TOP MANAGEMENT TEAM HETEROGENEITY AND PERFORMANCE OF LARGE FOOD AND BEVERAGE MANUFACTURING FIRMS IN KENYA

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DECLARATION

DECLARATION BY THE CANDIDATE

This thesis is my original work and has not been presented for the award of a degree in any other university. Materials referred to have been duly acknowledged.

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&

In memory of my late grandma, Teresia who minutes before passing on prayed for me to go to the university and get a degree. "It was from your mouth to God's ears and I've done it the best way I've known how".

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ABBREVIATIONS AND ACRONYMS

BSC	Balanced Scorecard
CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
DV	Dependent Variable
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GEQ	Carron, Widmeyer and Brawley's Group Environment Questionnaire
IPT	Information Processing Theory
ISO	International Organization for Standardization
IV	Independent Variable
KAM	Kenya Association of Manufacturers
KNBS	Kenya National Bureau of Statistics
KRA	Kenya Revenue Authority
MSME	Micro Small and Medium Enterprises
MV	Mediating Variable
NACOSTI	National Commission for Science Technology and Innovation
R&D	Research and Development
RBV	Resource Based View
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SBSC	Sustainable Balanced Scorecard
SME	Small and Medium Enterprises
TMT	Top Management Team
USA	United States of America
VIF	Variance Inflation Factors
WHO	World Health Organization

ABSTRACT

The top management team (TMT) influences the actions and outcomes of the organization. The TMT's characteristics influence the choice of strategies which affect performance thus strategies mediate the relationship between the TMT and firm performance. This relationship was evaluated through the competitive repertoire which is the complete array of competitive strategies adopted by an organization. Organizations adopt heterogeneous TMTs to acquire a wide variety of skills and attributes which can be applied for superior strategy development thus TMT heterogeneity is associated with competitive repertoire complexity. However, TMT heterogeneity can stir conflicts and factions among the TMT which would be detrimental to the firm. TMT heterogeneity therefore affects group cohesion which affects firm performance thus group cohesion mediates the effect of a heterogeneous TMT on firm performance. This study sought to determine the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. The specific objectives were to establish the effect of TMT heterogeneity on performance, to assess the effect of group cohesion on the relationship between TMT heterogeneity and performance, to evaluate the effect of competitive repertoire complexity on the relationship between TMT heterogeneity and performance and to determine the joint effect of TMT heterogeneity, group cohesion and competitive repertoire complexity on the performance of large food and beverage manufacturing firms in Kenya. A cross sectional descriptive survey was conducted among 53 large food and beverage manufacturers. Primary data and secondary data were collated through a structured questionnaire and checklist respectively. The hypotheses were tested through regression analysis with the Baron and Kenny model was adopted to test the mediating effects. The study established that TMT heterogeneity had a significant negative effect on financial ($p = 0.046$, $B = -1.666$), internal processes ($p = 0.026$, $B = -3.006$) and social performance ($p = 0.021$, $B = -4.063$) which was in line with the upper echelons theory. Group cohesion significantly mediated the relationship between TMT heterogeneity and financial ($p = 0.018$), internal processes ($p = 0.004$) and social ($p = 0.018$) performance consistent with the self categorization theory. Competitive repertoire complexity was not associated with TMT heterogeneity ($p = 0.369$ and $p = 0.877$ for repertoire concentration and range respectively) and did not significantly mediate the relationship between TMT heterogeneity and firm performance as anticipated from the information processing theory. TMT heterogeneity, group cohesion and competitive repertoire range had a significant joint effect on financial ($p = 0.004$), customer ($p = 0.018$), internal processes ($p = 0.001$), learning and development ($p = 0.026$) and social ($p = 0.021$) performance while TMT heterogeneity, group cohesion and competitive repertoire concentration had a significant joint effect on financial ($p = 0.03$), internal processes ($p = 0.009$) and social ($p = 0.042$) performance which supported the resource based view. This study contributed to the strategic management field by demonstrating that TMT heterogeneity was harmful to firm performance unless the TMT was cohesive. Policy makers and practicing managers would benefit by careful consideration of their policies and efforts in designing heterogeneous TMTs and fostering cohesion among them and being deliberate in strategy development and choice. The study was limited by data availability and unwillingness of the respondents to participate and suggested that future studies could adopt different research designs and study contexts.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The people at the helm of the organization determine its fortunes by influencing its actions and their outcomes. Organizations do not act independently of the people that make them up. The actions and the posture adopted by an organization largely reflect the thought process of its chief decision makers. Hambrick and Mason (1984) argued that to understand why organizations behave and perform in a certain way it is important to consider their top executives. They argued that viewing organizations as abstract entities whose outcomes were either planned or unfortunate was not exhaustively insightful because the organization's actions and the success or failure associated with them are as a result of the decisions of their core decision makers.

The Top Management Team (TMT) in an organization determines the strategies the organization pursues which influence the performance outcomes implying that strategies mediate this relationship. Competitive repertoire complexity contemplates the array of actions undertaken by a firm in a given period thus considering strategy as a pattern (Connelly, Tihanyi, Ketchen, Carnes & Ferrier, 2017). Therefore it mediates the relationship between TMT heterogeneity and firm performance. Further, cross functional teams such as the TMT are usually designed with deliberate differences (Ancona & Caldwell, 1992) to empower them with divergent skills and experiences. Due to these differences, TMT heterogeneity can trigger dysfunctional conflicts and activate fault lines leading to negative impact on cohesion which leads to poor performance (Carpenter, 2002). This implies that the effect of TMT heterogeneity on performance is also mediated by group cohesion.

This study was anchored on the upper echelons theory which holds that managers' characteristics determine their choices of strategy and firm outcomes (Hambrick & Mason, 1984). Therefore, TMT heterogeneity influences organization performance. It was also supported by the resource based view (RBV), the self categorization theory and the information processing theory (IPT). RBV posits that organizations with valuable, unusual and unmatched resources outperform their competitors (Oh & Kuchinke, 2017; Barney, 2001) whereby TMT heterogeneity, group cohesion and competitive actions are resources that can be deployed for competitive advantage. The self categorization theory posits that individuals categorize themselves as part of the group or not which determines group cohesiveness (Hogg & Terry, 2000). The IPT holds that people gather information, process it and store it for decision making (Hult, Ketchen & Slater, 2004). A heterogeneous TMT is more likely to launch and support competitive repertoire complexity due to its broader perspectives and experiences.

This study was motivated by the inconsistent findings in TMT research. The relationship between TMT heterogeneity and firm performance has received widespread attention among strategy scholars with mixed results (Pitcher & Smith, 2001; Wei, Lau, Young & Wang, 2005). Some scholars find the relationship not significant (Hambrick, Humphrey & Gupta, 2015; Muchemi, 2013 and Awino, 2013) while others (Mkalama, 2014; Mutuku, 2012 and Carpenter, 2002) find it significant. This study proposed that the mixed findings could be attributed to the underlying assumption that top managers are a united and cohesive team which in practice may not hold thus it maybe insightful to consider the team properties within the TMT. This study therefore sought to establish how group cohesion and competitive repertoire complexity affect the relationship between TMT heterogeneity and firm performance.

The context was the food and beverage manufacturing sector since it had a large number of established companies locally and globally run by a team of managers as opposed to a predominantly single manager context. McGrath (2016) noted that 77 out of the global 2000 were from the food and beverage sector while KAM (2016) reported it to be the largest among Kenyan manufacturers. Further to investigate the competitive repertoire of organizations, the study required a context with diverse strategies. Mutunga and Minja (2014) noted that the food and beverage manufacturing sector was one of the most vibrant in Kenya and was also becoming more competitive due to changing consumer trends (Mutunga, Minja & Gachanja, 2014). On the other hand, the sampled firms needed to have comparable strategies. The food and beverage manufacturing sector in Kenya therefore provided a viable context for the study.

1.1.1 Top Management Team Heterogeneity

The TMT comprises of the managers at the helm of the organization with whom the overall decision making and running of the organization is vested. They are in charge of the entire organization or its major departments. In a bid to derive the most out of the TMT, organizations incorporate managers with a variety of skills (Ancona & Caldwell, 1992) with the view that the TMT is able to launch superior strategies leading to organization success. TMT heterogeneity means the differences in the attributes and traits of the senior managers of an organization. It implies that the senior management's characteristics are different from one manager to the next. In this case the TMT is made up of managers with varied attributes. TMT homogeneity on the other hand refers to a situation where the TMT members are alike in their characteristics. There are few subgroups within the TMT given the managers' characteristics.

Carpenter, Geletkanycz and Sanders (2004) noted that managers provided a useful interface between the firm and its environment and their choices affect the firm. Decisions are not made in a vacuum and the decision makers are usually influenced by internal and external factors to arrive at certain conclusions. Carpenter et al (2004) noted that in dealing with the challenges associated with decision making such as competing goals, ambiguous signals and excess information, executives filter and interpret stimuli based on their cognitive bases and values. This implies that in shifting attention to the TMT in understanding organizations' actions, it is important to get insight into the TMTs' mental processes and value systems. However, Hambrick and Mason (1984) observed that such mental processes and value systems are inconvenient and impossible to measure directly and some important characteristics like tenure do not have psychological equivalents.

Hambrick and Mason (1984) proposed that organizations mirror their senior managers and thus coalesced the upper echelons theory. They noted that while dealing with strategic choices, managers are influenced a great deal by their behavioural components. Operational decisions are amenable to solutions that can be computed and thus managers have predetermined codes for dealing with them. Strategic decisions on the other hand do not have existing prescriptions and managers have to design appropriate solutions. These decisions therefore reflect the idiosyncrasies of the decision makers as they try to design appropriate solutions for the non routine situations.

Hambrick and Mason (1984) emphasized application of observable managerial attributes as proxies of the managers' values and mental processes. This is because the managers' cognitive bases and values are shaped by their observable characteristics. Based on their characteristics, managers filter and interpret stimuli in a certain way which influences the choices they make. Managers' observable characteristics therefore influence their decisions. They therefore argued that relatively observable manager attributes like age, functional background, socioeconomic roots, tenure, education level and financial status could be useful predictors of strategies and performance.

A person's age affects his or her worldview and is a major determinant in a person's behaviour whether implicitly or explicitly. Anecdotal evidence abounds in line with this for instance millennials are more technologically savvy and prefer informal jobs while older people are risk averse and rigid. Empirical evidence is also supportive of this view. Age is associated with more experience, rigidity and resistance to change (Tihanyi, Ellstrand, Daily & Dalton, 2000). Younger managers are likely to be more open to change and undertake more risky ventures which lead to volatile performance. Herrmann and Datta (2005) noted that age can be a surrogate for a person's knowledge and their tendency to take risks. They observed that managers with advanced ages have less mental and physical endurance and thus less capacity to process information. Age heterogeneity can therefore be associated with competitive repertoire complexity and reduced cohesion which ultimately affect firm performance.

Tenure indicates the duration a manager has been in an organization. Every organization has its own culture and the longer a person spends in the organization, the more he becomes acculturated. Due to this the person's perspective is narrowed as his tenure in the organization increases. Tenure indicates a manager's capability to collect and manage information (Herrmann & Datta, 2005) with long tenure reducing information gathering and processing ability. Wiersema and Bantel (1992) posited that long tenure was linked to a high commitment to status quo and organizational values. Further, people who have been in the organization for long have shared vocabulary and perception of events and good communication (Miller, 1991). Organizations with CEOs with long tenure are likely to have inappropriate structures and strategies mismatched to their environments. Tenure heterogeneity therefore affects competitive repertoire complexity and firm performance.

Education level focused on the highest academic qualifications attained by members of the TMT. Education shapes an individual's mental models and information gathering and processing ability. Wiersema and Bantel (1992) asserted that individuals with higher education levels had greater ability to process information and discriminate among different stimuli. Due to this they had a higher ability to tolerate ambiguity, span boundaries and be more innovative. Herrmann and Datta (2005) associated education with mental orientation, willingness to embrace change and knowledge base. However, they noted that higher education could lead to excess analysis. Education heterogeneity avails TMT members with the capacity to seek and analyze opportunities and tolerate ambiguity and thus the ability to launch and sustain competitive repertoire complexity. In addition they can contribute to better firm performance due to well thought out ideas and greater knowledge base.

Functional background also affects the cognitive processes of individuals and their behaviours. In the market place, there exist anecdotal stereotypes based on functional background such as engineers being overly analytical, marketers being frivolous especially with budgets and accountants being mean. A person's functional background shapes their outlook and personality. Wiersema and Bantel (1992) noted that some fields oriented their members towards change than others. Tihanyi et al (2000) observed that certain institutions exposed students to specific way of life which affected their open mindedness. In addition, functional background empowers managers with certain skills and experiences. Mkalama (2014) asserted that functional background reflected a person's depth of relevant knowledge in a specific area which affected the person's effectiveness. A TMT with functional heterogeneity is vested with a larger knowledge base which is crucial for information gathering and sharing which then affects performance.

Gender heterogeneity implies the mix of men and women at the helm of the organization. Gender heterogeneity brings in a variety of personalities and behaviours within the TMT. Dezso and Ross (2012) noted that the presence of female managers in the TMT added the informational and social diversity to the TMT which enriched the behaviour of managers in the organization. Schwab, Werbel, Hofmann and Henriques (2016) demonstrated that managerial groups with either very low or very high gender diversity ended up with group processes which hinder the benefits of moderate diversity. This implies that gender heterogeneity avails the TMT with a capacity to process information and wide perspectives which affects the competitive actions pursued by the organization and the performance. In addition, gender heterogeneity affects the group processes and thus the cohesiveness of the TMT.

TMT heterogeneity on the overall affects performance. Due to the variety of skills, talents and experiences vested in a heterogeneous TMT, the information processing ability of the TMT is elevated. Further, a heterogeneous TMT can launch a wide array of competitive moves that make it difficult for the competition to catch up. Keck (1997) and Wiersema and Bantel (1992) investigated and established that TMT heterogeneity affected firm performance significantly. Certo, Lester, Dalton and Dalton (2006) found significant relationship between the size of the TMT, functional heterogeneity and tenure heterogeneity and organization performance. However they cautioned that the relationships were ambiguous at best due to differences in TMT operationalization and existing moderating factors to this relationship.

Hambrick (2007) noted that the psychological and social processes by which the TMT made strategic choices was still a mystery and suggested it was imperative for research to uncover this 'black box'. In line with this, researchers have sought to investigate group processes in the TMT (Knight et al., 1999). To exhaustively explore the link between the TMT and organization performance, it is imperative to establish the role of group processes. This is because the TMT consists of various members whose collective characteristics are expected to determine firm outcomes. TMT research has thus shifted concentration to processes governing TMT decision making such as comprehensiveness, consensus, social integration, conflict and decision speed (Certo et al., 2006).

1.1.2 Group Cohesion

Groups are common in human society and their formation takes different approaches (Banwo, Du & Onokala, 2015). Lau and Murnighan (1998) noted that there were two growing trends in organizations which were the use of groups and the diversity in organizations. This indicates the growing need to understand the groups that make up the organization. The TMT in an organization is a group with the dynamics of any other group and thus to properly understand it, we must understand its dynamics. Greer (2012) observed that due to the universality of groups, scholars in various fields had tried to study group dynamics and its construct group cohesion.

Group cohesion implies the extent to which individuals feel part of the group, are committed to its goals and work together to achieve them. Banwo et al (2015) defined group cohesion as the complete influences, exogenous and endogenous, working on members to stay within the team. It reflects the inclination of the group to bond, stick together, and stay unified in pursuing group goals and organizational objectives. A cohesive group is able to pull in the same direction. Beal, Cohen, Burke and McLendon (2003) posited that when cohesion is strong a group is encouraged to perform well and can coordinate its activities to succeed.

When a group is put together, members do not automatically accustom to each other and become cohesive. It takes a process through which they get acquainted with each other, agree or disagree and accommodate each other before they can work together cohesively (Tuckman, 1965). At initial stages the group may suffer from poor performance which improves over time as members get accustomed to each other.

Tuckman (1965) coalesced a model of the process that groups go through before they start working together. First, is the forming stage where members are brought together and they get oriented to each other and test their interpersonal boundaries. This is followed by storming where there is escalation of disagreements and resistance to group objectives and influence. Next is the norming stage where conflict is overcome and the group develops cohesiveness. Finally, is the performing stage where group energy is directed towards the task. Tuckman and Jensen (1977) included a final stage referred to as adjourning where the group members separated. From this model group cohesion only happens in the third stage which implies that performance of the group may deteriorate initially when the group is formed and improve at a later stage.

