating good fitness of the model. The model of fit results is indicated in the 1.

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square</th>
<th>GFI</th>
<th>AGFI</th>
<th>RMR</th>
<th>CFI</th>
<th>TLI</th>
<th>NFI</th>
<th>RMSEA</th>
<th>CMN/DF</th>
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<td><strong>0.000</strong></td>
<td>.905</td>
<td>.859</td>
<td>.024</td>
<td>.965</td>
<td>.953</td>
<td>.928</td>
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<tr>
<td>Cut-off</td>
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<td>$&gt;0.8$</td>
<td>$&gt;0.03$</td>
<td>$&gt;0.9$</td>
<td>$&gt;0.9$</td>
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<td>$&gt;0.08$</td>
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The study employed Hierarchical Multiple Moderated Regression (MMR) analysis to test the influence of lean-green practices on the relationship between capital mobilization and performance of medium hotels in the Kenyan cities. This hierarchical multiple moderated regression is a three stepwise regression where the moderating variable is introduced in step two and the interaction variable between the independent and the moderator in step three. In step one: capital mobilization was regressed as the only predictor of performance of medium hotels in Kenyan cities. In step two the moderating variable, lean-green practices was introduced and finally in step three, the interaction term a product of capital mobilization and lean-green practices was introduced. The results are presented in the Table 2. The results show that model 1 has an R-square of 0.487, which shows that 48.7% of the variation in the
performance of medium hotels in Kenyan cities is explained by the variation of capital mobilization in the model. Based on the ANOVA F statistic, the model is generally significant with a p-value of 0.000 which is less than 0.05.

After introducing the moderating variable Lean-Green Practices (LGP) the model experienced a change in R-square of 0.269 (from 0.485 to 0.754). The change in R-square was significant as shown by the significant change in F with a p-value of 0.000 which is less than 0.05. The change in R-square shows a significant 26.9 % increase in variation of performance of medium hotels is explained by predictors in the model due addition of LGP to the model. The introduction of the interaction variable has a very slight significant change in R-square of 0.1 % which had a p-value of 0.000 in the ANOVA table. This shows that considering capital mobilization as the only independent variable in the in the model, lean-green practices slightly moderate the relationship between capital mobilization and performance of medium hotels in Kenyan cities.

| Table 2: Model Summary for MMR With Innovations as Predictor |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Model | R | R Square | Adjusted R Square | Std. Error | Change Statistics | R-square change | F | Change | df1 | df2 | Sig |
|-------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 | .698 | .487 | .485 | .33835 | .487 | 192.933 | 1 | 203 | .000 |
| 2 | .870 | .756 | .754 | .23377 | .269 | 223.280 | 1 | 202 | .000 |
| 3 | .870 | .758 | .754 | .23384 | .001 | .877 | 1 | 201 | .350 |

a. Predictors: (Constant), CapMob
b. Predictors: (Constant), CapMob, Lean-Green practices
c. Predictors: (Constant), CapMob, Lean-Green practices, X3Z

Table 3. shows the model coefficients of model 1, 2, and 3, of the performed stepwise regression model. In model 1 capital mobilization has a significant influence on performance of medium hotels in Kenyan cities ($\beta=0.698$, $t=13.890$, $p<0.05$). The coefficient of capital mobilization has a t-statistic of 13.890 and a p-value of 0.000 which is less than 0.05 implying significant at the 0.05 level of significance. The equation generated from model 1 becomes;

$\hat{Y} = 0.00 + 0.698X_1$

Model 2, shows that by adding Lean-Green to the model has a significant effect. The coefficient of Lean-Green is significant at 0.05 level of ($\beta=0.605$, $t=14.943$, $p<0.05$) showing that Lean-Green practices has a significant influence on performance of medium hotels in the Kenyan cities. The equation generated from model 2 becomes;

$\hat{Y} = 0.704 + 0.387X_1 + 0.605Z$

According to model 3, introducing the interaction term to the model did not yield any significant improvement. This means that the interaction term had no significant influence on the performance of medium hotels in the Kenyan cities ($\beta=-0.330$, $t=-0.936$, $p>0.05$). The p-value of the interaction term according to this model was found to be 0.350 implying not significant. Therefore, there is no significant model to be generated from model 3.

| Table 3: Coefficients for MMR With Innovations as Predictor |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Model | Unstandardized Coefficients | Standardized Coefficients | Std. Error | Beta | t | Sig |
|-------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| (Constant) | 1.398 | .217 | 6.455 | .000 |
| Internal Capital Mobilization | .674 | .049 | .698 | 13.890 | .000 |
| (Constant) | .560 | .160 | 3.495 | .001 |
| Internal Capital Mobilization | .373 | .035 | .387 | 9.544 | .000 |
| Lean-Green Practices | .496 | .033 | .605 | 14.943 | .000 |
| (Constant) | -.138 | .762 | -.181 | .857 |
| Internal Capital Mobilization | 5.238 | .180 | .557 | 2.988 | .003 |
| Lean-Green Practices | .665 | .183 | .811 | 3.627 | .000 |
| X3Z (Interaction term 3) | -.039 | .042 | -.330 | -9.36 | .350 |

a. Dependent Variable: PERFOR

Relationship between networks and performance of medium hotels in the Kenyan Cities

The fourth objective of this study was to establish the relationship between networks, and performance of medium hotels in Kenyan cities. The objective sought to test;

Ho: **There is no significant relationship between networks and performance of medium hotels in the Kenyan cities.**

The goodness of fit indices indicates that the hypothesized Structural Sub Model 4 provided a good fit between the data and the model. The likelihood Chi-square ($\chi^2=51.457$; df= 23, p= 0.001) was significant while the other fit measures showed that the model
fitted the observed data. The absolute measure GFI was 0.948, incremental CFI was .982, TLI was .973 and parsimony RMSEA was 0.078 indicating good absolute fitness of the model. The results are indicated in Table 4.