Group cohesion is multifaceted with elements that relate to the work and others relating to the interpersonal relationships among the members. While the impact of the work related elements on performance are obvious, interpersonal elements also affect performance. This is due to the fact that group members cannot delink their social relations from the work relations to a large extent. Chang, Duck and Bordia (2006) noted that group cohesion was a multidimensional construct that focuses on the group's integration and the individual's appeal to the group. Due to this, studies on the linkage between group cohesion and performance have resulted in mixed findings. They suggested that in measuring cohesion both dimensions needed to be considered since they helped to bind members to their group.

Group cohesion can be categorized into task cohesion and social cohesion. Task cohesion is the level to which individuals in a group work collectively and are committed to accomplish universal objectives. It relates to the work aspect of the group and how well the members of the group are able to work together to deliver the task at hand. Task cohesion has a direct link to group performance since it relates to the underlying reason for the work group existence. Wheelan (2005) established that task cohesion had a significant and stronger impact on firm performance than social cohesion. Social cohesion is the level by which individuals in a group like each other, trust, get along and support each other. It relates to the degree to which members of a group relate harmoniously outside the work environment. Social cohesion is important since it increases proximity among group members which facilitates better performance. Harun and Mahmood (2012) found out that social cohesion also had a significant bearing on firm performance.

Analysis of the developmental processes of diverse work teams is bound to be insightful given that confronting diversity further complicates managers' work (Lau & Murnighan, 1998). Cross functional teams such as the TMT are usually designed with deliberate heterogeneity (Ancona & Caldwell, 1992) to empower them with divergent skills and experiences. This heterogeneity in the TMT introduces another dimension in its relationship with performance. It can trigger dysfunctional conflicts and activate fault lines leading to negative impact on cohesion (Carpenter, 2002) which leads to poor performance. Knight et al. (1999) posited that demographic differences can affect the processes in the group in contradictory directions. On one hand they may affect communication and cohesion negatively by increasing the conflicts among them. This leads to a negative effect on performance.

Knight et al (1999) observed that the divergences in the TMT can also increase the creativity and innovation of the TMT by offering a variety of ideas which affects performance positively. If the TMT can work together and tap into their collective mental models and values, then their differences can lead to superior performance. This implies that the effect of TMT heterogeneity on performance is also mediated by group cohesion. Harun and Mahmood (2012) concluded that both task and social elements of cohesion were interconnected with performance and Beal et al (2003) observed that different cohesion components had different associations with performance.

Group cohesion further affects the effectiveness of the TMT by affecting how much cooperation the members offer to the each other. It affects the feelings, attitudes and moods that the members bring to the group. When the group is cohesive, the members are likely to be positive and supportive towards each other which lead to positive performance. Marchewka (2014) noted that cohesion influences the TMT's cognitive processes and their affective states and may persuade members to participate or dissuade them. This implies that the degree to which TMT heterogeneity affects performance is influenced by the cohesion among the TMT members. When the members are cohesive, they are able to cooperate and share ideas to deliver superior performance but if they are not cohesive performance suffers.

1.1.3 Competitive Repertoire Complexity

The TMT affects performance through their effect on strategies. Organizational strategies can be assessed in various ways for instance Porter (1980) defines the generic strategies as either cost leadership or differentiation with a narrow or broad focus. Pearce and Robinson (2012) propose the grand strategies for organizations. Mintzberg (1987) argues that strategy can be seen as a pattern, a plan, a position and a perspective which evolve over time to accommodate reality. Andrews (1980) views strategies as the pattern of decisions that a company makes which reveal its objectives and plans for achieving them. Strategy viewed as a pattern takes into account management's actions over time and allows for evaluation of a wide range of actions that may not fit into certain classes of strategies.

Aligning with the view of strategies as a pattern is the evaluation of the competitive repertoire of an organization. Competitive repertoire focuses on the rivalry between firms pegged on competitive moves and responses, strategic and organizational backgrounds and their drivers and outcomes (Chen & Miller, 2012). In a bid to improve their positions and performance, firms usually engage in competitive moves ranging from simple actions like price changes to more complex action like integration. Ferrier, Smith and Grimm (1999) defined competitive moves as externally focused, definite and discernible actions by a firm to improve or defend its place. Smith, Ferrier and Ndofor (2001) asserted that moves and countermoves in a market resulted in competitive dynamics which mirror the normal and innovative movements in the firm as they pursue profits. They noted that markets never reached equilibrium implying that as long as firms seek to succeed in the marketplace, there will always be competitive moves.

Competitive repertoire implies the array of competitive strokes deployed by an organization. It focuses on the entire set of an organization's competitive moves within a certain period which are essential to the competitive arsenal whether minor or major. Chen and Miller (2012) noted that competitive repertoire enables researchers to conceptualize organization strategy in a concrete manner. Lee (2012) conceptualized competitive repertoire as an organization's strategic play book containing a series of unique and sequential actions and counteractions. Miller and Chen (1996) observed that competitive repertoires consisted of set decisions, product or service additions or deletions including major and minor decisions. Lee (2012) noted that to properly analyze the effect of competitive repertoire on performance, it was important to isolate incidental activities from strategically initiated actions. He proposed that only purposely designed actions to achieve competitive advantage should be considered.

Competitive repertoire is a broad construct with several elements to it. Specifically it can be analyzed from the total number of actions undertaken by an organization or from the variety of actions undertaken. Li, Fang, Wang and Lim (2015) suggested that competitive repertoire could be evaluated from three characteristics namely volume, complexity and heterogeneity. Volume refers to all the moves launched by a firm within a specific period. It applies to the count of competitive moves undertaken in a certain period. Complexity is the degree to which the continuous competitive actions by a firm are made up of a wide range of actions of different kinds in a given period. Heterogeneity is the degree to which the competitive moves deviate from those of matched competitors.

Competitive repertoire can also be evaluated on a continuum ranging from simplicity to complexity as seen in various studies (Miller & Chen, 1996; Connelly et al, 2017 and Ferrier & Lyon, 2004). In this case competitive repertoire simplicity denotes the level to which an organization's competitive strokes consist of a narrow set of actions (Ferrier & Lyon, 2004). Miller and Chen (1996) as cited in Ferrier and Lyon (2004) argued that simplicity comprises of two related aspects that is range and concentration. The range implying that few kinds of actions are used to compete while the concentration refers to only a few kinds of action are employed within the range. They noted that simplicity did not imply that the firm was passive or conservative rather that its decisions are mostly of one type.

Competitive repertoire simplicity works in less turbulent environments where the same actions can prove successful over a period of time. Miller and Chen (1996) argued that managers pursuing simplicity are usually confident to exploit previously successful actions rather than diversify to others. Ferrier and Lyon (2004) noted that simplicity is defended where firms have a distinctive competence that leads to success. However, they observed that there was a fine line between simplicity that leads to success and the one that leads to failure. This is because previously successful strategies when stretched turn to strategic liabilities. Miller (1993) argued that a narrow lens of experience and skewed information processing would predispose the organization to competitive simplicity. Overtime competitive repertoire simplicity therefore leads to failure as the firms fail to maintain appropriate levels of information processing and competitive actions. Miller and Chen (1996) noted that simplicity can be harmful to performance in heterogeneous contexts or in its extremity. This study was on heterogeneous TMTs thus the focus on competitive repertoire complexity.

Competitive repertoire complexity refers to a situation where a wide range of competitive moves is engaged and consists of different types of moves. In this case the range of moves is wide and the actions are not concentrated to any type of actions. Connelly et al. (2017) noted that as competition progresses, organizations find it necessary to engage opponents with a complicated array of moves. This allows the firm to counter an evolving environment in a better manner and gain competitive advantage. Ferrier and Lyon (2004) noted that firms differ in their repertoire complexity driven by their managers' lens of experience which affects performance differently in the short and long run.

Competitive repertoire complexity is connected to performance especially in the long run. This is because consistent with the resource based view, complex actions make it difficult for rivals to mimic. Offstein (2004) observed that firms' competitive behaviour is important theoretically and empirically since it is linked to financial performance. He argued that competitive repertoire complexity allowed a firm to spread its bases of competitive advantage and maintain them over time. This is because rivals are unable to predict the firm's actions and respond to them. Ndofor, Sirmon and He (2011) established that complexity allowed the firm to use its resources effectively leading to better performance. In addition, competitive repertoire complexity affords a heterogeneous TMT with opportunity to exercise their collective abilities which affects performance.

1.1.4 Firm Performance

All organizations exist to serve a given purpose whether profit making or not. Firm performance is important to organizations since it usually designates the sole reason for the existence of the firm. Due to this, this construct is valuable to most business managers and management researchers (Richard, Devinney, Yip & Johnson, 2009). It is therefore a commonly tested dependent variable in management research (March & Sutton, 1997). Firm performance is the outcome of organization activities. It is the accomplishment from given actions. Richard et al (2009) and Venkatraman and Ramanujam (1986) noted that firm performance was a subset of effectiveness which includes performance and other internal outcomes related to efficient operations and non-economic external measures. Performance on the other hand includes three aspects namely financial performance, market performance and shareholders return.

March and Sutton (1997) noted that the interest on firm performance as a dependent variable is most explicit in organization strategy since the field defines it as its primary focus. The field seeks to understand, predict and shape organization performance. Venkatraman and Ramanujam (1986) asserted that the value of firm performance in strategic management can be seen in theoretical, empirical and managerial perspectives. From a theoretical perspective, performance is at the heart of strategic management since most theories have performance implications outrightly or inherently. Empirically, most studies use performance to evaluate strategies and managers actions. From a managerial perspective most prescriptions are on performance improvement. It is in line with these interests that this variable was included in this study.

Richard et al. (2009) noted that although organizational performance was commonly applied, it is rarely defined or measured consistently. They noted that business performance was commonly appraised in three ways. First was to use a single measure pegged on the relationship of the measure to performance. Second, was where different measures were used to compare with same independent variables but different dependent variables. Lastly, was where dependent variables were aggregated commonly applied with subjective measures. They further argued that it was important to align performance measures to the research contexts which would provide potential for meaningful comparisons across firms and industries. This study measured performance using both objective and subjective measures and therefore varied the approaches adopted to a single measure for financial measures and aggregated measures for the non-financial measures.

Behn (2003) observed that performance measurement was not an end to itself but rather should be used to achieve managerial purposes. By comparison between private and public agencies, he posited that performance measurement was good as it helped to achieve eight purposes. First, it helped to evaluate how well the agency was performing. It also helped to control and budget for organization activities. Next, performance measurement could be used to motivate stakeholders to do things right. It could also be applied by managers to promote the values of their agencies and to celebrate organizational accomplishments. Performance measurement could also assist firms learn what was working and what was not. Lastly, it enables performance improvement. Benh (2003) also noted that different purposes required different measures if the measures were to be meaningful.

Several measures have been applied by TMT researchers to measure performance. Carpenter (2002) used return on assets (ROA) to measure firm performance while Lubatkin, Simsek, Ling and Veiga (2006) applied growth in sales, growth in market share, ROE and ROA to measure performance. ROA measures ratio of net operating profit to the firm's assets in the balance sheet. ROA is commonly used to quantify accounting performance and is highly correlated with other performance gauges like return on equity (ROE) and return on investment (ROI) (Muchemi, 2013). ROE is derived by dividing the net profit by the book value of shareholders' equity while ROI is the ratio of net operating profit to the net book value of the assets. ROA, ROE and ROI are financial indicators of performance. Growth in sales and growth in market share are largely operational measures relating to the customers perspective.

Mutuku (2012) and Awino (2013) used the balanced scorecard (BSC) to measure performance. Kaplan and Norton (1992) noting that financial gauges were misaligned with the experiences of modern organizations, proposed the BSC. They noted that managers needed not choose between financial and operational measures of performance since none was balanced enough to present a clear picture of critical business areas. They therefore developed the BSC which incorporates financial measures and operational measures on customer satisfaction, internal processes and innovation and learning perspectives. Due to this, the BSC is a more comprehensive measure of performance providing a broader perspective of the firm's performance.

Hubbard (2009) noted that most organizations that adopted the BSC tended to customize it to their own circumstances. In addition, most of the firms had not reached the level of sophistication required to incorporate the BSC in their organizations. Due to this, he proposed the sustainable balanced scorecard (SBSC) which incorporates social and environmental measures in the BSC. The SBSC incorporates measures that top managers can identify with effortlessly and is likely to be readily accepted by organizations to measure performance. Further, by incorporating social and environmental perspectives the SBSC takes care of the emerging requirements on organizations to report on other performance perspectives.

Venkatraman and Ramanujam (1996) focusing on the strategic management perspective noted that use of financial indicators of performance was the narrowest conception of firm performance. They suggested that a broader perspective would also emphasize operational measures of performance. This integration of measures is supported by Nourayi and Daroca (1996). To accommodate this wider perspective of firm performance, this study adopted the SBSC measures. However, Venkatraman and Ramanujam (1996) noted that by broadening the perspective of performance, researchers would face challenges emanating from data collection sources. Specifically they noted that firms would not be forthcoming on data on financial indicators due to confidentiality and sensitivity. They proposed mixed sources whereby financial indicators would be obtained from secondary sources while operational indicators would be obtained from primary sources. This was the approach adopted by this study in collecting data for measuring firm performance.

1.1.5 Large Food and Beverage Manufacturing Firms in Kenya

Food and beverage manufacturers consist of all the firms involved in processing raw food materials and packaging them. The food and beverage manufacturing industry is one of the largest globally (Thompson, 2006; Hess, 2014 and McGrath, 2016). Food and beverage manufacturers have been facing declining margins due to economic challenges resulting in consumers seeking to save money thus shifting purchase to foods for home preparation while increased concerns about obesity leading to demand for healthy foods and stringent food safety regulations (Stuckler & Nestle, 2012). However, the industry has above average potential since food is a basic part of life.

Scrinis (2015) noted that the global food and beverage industry is dominated by large multinationals. Thompson (2006) argues that this is due to advantages such as broad product lines, greater geographic coverage, power with major distributors and stronger brands. Large enterprises are commonly defined by the number of employees though the standards differ across the world. In the European Union and the United Kingdom large enterprises are defined as having more than 250 employees, 500 in the USA, 200 in South Africa and 100 in Kenya (Berisha & Pula, 2015). Forbes (2016) rated Nestle, Anheuser-Busch InBev and Coca-Cola as the top three companies in the industry with Nestle and Kraft dominating the foods segment while PepsiCo, Coca-Cola and Dr Pepper-Snapple are dominant nonalcoholic beverage companies with Anheuser-Busch InBev, and MillerCoors being key alcoholic drinks manufacturers.

The food and beverage manufacturing sector in Kenya is an important contributor to the macroeconomic growth of the nation. This is because Kenya is largely an agricultural country which provides food and beverage manufacturers with great opportunities for processing domestically produced food products (Mutunga & Minja, 2014). In 2015, the food and beverage manufacturers contributed 41% of the gross domestic product (GDP) of the manufacturing sector which led to about 11.4% of the country's GDP (KNBS, 2016). This sector has a huge potential given that most of the food produced in the region is sold raw with little value addition. However, there is growing demand for processed foods and fast foods (Mutunga, Minja & Gachanja, 2014) which is likely to spur food and beverage processing within the country.

The Oxford Business Group (2016) noted that the food and beverage manufacturing sector in Kenya was well developed in the region with the largest firm being East African Breweries Ltd. They observed that the sector had attracted foreign interest with the most recent being plans by Wrigley Company to set up a $60 million chewing gum plant. Mutunga, Minja and Gachanja (2014) opined that the sector was affected by unfavourable policies but had shown signs of recovery driven by rapid population expansion and rural-urban migration. They noted that this had led to competition and deployment of strategies to sustain competition.

1.2 Research Problem

Hambrick and Mason (1984) proposed that to understand organizations actions, it was vital to consider the dominant coalition in the organization. Specifically, they noted that TMT attributes shaped the managers' strategic preferences which eventually affected business performance (Oppong, 2014). This implies that a heterogeneous TMT has the capacity to make superior strategic choices resulting in improved performance. The TMT affects performance as a result of the strategies deployed and so strategies mediate the relationship. However it is imperative to ascertain whether this assertion holds when the complete array of strategies undertaken by organizations is considered. In addition, for the TMT characteristics to enter into their strategic choices the TMT must work together as a team which may not be true for all TMTs. The differences in a heterogeneous TMT can also trigger divisions and conflict which impair cohesion and performance (Carpenter, 2002). A heterogeneous TMT therefore affects performance by affecting group cohesion.

Globally, TMT research has been conducted in various contexts (Certo et al., 2006) including listed companies, the fortune 500 companies, SMEs, computer, technology and natural gas companies. In Kenya, TMT research has focused on state corporations (Mkalama, 2014) and the banking industry (Mutuku, 2012 and Muchemi, 2013). These researchers have recommended that further studies be conducted in other contexts. In line with these recommendations, this study focused on the food and beverage manufacturers in Kenya. The variables in this study required organizations with established TMTs and diverse strategies. The food and beverage sector was the largest among Kenyan manufacturers with established firms and strategies (KAM, 2016 and Mutunga, Minja & Gachanja, 2014) and was thus amenable to this study.

Studies on TMT heterogeneity and performance have generated mixed findings. Some researchers (Mkalama, 2014; Mutuku, 2012, Wei et al, 2005 and Carpenter, 2002) have found a significant correlation between TMT heterogeneity and performance while others (Muchemi, 2013 and Knight et al., 1999) have obtained an insignificant relationship. These studies had an underlying assumption that the TMT has team properties which may not always be true thus the need to consider group processes within it. Further, studies on group cohesion and performance have been inconclusive (Banwo et al., 2015) since the impact of cohesion depends on the trigger direction. This study aimed at investigating the mixed results by considering the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance and the joint effect of these variables on performance.

Group cohesion and repertoire complexity had been studied as independent variables by previous researchers (Banwo et al., 2015; Harun & Mahmood, 2012 and Beal et al., 2003) and (Li et al., 2015, Larraneta, Zahra & Gonzalez, 2013 and Ferrier & Lyon, 2004) respectively. This study investigated these variables as mediators to the relationship between TMT heterogeneity and firm performance. This was achieved by applying cross sectional descriptive survey and regression analysis which had been applied successfully in similar studies (Mkalama, 2014; Muchemi, 2013, Carpenter, 2002 and Tihanyi, Ellstrand, Daily & Dalton, 2000) to isolate the mediating effect of the variables. The interaction between TMT heterogeneity, group cohesion and competitive repertoire complexity and their joint effect had not been tested in this manner previously raising the question; What is the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya?

1.3 Research Objectives

This study set out to determine the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. The study addressed the following specific objectives:

i. To establish the effect of TMT heterogeneity on the performance of large food and beverage manufacturing firms in Kenya
ii. To assess the effect of group cohesion on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya
iii. To evaluate the effect of competitive repertoire complexity on the relationship between TMT heterogeneity and the performance of large food and beverage manufacturing firms in Kenya
iv. To determine the joint effect of TMT heterogeneity, group cohesion and competitive repertoire complexity on the performance of large food and beverage manufacturing firms in Kenya.

1.4 Value of the study

Research on TMT heterogeneity and firm performance has over time yielded mixed findings. This has shifted the search to the conditions under which this relationship holds and therefore a search for the intervening and moderating factors to this relationship. This study contributed to this stream of inquiry by supplying an understanding of the effect of group cohesion and competitive repertoire complexity on the relationship. This would aid strategic management scholars understand when and how TMT heterogeneity affects firm performance.

This study was carried out among the large food and beverage manufacturers in Kenya. This provided a new context for the variables to be tested. Similar studies often result in varied findings as a result of contextual differences. This study therefore intends to assist upper echelons theory scholars to evaluate the application of the theory in the large food and beverage manufacturing sector in Kenya and thereby identify contextual differences that may not have been uncovered previously.

The study also anticipates to benefit business owners and managers in balancing TMT heterogeneity to derive the most benefit out of the TMT and to invest in activities that foster cohesiveness especially when formulating their strategic plans. Further policy and lawmakers' attention is drawn to the importance of TMT heterogeneity and encourages them to design policies that optimize it and deliver better performance. The Kenyan government has taken steps in this direction by requiring representation of minorities like the youth and women in decision making positions. However in the private sector such initiatives remain the prerogative of business owners and directors.

This study applied a positivist approach whereby data was gathered to test existing theories. Specifically the study was grounded upon the upper echelons theory, the resource based view, the self categorization theory and the information processing theory. The study has provided empirical evidence to support, modify or refute these theories. This therefore will be beneficial to theorists in strategic management for theory testing and theory building.

1.5 Organization of the Thesis

This thesis has six chapters. Chapter one introduces the study. It sets out the conceptual, theoretical and contextual background for this study. It outlines the study variables namely TMT heterogeneity, group cohesion, competitive repertoire complexity and firm performance. The large food and beverage manufacturing firms, the research problem, objectives and the value of the study are then discussed.

Chapter two focuses on the literature reviewed. It is made up of the theoretical and empirical literature. First, the theories underlying this study are discussed then empirical literature related to each hypothesis is presented. Next, the research and knowledge gaps are highlighted and tabulated. Finally the conceptual framework and the research propositions are outlined.

Chapter three enumerates the methodology applied by the study. It starts with the research philosophy followed by the research design. The population of study is then laid out as well as the sampling design. The methods of data collection are then given including the tests for reliability and validity. The study variables are then operationalized. Lastly, the data analysis methodology is given.

Chapter four and chapter five deal with the findings of the study. Chapter four presents all the findings of the study. It begins with the preliminary findings relating to response rate, reliability and regression assumption tests. This is followed by the descriptive statistics. Finally the study hypotheses are tested and the findings set out. Chapter five presents discussions relating to the findings in chapter four. The chapter gives the findings for each hypothesis tested along with inferences made.

Chapter six is the last chapter in this thesis. It sets out a summary of the findings from chapter four. A summary is given for the descriptive findings and for each hypothesis. This is followed by conclusions made for each hypothesis. The chapter then presents the implications drawn from the findings. The implications and recommendations on theory, policy and practice are enumerated. The chapter then concludes by setting out the limitations of the study and recommendations made for further study.

1.6 Chapter Summary

Chapter one provided an introduction to the study. It outlined the background to the study. The conceptual discussion was first set out showing the link between TMT heterogeneity, group cohesion, competitive repertoire complexity and firm performance. A theoretical discussion was then presented in relation to the theories that guided this study. The contextual discussion was then highlighted.

The variables of interest were then discussed in detail. This was followed by a description of the food and beverage manufacturing from a global and Kenyan perspective. The research problem was then discussed from the conceptual, methodological and contextual perspectives. The research objectives were then listed followed by the value of the study and an outline to the thesis.

Chapter two focuses on the literature reviewed in relation to this study. To begin with the theories anchoring this study are presented. This is followed by empirical literature in line with each of the study hypotheses. The research and knowledge gaps are then highlighted and tabulated. Finally, the conceptual framework and research hypotheses are enumerated.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents theoretical and empirical literature relating to the variables under study. To begin with the theories relating to each variable are presented showing the link between the variables and the theories. The critiques from literature leveled against the theories are also laid out for each theory. The chapter then sets out empirical studies corresponding to each of the study objectives and hypotheses. The research and knowledge gaps are then outlined. Lastly, the conceptual framework and study hypotheses are presented.

This study noted that the effect of TMT heterogeneity on firm performance had resulted in mixed findings. On the other hand studies on group cohesion revealed that group cohesion largely yielded a positive effect on performance and group processes influenced the relationship between TMT characteristics and performance. Finally the studies showed competitive repertoire complexity was associated with TMT heterogeneity and was beneficial to firm performance.

2.2 Theoretical Foundation

This study was grounded on the upper echelons theory which was first described by Hambrick and Mason (1984). Hambrick (2007) revisited the theory and noted that there were other factors affecting the TMT and performance relationship. This study evaluated group cohesion and competitive repertoire complexity and therefore was supported by other theories relating to these variables. The resource based view, the self-categorization and the information processing theories were considered.

2.2.1 Upper Echelons Theory

The construct of TMT heterogeneity is founded on the upper echelons theory which was first described by Hambrick and Mason (1984). The upper echelons theory holds that to fully comprehend organizational actions, it is important to focus on their top managers. Hambrick and Mason (1984) posited that complex decisions largely reflect behavioural factors rather than mechanical considerations. This is because such decisions were limited by many and conflicting goals, several options, different aspiration levels and bounded rationality. Strategic decisions are complex in the sense that they are not amenable to solutions that can be calculated. As such they reflect the decision makers' idiosyncrasies to a large extent.

In strategic decision making situations, the decision maker comes with certain givens to the situation, which reflects his cognitive base. These givens combined with the decision maker's values serve to filter the stimuli presented to him and become the basis for decisions made. Oppong (2014) opined that the individual attributes of top managers determine how they filtered through the environment which informs their decisions. Hambrick and Mason (1984) applied managers' observable characteristics to indicate the givens of the decision maker since psychological characteristics were difficult and inconvenient to measure and some important observable attributes such as tenure did not have equivalent psychological attributes. Therefore to understand organization actions and performance, the biases and dispositions of their top executives must be considered (Hambrick, 2007). Since leadership is shared, the composition of the TMT affects TMT decisions. TMT heterogeneity offers the firm access to diverse skills which when exploited leads to superior decisions and performance consistent with the upper echelons theory.

The upper echelons theory has certain limitations. To begin with, the use of demographic attributes as proxies for psychological qualities. Hambrick (2007) acknowledged that use of demographic attributes resulted in an unexplored black box relating to the true psychological and social processes that drove managers in their decision making. This further implies that the process through which demographic characteristics influence performance remains unclear (Oppong, 2014). Priem, Douglas and Gregory (1999) opined that demographic based TMT research lacked construct validity, power to explain and prescription practicality. This points to the need to evaluate the psychological attributes within the TMT as well as the processes by which the TMT influences the outcomes of the organization.

The theory also poses challenges associated with the unit of focus. In most organizations, the dominant coalition may only be one person and not the entire TMT as envisaged by the theory. Hambrick (2007) noted that most TMTs have little team properties and suggested the need to study TMT sub teams. In addition, the relationship amongst the TMT is influenced by the distribution of power amongst the TMT (Oppong, 2014). These concerns raise the question whether the TMT is really a team or is dominated by one manager who influences the direction of the organization. Due to this in studying the TMT, it is important to consider their ability to work together as a group. Further, Carpenter et al (2004) suggested that in studying TMTs, it might be more informative to avoid convenience identification of the unit of focus and adopt more comprehensive approaches such as a member of the TMT identifying the TMT.

Despite these shortcomings, the upper echelons theory imparts a reliable foundation for understanding the TMT. Carpenter et al (2004) noted that empirical evidence existed to support the upper echelons' view that executives matter however the results were not consistent. Oppong (2014) observed that demography based TMT research had proved successful in describing the connection between TMT characteristics and corporate performance. However, he noted the need to progress towards explaining and controlling this relationship by identifying the avenues through which firm performance is affected by TMT characteristics. This study attempted to progress the upper echelons viewpoint by factoring in the process by which the TMT characteristics affects corporate performance through study of the mediating effect of competitive repertoire complexity and group cohesion to this relationship.

2.2.2 Resource Based View

TMT heterogeneity, group cohesion and competitive repertoire complexity were also buttressed by the resource based view. The resource based view holds that firms with valuable, unusual, matchless and non-replaceable resources outperform their competitors (Barney, 2001). This theory posits that firms which possess in-house resources which are difficult for their competitors to access have a competitive advantage. Accordingly, for a business to have continued competitive advantage it must be able to control and apply these resources. TMT heterogeneity, group cohesion and competitive repertoire complexity constitute unique resources that can be applied to deliver competitive benefits. This is because these resources cannot be replicated by other organizations and so any organization that possesses them is able to gain advantage over the rest consistent with the resource based view.

A resource is something that can be seen as an advantage or disadvantage of a given firm and are usually linked somewhat permanently to the firm (Wernerfelt, 1984). This implies that any item whether tangible or intangible that an organization that can be deployed for competitive advantage constitutes a resource. Wernerfelt (1995) observed that all firms have different resources and it required time and money to change these resources. RBV proposes that firms which possess valuable, atypical and incomparable endowments with inelastic supply have the ability to generate super-normal profits (Wernerfelt, 1984; Barney, 2001; Kraaijenbrink, Spender & Groen, 2010 and Oh & Kuchinke, 2017). The theory admonishes organizations to focus internally to find the sources of their competitive advantage rather than trying to develop new competencies. Consistent with this, TMT heterogeneity, group cohesion and competitive repertoire complexity provide internal bases of competitive advantage which are idiosyncratic to every firm.

Barney (1991) opined that for firms to build sustained competitive advantage they needed to have heterogeneous and immobile resources. This implies that the resources are distinct for each firm and cannot be transferred from one firm to the other. In addition the resources must possess four attributes that is they must be valuable, uncommon, matchless and irreplaceable. Valuable implies that the resources can facilitate the firm to launch strategies to advance its performance. Uncommon implies that the resources are not owned by many other firms. Matchless suggests that other firms cannot mimic these resources perfectly while irreplaceable implies that they cannot also be substituted with other resources. When a firm has resources with these characteristics, it is in a position to derive sustained competitive benefits.

The resource based view has been criticized on various fronts which stem from its definition of resources and value. Kraaijenbrink et al. (2010) noted that three limitations of the theory posed serious challenges. First is that valuable, rare and inimitable resources are not the only components required to assure sustainable competitive advantage. Beyond possessing the resources, firms need to deploy them and so competitive advantage is also determined by the deployment capabilities of the organization. Secondly, the worth of a resource is too vague and cannot be the basis of theory delineation. The value of a resource can only be determined subjectively from a firm's perspective. Lastly, the definition of resources is unworkable. This emanates from the all inclusive definition of resources and the notion adopted by RBV that all resources are the same and they play a part in conferring prolonged competitive advantage in a similar way. Barney (2001) argued that the theory holds if the industry remains the same. It also fails to show how competitive advantage can be assured over the long run.

Despite these shortcomings, the theory is useful in explaining why some firms outperform others. Sun and Tse (2009) asserted that RBV is important in that it shifts attention from the peripheral environment to the internal environment. In so doing, it recognizes resource dissimilarity as a significant source of variation in corporate performance. In line with these observations, TMT heterogeneity, group cohesion and competitive repertoire complexity constitute resources which bestow on the firm the ability to deliver superior performance.

2.2.3 Self Categorization Theory

Group cohesion is founded on the self categorization theory. The self categorization theory holds that people psychologically catalogue themselves and others as belonging to the group or not belonging by looking at their differences and similarities (Turner, Oakes, Haslam & McGarty, 1994 and Hogg & Terry, 2000). By categorizing himself and others as part of the group or not a person accentuates the perceived similarity of a subject to the group or not. This results into self categories which are cognitive groups made up of the collective and others. Hogg and Terry (2000) posited that the categorization leads to depersonalization whereby subjects are not perceived as unique persons any more but rather as an embodiment of a given category. In this case the group characteristics take more prominence in the person's mind which makes the individual to reflect and conform to group customs.

For a group to be cohesive, the members have to be attracted to the group and the group goals. The degree of appeal that individuals have to the group and its goals depends on the extent to which they view themselves as part of the group. This results in more cohesiveness within the group. Cohesion hinges on the perceived prototypicality of others (Hogg and Terry, 2000). Turner et al (1994) asserted that depersonalization results in reduction of idiosyncratic differences such that an individual perceive themselves as interchangeable representatives of the group. This leads to cohesiveness since the group is bound by similar attributes. Hogg, Terry and White (1995) observed that depersonalization of the self was the underlying process to group processes such as cohesion.

The self categorization theory provides useful insights on the process by which groups foster cohesiveness and predicting group behaviour. The theory acknowledges the importance of group context noting that self categorization changes with changes in context since context affects the representativeness of group members (Turner et al., 1994). Conversely, this theory neglects to relate study contexts to practical contexts. Scholars and practitioners cannot therefore recreate desired contexts. Contextual influences applied in this theory thus lose practical relevance. Despite this, the theory provides a useful basis for understanding and improving group cohesion.

In line with this theory, whether the TMT members are attracted to the team and its goals depends on whether they feel part of the group or not as a result of their similarities and differences with the rest of the group members. Given that a heterogeneous TMT is made up of members with different characteristics, individual members might perceive themselves as belonging to the group or not belonging. When individual managers perceive many differences from the rest of the members they feel they do not belong leading to less cohesiveness while if they perceive more similarities they have a strong appeal to the group leading to more cohesiveness. Therefore the group cohesion among the TMT members can be explained using the self categorization theory.

2.2.4 Information Processing Theory

The competitive repertoire complexity construct is founded on the information processing theory. The information processing theory holds that people process any information they obtain from the surrounding rather than merely responding to stimuli. In this case, the human mind is seen as a computer which receives data, processes it and then generates output. Shaffer and Kipp (2010) argued that the way people think can be thought of as a model consisting of three steps namely the sensory store, short term memory and the long term memory. However in this process, people plan and monitor information that they attend to. This process is likened to the input-processing-output mechanism of a computer.