### Table 4: Fit indices of networks as the predictor

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square χ²</th>
<th>df</th>
<th>p-value</th>
<th>GFI</th>
<th>AGFI</th>
<th>RMR</th>
<th>CFI</th>
<th>TLI</th>
<th>NFI</th>
<th>RMSEA</th>
<th>CMN/DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistic</td>
<td>51.457</td>
<td>23</td>
<td>.001</td>
<td>.948</td>
<td>.898</td>
<td>.013</td>
<td>.982</td>
<td>.973</td>
<td>.969</td>
<td>0.078</td>
<td>2.237</td>
</tr>
<tr>
<td>Cut-off</td>
<td></td>
<td></td>
<td></td>
<td>≥0.9</td>
<td>≥0.8</td>
<td>≤0.03</td>
<td>≥0.9</td>
<td>≥0.8</td>
<td>≥0.9</td>
<td>≤0.08</td>
<td>≤ 3.0</td>
</tr>
</tbody>
</table>

A path coefficient was generated, and as shown in the standardized path coefficients in Table 5, there is a significant relationship between networks and performance of medium hotels in the Kenyan cities. The standardized path coefficients of networks on performance results were (β= .615, CR 11.002). The CR of the coefficient of 1 networks was found to be 11.002 which was greater than 1.96 the standard normal distribution critical ratio at 0.05 level of significance. This means that when the networks goes up by 1, the performance of medium hotels goes up by 0.615 or 61.5%. The findings therefore indicates that networks significantly influence performance of medium hotels positively. Tajeddini, Martin & Ali, (2020) utilizing the data gathered from Japanese hospitality firms, clearly identified that in uncertain, dynamic environments, a higher level of risk and entrepreneurial orientation benefited business performance especially when coupled with strong business and social networks.

Chuang, Hang, & Huang (2015) study’s findings indicated that, when doing business in emerging economies such as China, only a proper fit between organization learning and guanxi networking can yield higher degree, or extent of strategic performance. Fernando, Jabbour & War (2019) study confirmed that transforming into network type of organizations where coordination, relationship building, partners’ knowledge and internal communication are important constituents of increasing business performance in the long-run and helps in sustainability and competitiveness. The results of regression weight are presented in Table 6.

### Table 5: Regression Weights: (Group number 1 - Default model)

<table>
<thead>
<tr>
<th>Label</th>
<th>Perfection</th>
<th>Mean</th>
<th>AcTc1</th>
<th>MvP1</th>
<th>CuSat1</th>
<th>NcRet1</th>
<th>ECi1</th>
<th>AcInf2</th>
<th>AcInf1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
<td>Par_6</td>
<td>Par_2</td>
<td>Par_3</td>
<td>Par_4</td>
<td>Par_5</td>
<td>Par_7</td>
<td>Par_8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.E.</td>
<td>.615</td>
<td>.867</td>
<td>.928</td>
<td>1.000</td>
<td>1.034</td>
<td>1.031</td>
<td>1.000</td>
<td>1.032</td>
<td>.782</td>
</tr>
<tr>
<td>P</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

The study further conducted analysis of variance between networks and performance of medium hotels to test the hypotheses. The third null hypothesis stated that there is no significant positive relationship between networks and performance of medium hotels in Kenyan cities. The analysis of variance result (F= 23.620, p-value < 0.05) showed a significant influence between networks and performance of medium hotels. These findings concur with Mathuki, Ogutu & Pokhariyal, (2019) who indicated that strategic alliances had a strong statistically significant influence on the performance of firms in Kenya. Also, Kamau (2020) in the study on strategic alliance practices and organization performance established that strategic alliance practices have an influence on the overall organization performance. The null hypothesis was therefore rejected and the alternative hypothesis confirmed.

### Table 6: Analysis of Variance Between Networks and Firm Performance

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>32.246</td>
<td>3.225</td>
<td>23.620</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>26.484</td>
<td>.137</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58.730</td>
<td>204</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Conclusions

The influence of capital mobilization on performance of medium hotels was established with R-square of .485 and therefore this study came up with the following recommendations: The employee’s unique competencies need to be tapped through staff exchange programs, training and seminars so as to enhance their applicability in the dynamic world of doing business. This is necessitated by the varieties of doing the same thing in different styles due to different levels of technologies in existence. The data base concerning refurbishing and conservation strategic need to be enhanced since consumers make more urgent demands and expect convenient and prompt action anytime, anywhere. Adequate data base will assist in developing advanced logistics and skill training for workers to
adopt and align to new technologies associated with consumer demands. Capital expansion should be tailored towards lean-green practices since they have been proved to go in line with better performance with more emphasis on the concept of 5S being incorporated in entrepreneurship courses in all levels of instruction.

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Institutional Review Board Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.

Conflicts of Interest: The authors declare no conflict of interest.

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