Tushman and Nadler (1978) observed that organizations were information processing organisms which face uncertainty. Due to the uncertainty, the decision makers keep gathering information which they process before making decisions. Organizations must therefore develop information processing mechanisms. Further, as organizations grow they evolve into subunits which deal with specific aspects of the organization. Each subunit is faced by uncertainty resulting from its characteristics, the environment and the interdependence among subunits which dictates the information processing requirements. The TMT in an organization constitutes a subunit charged with strategic decision making which dictates its information processing ability.

Shaffer and Kipp (2010) noted that the information processing theory is informative since it sheds light on the mental processes associated with human decision making. It also acknowledges the different information needs associated with different strategies and helps in understanding organization actions and why they perform differently in similar settings. However, this theory is criticized for underestimating the diversity of human cognition and failing to capture the essence of the human mind by likening people to computer models. The theory also fails to explain reactive situations or complex contexts where there may be little or no information available or time for processing.

The overarching task of a firm and its managers is to process information (Hult et al., 2004). Competitive repertoire complexity increases the information needs for the TMT which provides appropriate conditions to harness the benefits of TMT heterogeneity. It increases the uncertainty associated with the TMT's work. This implies that the TMT has to gather more information and process it in order to make decisions for the organization. On the other hand, Offstein (2004) posited that competitive repertoire complexity drains the information processing capability of the rivals and confuses them as they cannot predict the firm's actions, which leads to better firm performance. In line with this theory, a heterogeneous TMT has a wider capacity to process information which results competitive repertoire complexity and ultimately influences performance.

2.3 Top Management Team's Heterogeneity and Firm Performance

Hambrick and Mason (1984) suggested that TMT characteristics determined the strategic choices that the TMT made which determined the performance outcomes. They noted that previous research had tended to exclude the people behind organizational actions. They therefore argued for a shift in focus to the dominant coalition in organizations in order to understand why they acted the way they did. In particular they posited that top managers' characteristics reflected the cognitive bases and values of the managers which they used to make complex decisions. Due to this, top managers' characteristics affected the strategies pursued by the organization and the performance of the organization. These propositions laid the foundation for the upper echelons theory, which many scholars have built on.

Research on TMT and performance has yielded mixed findings. Some authors have found a significant relationship between TMT characteristics and performance. Dezso and Ross (2012) using 15 years' panel data from Standard & Poor's firms studied the link between female representation in the TMT and firm performance. They established that female presence in the TMT led to better performance on condition that the firm applied innovation strategy. Certo et al (2006) in their meta-analysis of 27 empirical studies established that TMT functional heterogeneity and executive tenure heterogeneity had a significant relationship with performance. However they found no relationship for tenure and education heterogeneity with performance.

Schwab, Werbel, Hofman and Henriques (2016) studying data collected for all firms by the Portuguese Ministry of Work and Social Solidarity between 1985 to 2000 established that managerial gender diversity affected performance positively. However when gender diversity approached equivalence in management the positive effect declined. This led to the conclusion that there was a curvilinear relationship between managerial gender diversity and business performance.

These findings of a significant relationship between TMT attributes and firm performance are coherent with the upper echelons theory assertions that organizational leadership is a mutual pursuit (Hambrick, 2007). Therefore the joint capabilities, behaviours and TMT exchanges affected strategic behaviour and performance. In addition, TMT heterogeneity helps the TMT in processing of information due to the divergent views that stimulate debate and increased levels of information. Due to the increased ability of the TMT to gather and process information, the firm is able to launch superior strategies which affect performance.

Conversely, some scholars have found the connection between TMT attributes and firm performance insignificant. Mkalama (2014) analyzing 96 state corporations in Kenya found out that on the overall TMT demographics had a statistically insignificant effect on performance. Specifically age, education, gender and tenure had no significant influence on performance while functional background had a significant impact. In addition all the demographics affected performance positively. Strategic decision making also had no significant intervening influence on the relationship but the macro environment was a significant moderator to the relationship.

Mutuku (2012) surveyed 33 commercial banks in Kenya in her study of TMT diversity and firm performance. She determined that there was no significant relationship between diversity in age, gender, tenure in the TMT, academic skills, professional endowment and functional foundations and firm performance. Knight et al (1999) evaluated the intervening influence of group processes on the relationship between TMT variety and strategic consensus based on 76 high technology firms in USA and Ireland. They found out that functional, educational and tenure differences had a significant effect on strategic agreement while age diversity was insignificant. Functional and educational variations had a negative impact on strategic consensus while tenure assortment had a positive one. Further, group processes partially mediated the relationship.

The inconsistency in findings among TMT researchers has been the theme of interest in the upper echelons stream. Research on TMT heterogeneity has largely relied on demographic factors including age (Tihanyi et al., 2000 and Wiersema & Bantel, 1992), functional background (Carpenter, 2002 and Hambrick Cho & Chen, 1996), tenure in organization (Carpenter & Fredrickson, 2001), education (Eisenhardt & Schoonhoven, 1990) and size (Haleblian & Finkelstein, 1993). The initial proposition by Hambrick and Mason (1984) acknowledged the existence of a black hole in using these demographic attributes as proxies for psychological characteristics of the TMT. Some scholars have argued that the inconsistencies could be attributed to the use of demographic characteristics. They have therefore attempted to open up the black hole by using psychological attributes.

Kinuu (2014) using data from 46 Nairobi Securities Exchange corporations studied the effect of TMT psychological characteristics on performance. He established that there was a significant association between TMT psychological attributes and non-financial performance but a non-significant relationship with financial performance. Gallen (2009) in her study of 10 TMTs in the spa industry in Finland attempted to relate the TMT composition to strategy views. She concluded that the cognitive composition of the TMT affected their strategic decisions. Hambrick (2007) acknowledged the need to pursue this stream of research but noted that it remained largely difficult for scholars. He attributed this to the fact that few researchers had facilities with both local processes and universal organizational phenomena necessary for this study and also the unwillingness by managers to subject themselves to such studies.

Carpenter (2002) studying 247 large and medium scale organizations in the Standard & Poor's index noted that the ambiguity of results pointed towards important intervening and moderating variables. He observed that many studies on the upper echelons tended to decontextualize the TMT. He established that TMT education, functional and tenure heterogeneity affected firm performance positively depending on the firm's international strategy. He therefore concluded that TMT researchers needed to be more critical about the conditions under which TMT characteristics affected firm performance. Knight et al (1999) in their study noted that TMT heterogeneity leads to dysfunctional disagreements and categorization amounting to negative outcomes.

Hambrick et al (2015) studying 109 computer software and hardware firms proposed that the structural interdependence within the TMT moderated the effect of TMT heterogeneity and corporate performance. Their study applied TMT tenure heterogeneity and ROA to assess TMT variety and corporate performance respectively. They established that when the structure was designed with low horizontal and vertical interdependence and the TMT was heterogeneous performance was affected negatively. This they attributed to the little "teamness" associated with these structural arrangements. They concluded that structural attributes were important moderators in linking TMT heterogeneity to group outcomes since the heterogeneity would only affect group processes if the members were arranged in a way to affect each other.

Empirical studies suggest that there still exists a gap in understanding when and how TMT heterogeneity affects performance. Certo et al. (2006) concluded that there was modest support for a direct association between TMT heterogeneity and firm performance, pointing to the existence of other dynamics to this relationship. Hambrick (2007) noted that the mental and collective processes by which TMT attributes were converted into strategic choices was still obscure. Focus has thus shifted from demographics to dynamics underlying TMT decision making such as consensus, inclusivity, conflict and decision speed (Certo et al., 2006). This study proposed that TMT research would more insightful if the cohesiveness of heterogeneous TMTs was considered.

2.4 Top Management Team's Heterogeneity, Group Cohesion and Firm Performance

There has been a shift of focus to the conditions under which TMT composition affects firm performance. In this stead, is the interest on the capacity of the TMT to work collectively especially for heterogeneous TMTs. Hambrick (2007) asserted that the level to which a TMT engages in joint and shared relations has a positive influence on corporate performance which raises the importance of the ability of the TMT to work together as a harmonious whole. This ability should not be taken for granted in understanding the effect of TMT heterogeneity on business performance. Carpenter et al (2004) suggested that the subgroups within the TMT should be differentiated as opposed to treating the corporate executives as a collective whole. This suggestion acknowledges the possible existence of subgroups within the TMT consistent with the self categorization theory.

Marchewka (2014) analyzed the TMT group structure and group dynamics and company performance among 291 domestic firms listed on the Warsaw Stock Exchange. In her study she noted that although TMT effectiveness was affected by the characteristics of the TMT, the effect was indirect. She concluded that TMT effectiveness was determined by group dynamics which then affected company performance. This position is in conformity with the conclusions by Knight et al. (1999) who ascertained that group processes strengthened the relationship between TMT heterogeneity and strategic consensus. These studies hint to the value of the group processes inherent within the TMT.

Greer (2012) observed that group cohesion was a commonly applied construct of group dynamics due to its universality. Further, group cohesion is one of the critical ingredients in any small group (Brawley, Carron & Widmeyer, 1987). Hambrick et al (2015) in their study established that when the TMT was heterogeneous and designed with little cohesion, it operated in a fragmented way leading to unfavourable performance. This alludes to the critical role of cohesion within the TMT whereby a TMT whose structure enhances cohesion is more effective. Cohesion allows diverse groups to work mutually concerning a shared purpose and thus affects how effective the group is.

Studies on group cohesion and its impact on performance have yielded mixed results. In their study of group cohesiveness among 371 respondents from cooperative movements in Malaysia, Harun and Mahmood (2012) determined that group cohesion was significantly related to performance. They concluded that the level of cohesiveness among the individuals in the cooperative movement determined the success of the movement. Beal et al (2003) conducted a meta-analysis of 145 studies on the correlation between cohesion and firm performance. They established that cohesion affected performance positively. They however noted that this effect was stronger when performance was crystallized in behaviour terms rather than results. In this case cohesion had a stronger correlation to efficiency than effectiveness.

Shin and Park (2009) studied the effect of group cohesion at both personal and group level among 249 employees and 42 groups within a Korean manufacturing company. They established that group cohesion negatively moderated the association between competency and performance at an individual level. This implies that cohesion led to otherwise competent members downplaying their skills when they were cohesive. However at a group level, cohesion positively moderated the competency and performance relationship implying that cohesion empowered competent teams to perform better. Van Vianen and De Dreu (2001) studying 24 drilling teams in the USA and 25 student teams in Netherlands established that there was a significant relationship between cohesion and performance. These studies suggest that group cohesion significantly affected firm performance positively.

Some researchers have found contradicting results. Banwo et al (2015) surveyed 180 employees in 4 commercial bank branches in Nigeria. Their study resulted in non-findings since there was strong cohesiveness in both the groups with high performance and those with low performance. They concluded that whether cohesion elicited positive or negative impact on performance depended on what brought the team together. In addition, they noted that cohesive groups with members who had longer organizational tenure performed better than those with shorter tenure. This suggests that organizational tenure and cohesion have a stronger effect on performance which could be attributed to the idea that as team stayed together over time they were able to go through the group formation process and start performing. The time spent together allowed team members to go through the group stages.

The differences in findings among group cohesion researchers could be attributed to the differences in the operationalization of cohesion and the level of analysis. Beal et al (2003) noted that the components of cohesion had different impacts on performance. Chang et al (2006) observed that the confusion in findings on cohesion was due to discrepancy in characterization and measurement of cohesion. They noted that group cohesion is a multifaceted concept involving an individual's assessment of the group as a whole and the person's appeal to the group. Brawley et al (1987) observed that there was a need to differentiate between the work and collective concerns of members of the group. Group cohesion therefore can therefore be divided into the task aspect which centers on work related goals and the social aspect which centers on the interactions of the TMT outside the work environment or work situations.

Chang et al (2006) in their study comprising of 28 student groups set to explore the effect of group cohesion on performance using multidimensional measures. They found out that group cohesion consisted of a two factor structure that is social and task cohesion. In addition both components of cohesion had a positive effect on group performance and they increased over time and that cohesion was a stronger antecedent to performance than a consequence. This implied that it is cohesion that affected performance rather than performance affecting the cohesion.

The findings by Chang et al (2006) implied that a cohesive group performed better than a less cohesive one and that the cohesiveness increased as the group members interacted longer with each other. This was aligned with the conclusions by Banwo et al (2015) that longer tenured cohesive groups had better performance than those with shorter tenures. This also supported the group formation process by Tuckman (1965) that argued that group performance was as a result of the group advancing from the initial stages riddled with disagreement to the performing stage where the group was cohesive. In their study Harun and Mahmood (2012) established that performance was significantly affected by both task and social cohesion. However, task cohesion had a stronger effect on performance compared to social cohesion.

By viewing the TMT as a group with the usual group dynamics, it may be possible to derive further insights on how the dynamics within the TMT affect the performance of the TMT. Several authors (Knight et al, 2009; Hambrick et al, 2015, Marchewka, 2014) have pointed to the need to study the dynamics within TMTs. TMT heterogeneity is likely to elicit group processes which in turn affect performance in various ways. Van Vianen and De Dreu (2001) in their study established that cohesion measures did not mediate the relationships between personality composition and team performance (Aeron & Pathak, 2012). On the other hand, Peterson, Smith, Martorana and Owens (2003) studying 17 CEOs established that CEO personality can influence TMT dynamics which then influences firm performance suggesting the importance of TMT dynamics as a mediator. Hambrick et al. (2015) noted the importance of 'teamness' in understanding how TMT heterogeneity affects firm performance. This study seeks to explore group cohesion as an intervening variable to the TMT heterogeneity and firm performance relationship.

2.5 Top Management Team's Heterogeneity, Competitive Repertoire Complexity and Firm Performance

Hambrick and Mason (1984) in putting together the upper echelons theory argued that the senior officials' attributes affected corporate performance by affecting the strategic choices they made. In this case, strategic choices mediated the upper echelons propositions. Yohannes and Ayako (2016) studied the intervening effect of generic strategies on the relationship between TMT characteristics and performance of Kenyan marketing and social research association firms. They concluded that low demographic diversity was associated with cost leadership which affected performance significantly which was consistent with the upper echelons predictions. Carpenter (2002) concurred that the organizational context is shaped to a great deal by the strategies the organization is pursuing which affects the extent to which TMT heterogeneity affects firm performance. In his study he established that TMT education, functional and tenure diversity affected performance positively depending on the intricacy as shown by the firm's internationalization.

Competitive repertoire provides an avenue for the study of firms' strategies exhaustively by observing their competitive actions over a period of time. Further, TMT heterogeneity is associated with competitive repertoire complexity. Hambrick et al. (1996) suggested that senior management profiles could be modified depending on the strategic repertoire of the firm to achieve its objectives. In their study of 32 USA airlines, they established that firms with heterogeneous TMTs had a greater propensity to deploy a wide array of complex competitive moves with a positive impact on performance. However, such firms were slower in responding to competitor's initiatives.

Offstein (2004), in his study of USA pharmaceutical firms between 1999 and 2001, found out that TMT heterogeneity led to competitive moves becoming more complex and sophisticated. He concluded that executive dissimilarity led to an increase in the firm's competitive activity and repertoire complexity. Larraneta et al. (2013) studying 140 new ventures in Spain observed that the new endeavours were likely to profit from applying multiple competitive actions especially in highly dynamic industries. Further, they established that in highly uncertain contexts strategic simplicity affected firm performance positively. Ferrier and Lyon (2004) on the other hand, concluded that competitive repertoire simplicity was negatively associated with firm performance among airline firms. However, in their multi-industry study, they established that repertoire simplicity was positively related to performance for businesses headed by diverse TMTs. These findings imply that heterogeneous TMTs are associated with broader competitive actions leading to positive performance.

Gagnon (2006) studying small and medium sized firms in Quebec also found that TMT characteristics influenced the strategic repertoire. Specifically, he noted that as the TMT became more heterogeneous, the need to gather information grew leading to the development of more information technology applications due to increased complexity. These findings are consistent with the information processing theory whereby a more heterogeneous group has a wider capacity to gather and process information. Connelly et al. (2017) studying 1,168 firms in 204 industries sought to establish the antecedents and performance outcomes of competitive repertoire complexity. They found that complex competitive repertoire is harmful to performance in the short term but beneficial in the long term on condition that the managers do not overexert themselves since it can overburden the TMT.

Connelly et al. (2017) provide a crucial link between the TMT and competitive repertoire complexity by pointing out that competitive repertoire complexity can overburden the TMT. A heterogeneous TMT has the capacity to handle the burden associated with competitive repertoire complexity due to the variety of skills and experiences provided by the members. Competitive repertoire complexity therefore affects the relationship between TMT heterogeneity and firm performance consistent with the upper echelons theory. Further, the capacity of a heterogeneous TMT to support competitive repertoire complexity is aligned to the information processing theory. This study proposed that competitive repertoire complexity mediates the TMT heterogeneity and firm performance relationship.

2.6 Top Management Team's Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Firm Performance

Various scholars have concluded TMT heterogeneity affects performance. However this relationship is not wholly direct. Certo et al. (2006) in their meta-analysis concluded that the evidence for a direct relationship between TMT heterogeneity and firm performance was largely equivocal. Knight et al. (1999) in their study established that TMT heterogeneity did not significantly influence strategic consensus unless group variables were factored in since TMT heterogeneity can either trigger the benefits of the group or the dysfunctions. TMT heterogeneity can therefore be beneficial or harmful to performance which could explain the mixed results in previous studies. If the TMT members are divided by their differences, then performance is affected negatively. However, if the TMT members are able to harness their differences and work together, there is positive effect on performance. Thus TMT heterogeneity may result in group fragmentation or group cohesiveness.

Group cohesiveness does not always result in positive performance. This is because it depends on the context the group is working in. A group can deploy its togetherness to fight organizational objectives or to support them. Banwo et al. (2015) in their study established that group cohesion could influence performance in a positive or negative direction contingent on the context. This implies the need to focus on context of the group. Shin and Park (2009) established that cohesion had a negative moderating effect at individual levels but a positive one at group level in competency-performance relationships implying the need to review the group context. This implies that group cohesion can lead to otherwise high performing members reducing their efforts to conform to the group. However, on a group level cohesion had a positive effect meaning that on group tasks a cohesive group performs better. The work context of the group therefore is important in determining the effect that cohesion has on the performance of the group.

Carpenter (2002) provided the background against which a TMT works in. In his study he proposed two contexts that need to be considered in TMT studies that is the social context and the strategy context. This implies that the social interactions of the TMT and organizational strategies affect the TMT. Deszo and Ross (2012) in their study established that female representation in the TMT improved performance as long as the firm focused on innovation strategy. This is because the strategy provides a context for the informational and collective advantages of the gender variety and the conduct of women in management needed for performance. This supports the findings by Carpenter (2002) in that the strategy provides a background in which the benefits of TMT heterogeneity can be felt.

On the other hand, competitive repertoire complexity also affects the cohesiveness of the group. Carpenter (2002) demonstrated that TMT heterogeneity had a positive impact on firm performance at lower stages of complexity but a negative one at higher levels due to accelerated conflict. Lubatkin et al (2006) studying small and medium firms in New England noted that the firm's ambidexterity is largely dependent on the TMTs internal dynamics that endowed the TMT with capacity to process huge quantities of information and decision options and handle conflict and uncertainty. Competitive repertoire complexity increases the pressure on the TMT to process wide loads of information and can therefore trigger disagreements among the TMT especially when it is not cohesive. Thus TMT heterogeneity, group cohesion and competitive repertoire complexity potentially affect corporate performance jointly.

2.7 Research and Knowledge Gaps

The variables of interest in this study have been studied by various scholars previously. There is a general agreement that TMT heterogeneity affects firm performance. However, the conclusions among scholars have been inconsistent which has led to the search for the conditions under which TMT heterogeneity affects firm performance. Scholars have reviewed many variables but the findings remain inconsistent across various contexts. Therefore there are several gaps in this stream of research as shown in Table 2.1.

Table 2.1: Summary of Research and Knowledge Gaps

Researchers	Focus of the Study	Methodology	Findings and Conclusions	Knowledge Gaps	Focus of Current Study
Connelly et al. (2017)	Antecedents and outcomes of competitive repertoire complexity	Cross sectional survey, secondary data and hierarchical linear modeling	Competitive repertoire complexity harms performance in the short run but is more beneficial in the long run	Evaluation of the causal web between governance, competitive repertoire complexity and firm performance	Investigates effect of TMT heterogeneity as antecedent to competitive repertoire complexity
Yohannes & Ayako (2016)	TMT diversity, generic strategies and firm performance of marketing and social research firms	Cross sectional survey, questionnaire and structural equation modeling	Homogenous TMTs had a significant effect on cost leadership which impacts positively on firm performance	Strategies evaluated through generic strategies which may not be clearly evident in some firms	Applies competitive repertoire which is more encompassing of firms strategic actions
Hambrick et al (2015)	Moderating effect of structural interdependence on upper echelons perspective	Cross sectional survey, secondary data and generalized estimating equation	Structural interdependence moderates the effect of TMT heterogeneity and firm performance when arranged to foster 'teamness'	Survey research to validate indicators or identify better ones to measure hierarchical closeness	Evaluates the closeness by use of group cohesion

Table 2.1 Continued…

Researchers	Focus of the Study	Methodology	Findings and Conclusions	Knowledge Gaps	Focus of Current Study
Banwo, Du & Onokala (2015)	Impact of group cohesiveness on firm performance	Cross sectional survey, questionnaire and regression analysis	Findings inconclusive since cohesion was strong in both groups with good and bad performance but performance was higher in teams with long tenure	Include more variables and apply cross country studies in similar settings	Cohesion evaluated as a mediator to TMT heterogeneity as alluded to by the tenure in teams
Njagi (2015)	TMT diversity and performance of oil marketers in Kenya	Cross sectional survey and regression analysis	Positive relationship between TMT diversity and firm performance	Study noted the potential of conflict leading to negative effect but this was not investigated	Includes group cohesion to study potential of TMT diversity to trigger conflict
Mkalama (2014)	TMT demographics and performance in state corporations	Cross sectional survey, questionnaire and regression	Significant effect of TMT demographics on performance but strategic decision making and macro environment insignificant	Need to shift focus to other variables affecting the relationship	Focuses on group cohesion and competitive repertoire complexity

Table 2.1 Continued…

Researchers	Focus of the Study	Methodology	Findings and Conclusions	Knowledge Gaps	Focus of Current Study
Kinuu (2014)	TMT psychological characteristics and performance of listed firms at the NSE	Cross sectional survey, questionnaire and secondary data and regression analysis	TMT psychological characteristics had a significant effect on non-financial measures but a non-significant one on financial performance	Replicate study to other contexts and apply secondary data and longitudinal studies to observe relationships	Study conducted in food and beverage sector
Muchemi (2013)	TMT diversity and performance in Kenyan banks	Cross sectional survey, questionnaire and multiple regression	Insignificant relationship between TMT diversity and performance. Firm innovation and CEO leadership style are significant moderators	Consider if other strategies are significant since only innovation was evaluated and other contexts	Focuses on the competitive repertoire to include other strategies in the food and beverage manufacturers context
Awino (2013)	TMT diversity and performance in the service industry	Cross sectional survey, questionnaire and simple regression	Relationship between TMT diversity and performance was insignificant	Consider other contexts and variables under which the relationship may be significant	Study considers group cohesion and the repertoire complexity among food and beverage manufacturers

Table 2.1 Continued…

Researchers	Focus of the Study	Methodology	Findings and Conclusions	Knowledge Gaps	Focus of Current Study
Deszo & Ross (2012)	Female representation in TMT and firm performance	Panel data and regression analysis	Female representation improves firm performance as long as the firm is focused on innovation strategy	Moderating factors to this relationship apart from innovation strategy	Study focuses on complete array of competitive actions and other TMT characteristics
Mutuku (2012)	TMT diversity and performance in commercial banks in Kenya	Cross sectional survey, questionnaire and multiple regression	TMT diversity and performance relationship significant however gender, age and tenure have negative impact on performance.	Consider if the relationships apply in other contexts	Study to be carried out in food and beverage manufacturers
Harun & Mahmood (2012)	Group cohesiveness and firm performance in cooperatives in Malaysia	Cross section survey, primary data and correlation analysis	Correlation between both task and social cohesion and firm performance	Measure business performance from multiple measures and replicate study in other contexts	Study applies the SBSC to measure performance which includes multiple measures

Table 2.1 Continued…

Researchers	Focus of the Study	Methodology	Findings and Conclusions	Knowledge Gaps	Focus of Current Study
Shin & Park (2009)	Moderating effect of group cohesion on competency and performance	Cross sectional survey, case study, questionnaire and hierarchical regression analysis	Cohesion has a negative moderating effect on competence and performance relationship at an individual level but a positive one at a group level	Evaluate group cohesion's interaction with other variables from primary data	Study applies group cohesion as an intervening variable
Ferrier & Lyon (2004)	Moderating role of TMT heterogeneity on competitive repertoire simplicity and firm performance	Cross sectional longitudinal data, Structured content analysis and regression analysis	Competitive repertoire simplicity was negatively related to performance in airlines but positively related to performance in firms led by heterogeneous TMTs	Integrate group processes and executive psychological orientation in studying competitive dynamics and strategic leadership	Studies TMT heterogeneity as independent variable and incorporates group cohesion

Table 2.1 Continued…

Researchers	Focus of the Study	Methodology	Findings and Conclusions	Knowledge Gaps	Focus of Current Study
Carpenter (2002)	TMT heterogeneity, strategy and social context and firm performance	Lagged cross sectional survey and linear regression	Positive relationship between TMT heterogeneity and performance contingent on complexity	Study was in developed economy thus consider if the relationships apply in other contexts	Study to be carried out in Kenyan food and beverage manufacturers
Tihanyi et al. (2000)	TMT characteristics and firm international diversification	Hierarchical multiple regression analysis	Certain TMT demographic characteristics are associated with internationalization	Internationalization does not give advantage	Considers the wider competitive actions by firms
Knight et al. (1999)	Effect of TMT diversity and group process on strategic consensus	Cross sectional survey & Structural equation modeling	TMT diversity is negatively related to consensus and group process strengthens this relationship	Study was conducted in high technology firms in developed economies	Study evaluates group cohesion in a developing economy
Hambrick et al (1996)	Influence of TMT heterogeneity on firms' competitive moves	Cross sectional, structured content analysis and regression analysis	TMT heterogeneity was positively related to the propensity for competitive actions and the magnitude and firm performance	Empirical studies aimed at understanding processes involved in competitive decision making	Focuses on the group processes by evaluating the cohesiveness of the TMT

The gaps associated with TMT heterogeneity and firm performance relationship were classified into three namely conceptual, contextual and methodological gaps. Conceptually, most TMT studies have taken for granted the capacity of the TMT to work collectively. Few scholars have alluded to the need to factor in the group processes associated with TMTs in future studies. However, this has not been explored exhaustively and provides a viable research avenue. In addition, the process by which TMT characteristics affects performance poses gaps for scholars. This study proposed to address these gaps by factoring group cohesion and competitive repertoire complexity as mediator variables to the TMT heterogeneity and business performance relationship.

The variables of interest have been tested in various ways by previous studies. Specifically TMT heterogeneity, competitive repertoire complexity and group cohesion have been studied as independent variables, intervening and moderating variables. This study evaluated the mediator effect of competitive repertoire complexity and group cohesion on the correlation between TMT heterogeneity and business performance thereby adopting a different methodology from previous studies. The study was conducted among the food and beverage manufacturing firms in Kenya. The variables of interest had not been tested in this manner in this context previously. The sector therefore provided an avenue to test for any contextual differences.

2.8 Conceptual Framework

TMT heterogeneity affects the firm's performance directly since it presents the firm with diversity of skills and experiences leading to superior performance. TMT heterogeneity emanates from differences in the TMT characteristics. This study measured TMT heterogeneity as the heterogeneity on the age, gender, education, functional background and tenure in the organization. Firm performance was measured using the sustainable balanced scorecard measures which were delineated into financial measures and non financial measures made up of customer, internal processes, learning and development, social and environmental perspectives. The relationships between the variables were depicted as shown in Figure 2.1.

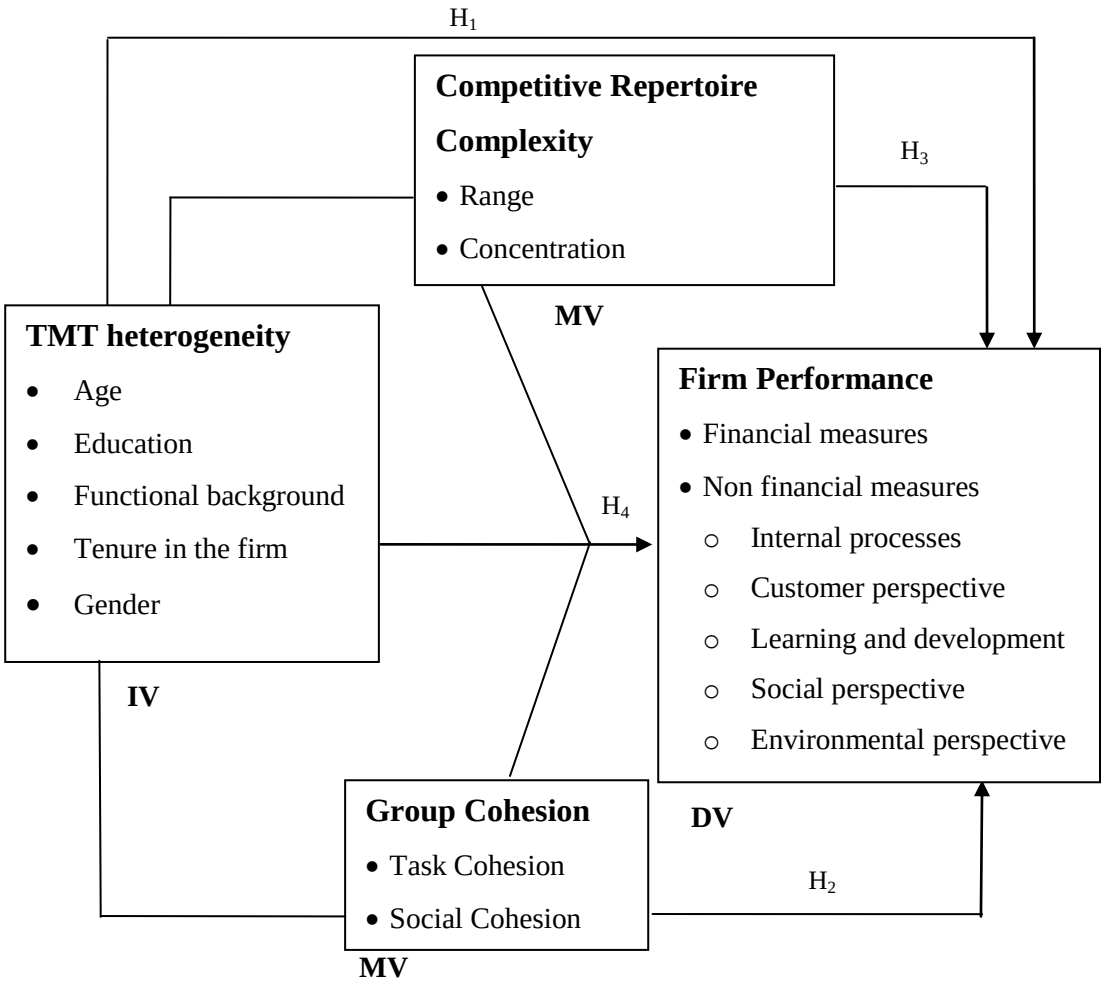


Figure 2.1: Conceptual Model

Group cohesion and competitive repertoire complexity mediate the relationship between TMT heterogeneity and firm performance. The differences among TMT members are likely to affect the cohesion among the TMT members. Group cohesion then affects the performance of the business since cohesive TMTs engage in behaviours that boost firm performance. Group cohesion was measured in terms of task and social cohesion. Further, a heterogeneous TMT can deploy a complex competitive repertoire due to the increased ability to process a lot of information and the variety of skills and experiences of the TMT. Competitive repertoire complexity affects performance since it makes it difficult for rivals to anticipate the firm's moves. Competitive repertoire complexity was evaluated in terms of the range and the concentration of competitive moves.

2.9 Research Hypotheses

In order to achieve the research objectives and capture the relationships among the variables in the conceptual framework, the following hypotheses were tested:

H_1: TMT heterogeneity has no significant effect on firm performance

H_2: Group cohesion has no significant mediating effect on the relationship between TMT heterogeneity and firm performance

H_3: Competitive repertoire complexity has no significant mediating effect on the relationship between TMT heterogeneity and firm performance

H_4: TMT heterogeneity, group cohesion and competitive repertoire complexity have no significant joint effect on firm performance

2.10 Chapter Summary

Chapter two presented literature reviewed by the study comprised of theoretical and empirical literature. The chapter began by setting out the theoretical underpinnings of this study whereby the upper echelons theory, the resource based view, the self categorization theory and the information processing theories were discussed. The variables supported by these theories were set out for each theory and the limitations associated with each theory described.

This was followed by empirical literature relating to the four objectives and hypotheses of interest. Studies showing the direct effect of TMT heterogeneity on performance were first enumerated followed by studies in line with the mediating effect of group cohesion and competitive repertoire complexity respectively. Studies related to the joint effect were then considered. A summary of the knowledge gaps identified was then tabulated before the conceptual framework was presented. Finally the conceptual hypotheses were enumerated.

The next chapter presents the research methodology adopted in this study. It begins by setting out the research philosophy followed by the research design. The population of study is then discussed and the sampling design presented. The procedures relating to data collection are discussed next including the tests applied to check for reliability and validity of data collection instruments. The study variables are then operationalized. Finally the techniques for data analysis are presented including the tests used for diagnosing multiple regression assumptions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology applied to address the research objectives and empirically test the identified hypotheses. It provides the research philosophy followed by the research design. The chapter then sets out the population and the sampling design. The data collection techniques are then highlighted. The study variables are then operationalized before the data analysis techniques are presented.

This study sought to determine the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and firm performance. Expectations relating to this relationship were derived from existing theory thus the study adopted a positivist approach and a cross sectional descriptive research design. This allowed for study items to be observed at a given point in time without manipulation by the researcher. This also allowed for the application of scientific methods to achieve the study objective.

To allow for scientific collection and analysis of data, the study population was defined. The sample size was determined using the Yamane's sample size determination table. Simple random sampling was then applied to pick respondents from the population. Data was accumulated through a structured questionnaire for primary data and a checklist was applied to guide secondary data collection. The data was then analyzed using descriptive and inferential statistics. The hypotheses were tested using simple and stepwise linear regression.

3.2 Research Philosophy

Research philosophy is the fundamental postulations and rational structure upon which investigation in a ground of inquiry is founded. Science philosophers have been polarized into two major philosophies namely positivism and phenomenology. Creswell (2003) noted that positivism was deterministic in that causes determine effects. Knowledge acquired is founded on prudent examination and assessment of the verifiable truth that is present in the universe. Due to this, the scientific method is the customary approach to research where the researcher commences with a theory, obtains data to either back up or disprove the theory and revises accordingly before conducting further research.

Phenomenology holds that individuals create meaning as they intermingle with the universe they are interpreting and they understand it on the basis of their past and social dimensions and meaning is generated through social interactions (Creswell, 2003). In this case the research approach is mostly inductive where the researcher comes up with denotations from data collected from the field (Crotty, 1998). The researcher therefore relies a lot on open ended questions and the context to make conclusions. The researcher then makes interpretations to the responses paying attention to the context within which the respondents gave the responses. In addition, the findings are not independent of the researcher. The researcher then builds a theory from the findings made.

This study adopted a positivist paradigm because this perspective provided an avenue for reporting results as observed, attaching meaning to new knowledge discovered and independence of the researcher from the study. The study therefore emphasized numbers and statistics where samples were obtained randomly with a view of generalizing to entire populations. It set hypotheses in line with existing theories. The study further assumed that absolute truth can never be found and so it sought to falsify the hypotheses and either rejected or failed to reject them consistent with positivism.

3.3 Research Design

A research design is a framework that directs the researcher in conducting a study. It applies to the overall approach that is used to bring together all the elements of the study to ensure the research objectives are met. Rahi (2017) views a research design as the research strategy which is an assembly of circumstances for collecting and analyzing the data in a way that combines the importance of the study and thrift in conducting the study. It is vital as it helps the researcher plan on the methods to be applied in collecting the data, analyzing it and influences the reliability of the results.

This study utilized a cross sectional descriptive survey design. A cross sectional descriptive survey is performed once and gives a status of variables at a moment in time and describes the variables as they are without manipulation by the researcher whereby data is collated by predesigned tools (Rahi, 2017; Levin, 2006). This design allows for comparison between many organizations where variables are observed as is and reduces intrusion on the subjects of observation. The study observed variables across many firms with minimum intrusion and thus the cross sectional descriptive survey was most practicable.

A cross sectional descriptive research design assists in establishing whether there are significant associations between variables at a certain point in time (Sedgwick, 2014). This design was therefore useful in establishing the relationships among variables in this study. This study was carried out among large food and beverage manufacturing firms which are very competitive and prefer to maintain secrecy regarding their operations. This research design allowed for minimal intrusion into the respondents activities and was thus most appropriate in this context. This research design is more amenable to and commonly applied in social science studies and is largely linked with deductive studies (Rahi, 2017; Levin 2006).

3.4 Population of the Study

A population can be defined as the universe or all the units of interest to a researcher. It is a complete group for which certain information is required. The population helps the researcher and any other interested parties know which items should be included and which ones should be excluded from the study. Banerjee and Chaudhury (2010) noted that it involves all the items a researcher wishes to understand. Population is therefore crucial and must be clearly defined in applying descriptive research design.

This study was conducted among the large food and beverage manufacturing firms in Kenya. This was due to the importance associated with this sector in the macroeconomic growth of the country (KAM, 2016). In addition this study required an established context with firms that are run by TMTs and not lone managers. The food and beverage manufacturing sector had a large number of large firms with established TMTs and strategies (Mutunga & Minja, 2014) appropriate for studying the variables of concern for this research.

The population of study was 198 food and beverage manufacturing firms catalogued with the Kenya Association of Manufacturers (KAM, 2016). KAM was the representative associate for manufacturing firms in Kenya. The food and beverage sector was the largest constituting of 21.92 % of the total KAM membership (KAM, 2016). The sector was made up of all food and beverage processors including alcohol, soft drinks, flour, confectioneries, dairy, meat, tobacco and vegetable oils. However due to the mix in product lines the firms could not be stratified along product lines.

3.5 Sampling Design

Sampling is the choice of a smaller quantity of respondents from the universe and is applicable where the population cannot be studied feasibly at a reasonable cost (Taherdoost, 2016). It is the process of picking units of study from the population with an aim of generalizing the findings to the population they were derived from. It assists the researcher in obtaining data from otherwise very large populations which may not be accessible to the researcher in a feasible way or would be very costly. Sampling has been applied by other scholars such as Larraneta et al (2013), Harun and Mahmood (2012) and Hermann and Datta (2005) in similar studies.

This inquiry applied simple random sampling. Simple random sampling is a probabilistic sampling method whereby each item has a similar opportunity of being incorporated in the sample (Taherdoost, 2016). This allows for making generalization to the population and reduces human bias in selecting the sample. Simple random sampling was possible because a sampling frame (appendix V) was available from KAM to enable the sampling process. The firms were arranged alphabetically and numbered then the sample was generated using the random numbers table.

The study targeted large firms only among the food and beverage manufacturers to avoid scenarios of lone managers in place of TMTs. Large firms were delineated using the criteria adopted by the Kenyan Micro Small and Medium Enterprises (MSME) Act of 2012 which considers MSMEs to consist of a maximum of 100 employees and a annual turnover of five million shillings. Therefore any firms with fewer than 100 workers were omitted.

The sample size was determined using the Yamane's (1967) table for sample size determination (appendix IV) which is suitable when the data is normally or nearly normally distributed (Israel, 1992). This study adopted a 7% precision level which is the range within which the true value lies, a 95% confidence level and a 50% degree of variability (P = 0.5) since the population was expected to be heterogeneous. This yielded a sample of 101 firms for this study which represented 51% of the population. This was consistent with Mugenda and Mugenda's (2003) suggestion that a sample of 30% was a good representation of the population and provided a margin for representativeness incase of non-response.

3.6 Data Collection

The study applied both primary and secondary data. Primary data is data assembled by the researcher for the objective of the study in question and is tailored to suit the researcher's objectives. Primary data is usually tailored to meet the research objectives. Conversely, secondary data is information existing on hand that is collected by other parties for their purposes. Such data is not usually tailored to the research objectives but is relevant for the research.

Secondary data was obtained addressing the financial performance for the 5 year period between 2010 and 2015. This data was obtained from the Kenya Revenue Authority (KRA). To achieve this, a checklist showing the information required along with the university introduction letter and the research permit from the National Commission for Science, Technology and Innovation (NACOSTI) were availed to the KRA's commissioner for domestic taxes. The researcher was then authorized to collect the information from KRA records. The researcher filled in the checklist with the required information from the financial reports filed with KRA.

Primary data was collected through structured questionnaire. A structured questionnaire involves use of closed questions which minimize response discrepancies, require less coding and transcribing time, lead to higher response rate and are more amenable to statistical manipulation. The questionnaire was administered to a TMT member who were defined to include the Chief Executive Officer (CEO) and managers of key functions or departments. The researcher obtained their contacts and furnished them with the questionnaire.

The questionnaire was administered to 101 respondents by drop and pick method which involves providing respondents with the questionnaire then picking it at a later date. This method allows respondents time to go through the questionnaire and make reference before filing the questionnaire. The questionnaire applied in this study had some questions which would necessitate the respondents to refer to their records and so they required time for reference. This method was possible since the respondents were literate and could fill the questionnaire without help. The researcher could also administer the questionnaire simultaneously to multiple respondents.

Primary data was collected regarding the TMT characteristics, group cohesion and the competitive repertoire of the firms. The questionnaire was constructed with the help of previous studies and the concepts of interest. Questions on group cohesion were adapted from the Carron, Widmeyer and Brawley's Group Environment Questionnaire (GEQ) which is internationally recognized and widely utilized tools in measuring group cohesion (Prokesova & Musalek, 2011). Questions on competitive repertoire complexity and the classifications of competitive actions were adapted from Ferrier and Lyon (2004), Connelly et al. (2017) and Offstein (2004).

3.6.1 Reliability Tests

Reliability means the capacity of the questionnaire to measure variables consistently. Noble and Smith (2015) noted that reliability relates to the truthfulness and exactness of a measurement system. Further, reliability relates to stability, equivalence and internal consistency of the tool. Stability is the reliability over time and it implies that the same results can be obtained when the same instrument is applied to the same respondent at different times. To increase on the stability of the questionnaire, variables that could be operationalized in factual data such as TMT heterogeneity, competitive repertoire complexity and financial performance were measured from factual figures which are not prone to changes over time. Secondary data was also obtained for sensitive measures like the financial performance.

Equivalence relates to the differences due to subjective judgments by researchers. Kothari (2004) considers equivalence as the amount of error that can be brought in by different researchers or different samples of objects under investigation. It relates to the differences at a certain instant that emanate from the observers and samples of items that is the inter-observer consistency. Equivalence can be assured by having alternative tests administered to the same respondents simultaneously. However, this has the disadvantage of tiring the respondents and thus may reduce on the stability. It can also be improved by increasing the sample, using trained and motivated personnel and carefully designed instructions with no variation from group to group. The respondents were furnished with similar instructions to improve on the equivalence of this study. In addition, several questions were designed to be responded to with factual data to make them independent of the researcher.

Internal consistency refers to the homogeneity among the items and they reflect the same construct (Noble & Smith, 2015). It checks whether indicators that make up the scale are consistent. The Cronbach's alpha is a commonly applied method of testing internal consistency of the questions especially where Likert scales are applied. The Cronbach's alpha coefficients range from zero (0) to one (1) whereby the closer the coefficient is to 1 the more consistent it is internally. Sekaran (2000) suggested that a coefficient of more than 0.5 is adequate for accepting measures as internally consistent. This inquiry applied the Cronbach's alpha to evaluate the internal consistency of the items under study. This approach had been applied by similar studies (Muchemi, 2013; Mutuku, 2012) to test for reliability.

3.6.2 Validity Tests

Validity refers to how soundly a questionnaire gauges the variables it was intended to assess. Mohajan (2018) noted that it is a necessary criterion for a measurement tool and indicates the level to which the tool appraises what it was supposed to evaluate. Further, reliability contributes to the validity of the tool but is not an adequate prerequisite for validity. In determining whether the tool is valid the researcher examines relevant evidence in order make judgment. Mohamad et al (2015) defined it as the degree to which individual scores give the researcher opportunity to arrive at meaningful inferences from the sample. They noted that this involved evaluating three types of validity namely content validity, criterion-related validity and construct validity.

Content validity applies to the degree by which an evaluation tool comprehensively addresses the subject matter of study. Noble and Smith (2015) argued that for an instrument to have content validity it should contain a representative sample of the population of interest. This involves a judgment on what would consist of adequate coverage of the subject matter. The researcher was guided by qualified supervisors and other scholars in the school of business to determine whether the questionnaire adequately covered the subject matter of this study.

Criterion related validity on the other hand applies to the capacity of the predicting measures to be used in capturing the relevant aspects of the criteria. Mohajan (2018) posits that it relates to the capacity to forecast the outcome of a present scenario. It reflects how successful a measure is for estimation. For this purpose the measure must be relevant, free from bias, reliable and available. He asserted that this involves concurrent and predictive validity which imply the importance of a test in interacting with other validity measures and its usefulness in predicting future performance respectively. The questionnaire adapted some questions from previous researchers in similar studies.

Construct validity implies the scope by which an investigation conforms to theoretical expectations. Mohajan (2018) defines it as the degree to which measures can be explained by the explanatory elements of a reasonable theory. Construct validity is usually evaluated from association of results obtained with other propositions and if results conform in a predicted way with the propositions, the instrument is deemed valid. The study was guided by the supervisors to ensure that the hypotheses set and questions posed were consistent with theoretical expectations.

Cooper and Schindler (2006) noted that the three sets of validity are interrelated theoretically and operationally. In addition, validity on the overall involves judgment rather than numerical measurements. The researcher was guided by supervisors and other scholars in making this judgment. The questionnaire was amended in line with their recommendations. Further, the constructs were arrived at after critical review of literature related to the concepts of study. In addition the questionnaire was subjected to pilot testing to help in obtaining feedback from intended respondents.

Connelly (2008) noted that literature recommends that a pilot study sample should be 10% of the anticipated sample. Thus the questionnaire was subjected to pilot testing to 10 firms, which represents 10% of the population in line with this suggestion. Responses were obtained from 5 firms which helped to assess the validity of the questionnaire. Construct validity was also evaluated by checking the results against expectations derived from the underlying theories. The questionnaire was then modified according to the findings from the pilot study.

3.7 Operationalization of Key Study Variables

This inquiry sought to evaluate the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and firm performance of large food and beverage manufacturing firms in Kenya. To achieve this, the study adopted the operational definitions and measures in Table 3.1.

Table 3.1: Operationalization of Key Study Variables

Construct	Definition	Measure	Question Number	Supporting Literature
TMT Heterogeneity				
Age	Number of years TMT member has lived	Direct	8	(Yohannes & Ayako, 2016; Dezso & Ross, 2012)
Gender	Male or female	Direct	6	(Schwab et al, 2016; Yohannes & Ayako, 2016)
Education level	Highest level of education attained by TMT member	Direct	9	(Yohannes & Ayako, 2016; Njagi, 2015; Certo et al, 2006)
Functional background	Specialization of a TMT member	Direct	10	(Naranjo-Gil, Hartmann & Maas, 2008; Certo et al, 2006)
Tenure	Number of years in the organization by TMT member	Direct	7	(Hambrick et al, 2015; Naranjo-Gil, Hartmann & Maas, 2008; Ferrier & Lyon, 2004)
Firm performance				
Financial	ROA	Direct	Checklist	(Connelly et al, 2017; Hambrick et al, 2015; Certo et al, 2006)
Customer	Market share, number of customer complaints and product returns	5-point likert type scale	15	(Awino, 2013; Mutuku, 2012; Kaplan & Norton, 1992)
Internal processes	Capacity utilization, Labour turnover, defective units	5-point likert type scale	15	(Awino, 2013; Mutuku 2012; Kaplan & Norton, 1992)
Learning and development	New products developed and new markets entered	5-point likert type scale	15	(Awino, 2013; Mutuku, 2012; Kaplan & Norton, 1992)

Table 3.1 Continued…

Construct	Definition	Measure	Question Number	Supporting Literature
Social	CSR activities and growth in CSR spend	5-point likert type scale	15	(Hubbard, 2009; Kaplan & Norton, 1992)
Environmental	Energy and water savings	5-point likert type scale	15	(Hubbard, 2009; Kaplan & Norton, 1992)
Group Cohesion				
Task Cohesion	Work related alignment to achieve organization goals	5-point likert type scale	11	(Harun & Mahmood, 2012; Chang et al, 2006;Wheelan, 2004)
Social Cohesion	Level to which TMT members like, support, get along and trust each other	5-point likert type scale	12	(Harun & Mahmood, 2012; Chang et al, 2006;Wheelan, 2004)
Competitive Repertoire Complexity				
Range	Number of competitive actions	Direct	13	(Li et al, 2015; Ferrier & Lyon, 2004)
Concentration	Proportion of each class of actions over the total	Direct	13	(Connelly et al, 2017; Li et al, 2015)

Source: Researcher (2018)

3.8 Data Analysis

Data collected was cleaned and edited for completeness. All the 53 questionnaires were accepted for analysis. The data was then subjected to mathematical and statistical analysis. Descriptive statistics consisting of frequencies and percentages were generated to describe the results obtained and presented in form of tables. The results were detailed in chapter four of this thesis.

This study applied multiple regression analysis and so the data was evaluated in line with the assumptions for regression that is normality, multicollinearity and homoscedasticity (Osborne & Waters, 2002). To begin with data is assumed to conform to a normal distribution. Data collected was tested for normality using the normality Q-Q plot for visual inspection and the Shapiro-Wilk and Kolmogorov-Smirnov tests for statistical significance.

Data was also tested for multicollinearity since firm performance was related to several variables in this study. Multicollinearity takes place when two predictor variables are strongly correlated with each other. This was tested by checking the tolerance and the variance inflation factors. Data was also evaluated for homoscedasticity. Homoscedasticity is the expectation that the dependent variable demonstrates comparable values of variance along the array of values of the independent variable. This was tested visually through residual plots.

Heterogeneity measures were calculated from the demographic data collected. For the numerical variables that is age and tenure heterogeneity was measured using the coefficient of variation which has scores ranging from 0 to 1. The closer the score is to 1 the more the variation thus heterogeneous the variable is. The heterogeneity for the categorical variables namely education, functional background and gender was measured using Blau's (1977) heterogeneity index calculated as $1-\sum i^2$ where *i* is the proportion of the group in the *i*th category. This index ranges from 0 to 1 where 1 is the highest. This is consistent with other scholars such as Carpenter (2002), Knight et al. (1999) and Hambrick et al. (1996). A composite index for TMT heterogeneity was calculated by getting an average of the individual items.

Competitive repertoire complexity was measured using the Herfindahl's index calculated as $\sum (a_i/T)^2$ whereby a_i/T is the proportion of the firm's actions in the *i*th category to its total number of actions in a given year (Ferrier & Lyon, 2004). This index has been applied by Ferrier and Lyon (2004) successfully. Group cohesion was calculated as a composite index consisting of task and social cohesion measures. Performance measures were then regressed against the composite indices for TMT heterogeneity, group cohesion and competitive repertoire complexity.

Table 3.2: Summary of Objectives, Hypotheses and Analytical Models

Objectives, Hypotheses and Analytical Models
Objective 1: To establish the effect of TMT heterogeneity on the performance of large food and beverage manufacturing firms in Kenya **H_1**: TMT heterogeneity has no significant effect on firm performance Method: Simple regression Firm Performance =f(TMT Heterogeneity) $Pf = \beta_{f0}+\beta_f Xh+ \varepsilon_f$ Where β_{f0} = intercept P = Performance β_f is beta coefficients for H_1 Xh= TMT Heterogeneity
Objective 2: To assess the effect of group cohesion on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya **H_2**: Group cohesion has no significant mediating effect on the relationship between TMT heterogeneity and firm performance Method: Stepwise regression Step 1: Group Cohesion = f (TMT Heterogeneity) $Xc = \beta_{20}+\beta_{21}Xh+ \varepsilon_2$ Step 2: Firm Performance = f (Group Cohesion) $P_3 = \beta_{30}+\beta_{31}X_c+ \varepsilon_3$

Table 3.2 Continued…

Objectives, Hypotheses and Analytical Models

Step 3: Firm Performance = f (TMT Heterogeneity)

$P_4 = \beta_{40}+\beta_{41}X_h+ \varepsilon_4$

Step 4: Firm Performance =f(TMT Heterogeneity + Group Cohesion)

$P_5 = \beta_{50}+\beta_{51}X_h+\beta_{52}X_c+ \varepsilon_5$

Where β_{21}, β_{31}, β_{41}, and β_{51} are beta coefficients for C, P_3, P_4 and P_5 respectively

β_{20} β_{30} β_{40} and β_{50} are the intercepts

Xh= TMT Heterogeneity

Xc = Group Cohesion

Objective 3: To evaluate the effect of competitive repertoire complexity on the relationship between TMT heterogeneity and the performance of large food and beverage manufacturing firms in Kenya

H_3: Competitive repertoire complexity has no significant mediating effect on the relationship between TMT heterogeneity and firm performance

Method: Stepwise regression

Step 1: Competitive Repertoire Complexity = f (TMT Heterogeneity)

$Xr = \beta_{60}+\beta_{61}Xh+ \varepsilon_6$

Step 2: Firm Performance = f (Competitive Repertoire Complexity)

$P_7 = \beta_{70}+\beta_{71}Xr+ \varepsilon_7$

Step 3: Firm Performance = f (TMT Heterogeneity)

$P_8 = \beta_{80}+\beta_{81}Xh+ \varepsilon_8$

Step 4: Firm Performance = f(TMT Heterogeneity + Competitive Repertoire Complexity)

$P_9 = \beta_{90}+\beta_{91}Xh+\beta_{92}X_r+ \varepsilon_9$

Where β_{61}, β_{71}, β_{81}, and β_{91} are beta coefficients for R, P_7, P_8 and P_9 respectively

B_{60} β_{70} β_{80} and β_{90} are the intercepts

Xr = Competitive Repertoire Complexity

Table 3.2 Continued…

Objectives, Hypotheses and Analytical Models

Objective 4: To establish the joint effect of TMT heterogeneity, group cohesion and competitive repertoire complexity on the performance of large food and beverage manufacturing firms in Kenya
H_4: TMT heterogeneity, group cohesion and competitive repertoire complexity have no significant joint effect on firm performance
Method: Multiple regression
Firm Performance =f((TMT Heterogeneity + Competitive Repertoire Complexity + Group Cohesion)
$Pf = \beta_{f0}+\beta_{f1}Xh +\beta_{f2}Xc +\beta_{f3}Xr + \varepsilon_f$
$Pn = \beta_{n0}+\beta_{n1}Xh +\beta_{n2}Xc +\beta_{n3}Xr + \varepsilon_n$
Where β_{f0} andβ_{p0} = intercept
β_{f1}, β_{f2}, β_{f3}, β_{n1}, β_{n2} and β_{n3} are beta coefficients for H_4

Source: Researcher (2018)

Simple linear regression was used to evaluate the independent effects of TMT heterogeneity characteristics on firm performance. The mediating effect of group cohesion and competitive repertoire complexity was tested through stepwise regression using the Baron and Kenny (1996) model. The joint effect between the independent, mediating and dependent variables was tested by use of multiple regression analysis. Specifically, the objectives and hypotheses of study were tested as shown in Table 3.2.

3.9 Chapter Summary

Chapter three presented the research methodology applied in this study. The chapter began by indicating the research philosophies commonly adopted in research before setting out the positivism philosophy adopted in this study. The cross sectional descriptive research design applied to accomplish the objectives of interest was then discussed. This was followed by a discussion on the population adopted which was the large food and beverage manufacturers in Kenya registered with KAM.

The sampling design applied was then set out including the sample size and the simple random sampling procedure applied. The data collection procedures for primary and secondary data were then laid out including the reliability and validity tests. This was followed by the operational definitions adopted by the study. Finally the data analysis procedures were set out including the diagnostic tests for the assumptions of multiple regression.

The next chapter presents the findings made from data analysis. It sets out the descriptive results from the analysis of data beginning with the response rate and the results relating to the reliability and validity tests. This is followed by the findings on the multivariate regression assumption tests including normality, multicollinearity and homoscedasticity tests. The descriptive statistics relating to TMT demographic profiles, group cohesion and competitive repertoire complexity and firm performance are then outlined. Finally the findings relating to each of the study hypothesis are discussed and tabulated.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This study aimed at establishing the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. The study set out four objectives and hypotheses to capture the relationships among the variables. To test the relationships, primary data was collected from TMT members and secondary data from KRA for the five year period between 2010 and 2015. The data was then analyzed using descriptive and inferential statistics.

This chapter presents the findings from the data gathered from the food and beverage manufacturing firms. The response rates are first set out before the results obtained for various tests are presented including the reliability and validity tests and regression assumptions tests. Descriptive statistics relating to TMT demographics, group cohesion, competitive repertoire complexity and firm performance are then presented. The findings are tabulated and preliminary discussions relating to the descriptive statistics presented.

This chapter ends with the findings relating to the specific objectives of this study. Each objective is introduced with a brief description of the expectations from review of literature. The hypothesis relating to the objective is then recast before the findings are tabulated. A preliminary discussion relating to the inferential statistics is then given interpreting the tabulated statistics. This is followed by inferences made by the study in relation to the study hypotheses.

4.2 Response Rate

The study targeted large food and beverage manufacturing firm in Kenya. The study population consisted of 198 firms from the KAM database. The sample was determined through the Yamane sample size determination table at 7% precision level, 95% confidence level and 50% degree of variability. This yielded a sample of 101 firms which represented 51% of the population. The questionnaire was sent to respondents from all the 101 firms in the sample. 53 questionnaires were filled in and returned constituting a response rate of fifty two percent (52%).

The ideal response rate has been a theme of interest to many scholars especially when using questionnaires. This is because the researcher relies on the keenness of the respondents to provide data and they can decide not to respond. Baruch (1999) noted that there is no norm associated with the response rate in academic studies. Further, he observed studies targeted at organization representatives had a lower response rate due to the representatives being busy, not considering it relevant, return addresses not being available and companies having policies not to complete questionnaires. In his study on response rates among articles published in five top tier journals established that the mean response rate for studies targeting the top managers was 36.1%. Baruch and Holtom (2008) analyzed 463 studies using questionnaires with articles published in 17 refereed top and second tier management and behavioural science journals. They noted that the mean response rate for organizational level researches was 35.7%.

The variables of interest in this study were more validly observable from the top management. Baruch and Holtom (2008) observed that there was a tacit recognition that obtaining feedback from the senior management of the organization was difficult. This was consistent with Hambrick's (2007) observation that the TMT had a tendency to refuse to subject itself to academic studies. In addition, most of the food and beverage manufacturing firms were private companies and so preferred to maintain secrecy on their information. In a bid to improve the response rate, this study sought introductions from people within the networks of the TMTs in the sampled firms. Mutunga and Minja (2014) studying the strategies deployed by the food and beverage firms in Kenya had 33.7% response rate. Further, Kothari (2004) recommended that 10% of the population was adequate to perform statistical analysis. Against this background, the response rate of 52% was considered adequate since it surpassed the average response rate in previous studies with similar respondents and context and the suggested threshold for statistical analysis.

4.3 Reliability Tests

Reliability is the degree by which a given measure has the capacity to appraise the variables consistently. It refers to the level to which an instrument provides dependable results (Mohajan, 2018). A reliable instrument does not have unsystematic or random errors and can perform in different times and conditions. Reliability relates to stability, equivalence and internal consistency. Stability and equivalence were achieved by using factual questions, secondary data and giving similar instructions to all the respondents.

Internal consistency on the other hand was measured through the Cronbach's alpha which has coefficients ranging from 0 to 1. The higher the value of the coefficient, the more reliable the item is deemed to be. Further Sekaran (2000) provided a benchmark of 0.5 for determining whether a scale was reliable or not. This study adopted this benchmark in assessing the results from the internal consistency test. Table 4.1 depicts the Cronbach's alpha values for the items in this study.

Table 4.1: Internal Consistency Results

Variables	**No of Items**	**Cronbach's Alpha**	**Decision**
Gender heterogeneity	2	0.549	**Reliable**
Tenure heterogeneity	6	0.835	**Reliable**
Age heterogeneity	7	0.863	**Reliable**
Education level heterogeneity	6	0.695	**Reliable**
Functional background heterogeneity	8	0.873	**Reliable**
Competitive repertoire complexity	4	0.790	**Reliable**
Task cohesion	14	0.923	**Reliable**
Social cohesion	7	0.869	**Reliable**
Financial performance	2	0.716	**Reliable**
Customer performance	4	0.812	**Reliable**
Internal processes performance	5	0.844	**Reliable**
Learning and development performance	4	0.642	**Reliable**
Social performance	3	0.635	**Reliable**
Environmental performance	3	0.550	**Reliable**

Source: Primary Data (2018)

The results obtained revealed a high level of internal consistency for the items applied in this study. Gender heterogeneity had the lowest Cronbach's alpha at 0.549 while task cohesion had the highest Cronbach's alpha at 0.923. All the variables had Cronbach's alphas which were above the benchmark of 0.5 and were therefore considered reliable.

4.4 Validity Tests

Validity indicates the capability of a questionnaire to determine that which it was intended to. Mohajan (2018) noted that assessing validity involves determining content validity, criterion-related validity and construct validity. However they noted that these three were interrelated in theory and in operation and they involved judgment as opposed to numerical measures. This study reviewed literature and applied expert opinions to make the judgment that the items applied were valid.

The constructs in this study were arrived at after critically reviewing literature related to the variables of interest. Parts of the questionnaire were adapted from previous studies. Specifically, the group cohesion measures were adapted from the Carron, Widmeyer and Brawley's Group Environment Questionnaire (GEQ) which is one of the tools recognized internationally and most applied for measuring group cohesion (Prokesova & Musalek, 2011). The competitive repertoire complexity measures and categories were adapted from Ferrier and Lyon (2004), Connelly et al (2017) and Offstein (2004) who had applied them in previous studies successfully. In addition results obtained were compared to theoretical expectations to check their conformity to theoretical expectations.

The questionnaire and checklist applied to collate primary and secondary data in this study were also subjected to expert opinion sought from the study supervisors and colleagues. In addition the proposal along with the instruments was presented before expert panelists from the school of business at different panels for evaluation before the study was conducted. Suggestions given were incorporated before the data was collected. The questionnaire was also pilot tested in 5 firms before data collection and the questions were edited to reflect the feedback obtained from the respondents.

4.5 Tests for Multiple Regression Assumption

This study sought to investigate the effect of multiple variables on the performance of the firm. The data was therefore analyzed using multivariate analysis which involves a single dependent variable and numerous predictor variables. In multivariate regression analysis assumptions are made regarding normality, multicollinearity and homoscedasticity. When the assumptions are violated the results are prone to Type I or Type II errors or over or under approximation of magnitude or effect size (Osborne & Waters, 2002). These assumptions were examined prior to statistical analysis.

First the data was tested for normality. Normality implies that the variables are neither highly skewed nor kurtotic and there are no substantial outliers. Osborne and Waters (2002) noted that where the normality assumption is violated relationships and significance tests can be distorted. Normality can be assessed through visual inspection and statistical measures. Visually normality is assessed from the Q-Q plots or the cumulative frequency P-P plots. Normality can also be inferred from the Kolmogorov-Smirnov and Shapiro-Wilk tests. Outliers can be identified from the histograms and frequency distributions.

The variables of interest were tested for normality using the Kolmogorov-Smirnov and Shapiro-Wilk tests. If the variables are normally distributed, the statistics should be statistically not significant thus the levels of significance for Kolmogorov-Smirnov and Shapiro-Wilk tests should be above 0.05. Table 4.2 shows the results obtained.

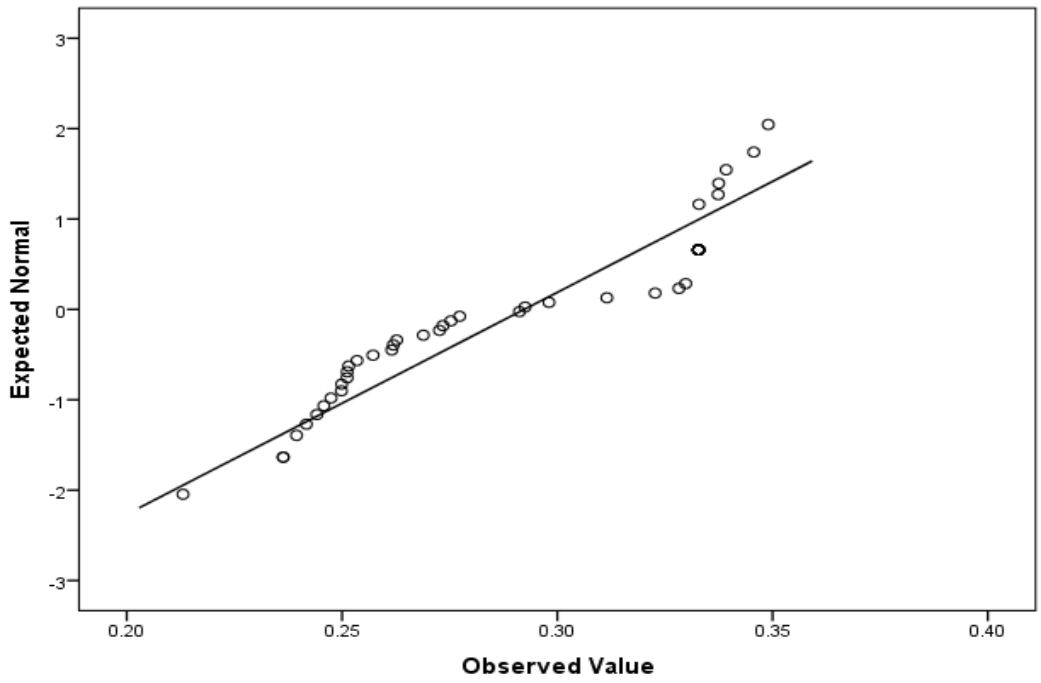
Table 4.2: Normality Tests

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TMT Heterogeneity	.089	53	.200	.967	53	.154
Group Cohesion	.122	53	.046	.966	53	.141
Competitive Repertoire Concentration	.283	53	.000	.710	53	.000
Competitive Repertoire Range (Natural Log)	.149	53	.005	.968	53	.160
Financial Performance	.216	53	.000	.889	53	.000
Non Financial Performance	.114	53	.081	.938	53	.009

Source: Primary Data (2018)

The results indicated that the p-values for the Shapiro-Wilk test for TMT heterogeneity and group cohesion and the p-values for the Kolmogorov-Smirnov test for TMT heterogeneity and non financial performance were greater than 0.05 suggesting that the variables fitted a normal distribution. Competitive repertoire range was transformed to its natural log which was normally distributed as evidenced by the $p>0.05$ for the Shapiro-Wilk test.

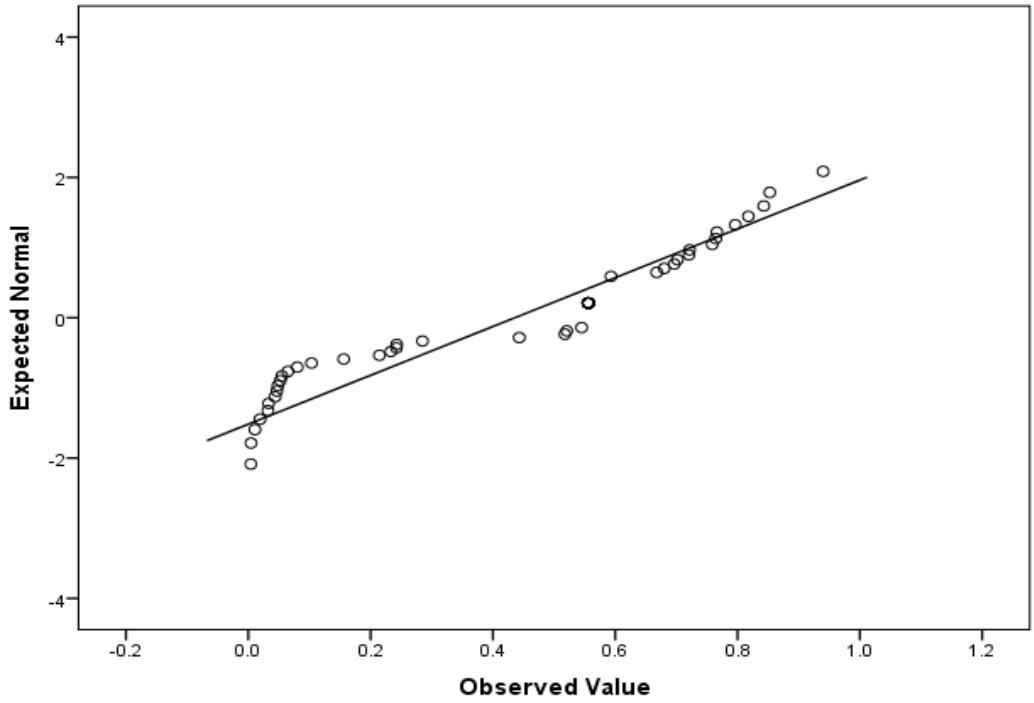
Competitive repertoire concentration and financial performance had p values less than 0.05 for both tests. These variables were then subjected to a visual inspection by plotting Normal Quantile Quantile (Q-Q) plots. Visual inspection involves making judgment on the distribution of the data and the outliers noted. Figure 4.1 and Figure 4.2 illustrate the Q-Q plots for competitive repertoire concentration and financial performance respectively.



Source: Data Analysis (2018)

Figure 4.1: Normal Q-Q Plot for Competitive Repertoire Concentration

Figure 4.1 depicted the distribution of data relating to competitive repertoire concentration along the normal distribution line. Visually, the study noted that there were few outliers which were affecting the normality of the data. However, majority of the data points were scattered relatively close to the normal distribution line. For this reason, the variable was maintained in the study.



Source: Data Analysis (2018)

Figure 4.2: Normal Q-Q Plot for Financial Performance

Figure 4.2 depicted how the data relating to financial performance was scattered along the normal distribution line. By visual inspection the study noted that most of the data points were closely scattered along the normal distribution line. However, there were few outliers which were falling away from the normal distribution line which were affecting the normality. Since most of the data points were relatively close to the expected distribution line, the variable was maintained in the study.

The data was then tested for multicollinearity. Multicollinearity occurs when numerous predictor variables in multiple regression are strongly associated that is they can be forecasted from the others with a high level of precision. When multicollinearity is present the predictor variables provide redundant information and lead to increased standard error of estimates and confusing results.

Multicollinearity can be assessed by checking the t-statistics and the R-squared statistics and the pair-wise correlation coefficient. In addition, multicollinearity can be detected from the tolerance and the variance inflation factors (VIF). Tolerance implies the ratio of the variance in the predictor variable that can be explained for by the other predictor variables. The explanatory variables in this study were tested for multicollinearity through the variance inflation factors. When there is multicollinearity the tolerance level is very low and VIFs are greater than 10 or less than 1. Table 4.3 shows the observed VIFs for the predictor variables in this study.

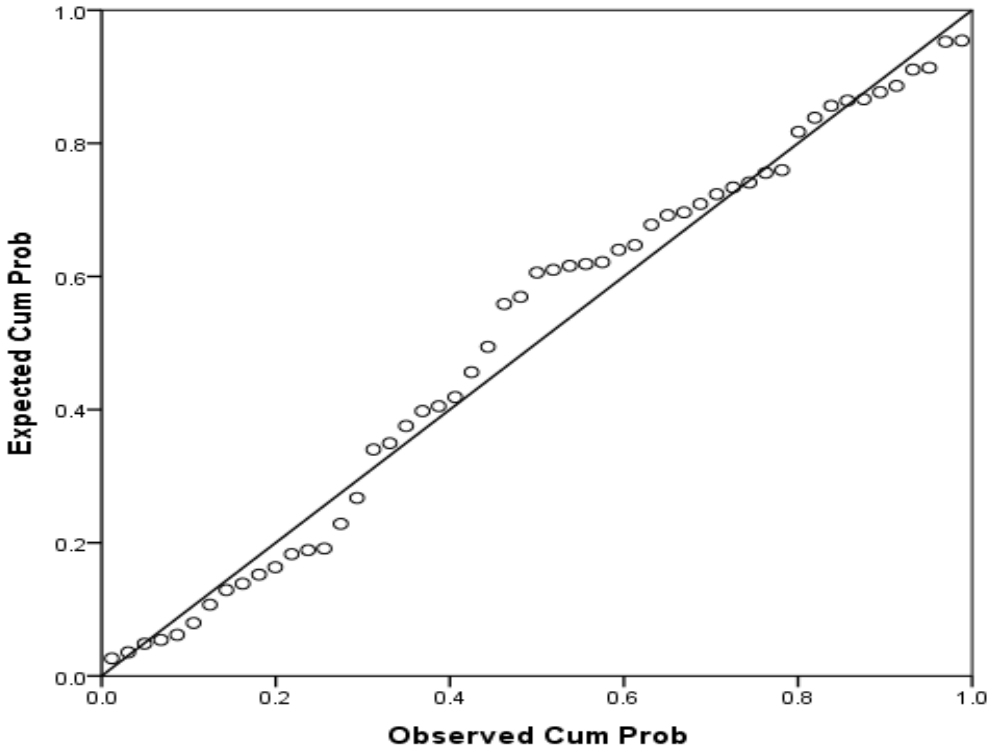
Table 4.3: Multicollinearity Tests

Variables	**Collinearity Statistics**	
	Tolerance	**VIF**
TMT Heterogeneity	.912	1.096
Group Cohesion	.902	1.108
Competitive Repertoire Concentration	.971	1.030
Competitive Repertoire Range (Natural Log)	.985	1.015

Source: Primary Data (2018)

The results obtained indicated that the variables did not have serious multicollinearity issues. This is because the tolerance levels were relatively high and above the indicative value of 0.1 while the VIFs were all between 1 and 10. This implied that all the predictor variables did not have high correlation with each other and none could be predicted with a great degree of accuracy from each other. The study therefore inferred that all the predictor variables were relevant.

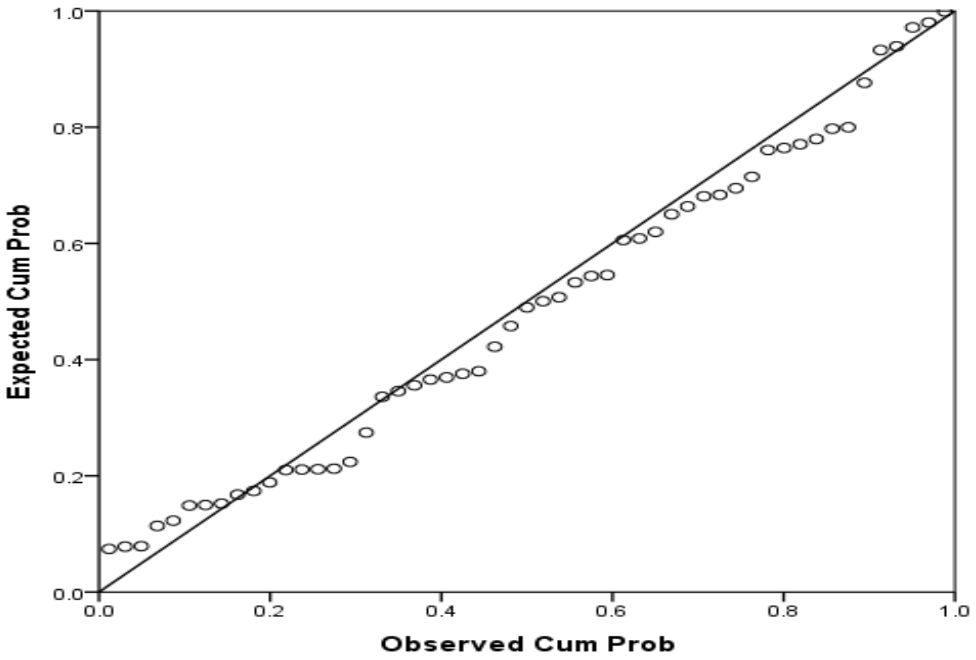
Finally the data was tested for homoscedasticity. Homoscedasticity implies that the variation in errors is equivalent along all values of the explanatory variable. It refers to the expectation that the dependent variable shows comparable values of discrepancy along the range of values for a predictor variable. Osborne and Waters (2002) observed that heteroscedasticity (high levels of homoscedasticity) can result in serious misrepresentation of results and weakens analysis which raises the probability of Type I error. Homoscedasticity can be assessed visually from a normal probability (P-P) plot of the standardized residuals by the regression standardized predicted value or the box plots. When the data was plotted to test for homoscedasticity the normal probability plots were as shown in Figure 4.3 and Figure 4.4.



Source: Data Analysis (2018)

Figure 4.3: Normal P-P Plot of Regression Standardized Residuals for Financial Performance

Figure 4.3 showed the normal probability P-P plot for the standardized residuals for financial performance. The plot was visually inspected and the study noted that the most of the points were lying along the normal line. This study therefore inferred that the residuals were normally distributed and therefore the error terms were normally distributed. The study concluded that the data exhibited similar variance along all levels of the independent variables.



Source: Data Analysis (2018)

Figure 4.4: Normal P-P Plot of Regression Standardized Residuals for Non Financial Performance

Figure 4.3 showed the normal probability P-P plot for the standardized residuals for non financial performance. From a visual inspection, the study noted that the most of the points were lying along the normal line. This implied that the error terms were normally distributed since the data points away from the normal line were relatively few. The study inferred that the data exhibited similar variance along all levels of the independent variables.

4.6 Top Management Team Demographic Profiles

The independent variable for this study was TMT heterogeneity which implies the variety of characteristics that are within the TMT. The characteristics of the TMT influence the strategies which then affect the performance of the firm. The TMT's characteristics shape the cognitive bases and the values that managers bring to decision situations which influence the strategic options they make. Hambrick and Mason (1984) suggested that demographic characteristics could provide useful proxies of the psychological characteristics within the TMT. This study in line with their proposal operationalized TMT heterogeneity as the variety in the TMT's characteristics including gender, age, tenure in the firm, educational background and functional background. The TMT was defined as all the managers responsible for the key functional areas including the CEO or MD or equivalent and the heads of departments or functions.

TMT heterogeneity was determined by collecting primary data. Data was obtained from 53 Kenyan food and beverage manufacturing firms relating to their senior managers. Categories representing the differences within the TMT heterogeneity characteristics were presented to the respondents to indicate the actual numbers of their TMT members falling within those categories. The findings for each of the TMT heterogeneity characteristics were discussed in the following section.

4.6.1 Gender Composition

Gender composition denotes the mix of male and females within the TMT. Gender composition has the potential to affect firm performance since men and women have different informational and social benefits to organization and they enrich behaviour throughout the firm (Dezso & Ross, 2012). The Kenyan government in recognition of the importance of gender diversity has instituted a policy requiring that there must be a gender representation of at least 30% of each gender at all levels in state corporations and agencies. However, the private sector has no such policy prescriptions and therefore the gender representativeness is purely at the discretion of the firm. This inquiry sought to ascertain the gender composition of the TMTs in the food and beverage manufacturing firms. The outcomes were as depicted in Table 4.4.

Table 4.4: Gender composition of Top Management Teams

Gender	Frequency	Percentage
Males	471	69.06%
Females	211	30.94%
Total	682	100%

Source: Primary Data (2018)

Table 4.4 revealed that there were 682 top managers in the 53 food and beverage manufacturing firms under study. Out of this, were 471 males and 211 females representing 69.06% and 30.94% respectively. Mkalama (2014) studying state corporations found female managers in the TMT to be 38.39% while Njagi (2015) found female representation in the TMTs in oil marketing companies to be 37%.

This study noted that male managers dominated the TMTs in the large food and beverage manufacturing sector comparable to other sectors in the country. This observation was also similar to that of Dezso and Ross (2012) who noted that the proportion of organizations with at least a single woman in the TMT was substantially lower and never reached one third in any year within the USA public companies.

4.6.2 Managers Tenure in the Organization

Managers' tenure refers to the duration that managers have spent in the organization. Wiersema and Bantel (1992) observed that managers tenure can affect firm performance since the longer managers spend in the organization the more they become accultured and their behaviour conforms to organizational norms. Further, tenure heterogeneity confers the TMT with a variety of perspectives and frames of reference which has an effect on the TMT decisions and firm performance (Hambrick et al, 2015). The tenure composition of the TMT may also be informative of the firm's promotion policy whereby some firms prefer promoting internal candidates over recruiting external candidates. In such cases, the TMT would be composed of managers with long tenures. This study sought to determine the tenure composition of the TMT whereby the respondents were given tenure categories to indicate the numbers of managers in those categories. The findings were presented in Table 4.5.

Table 4.5: Tenure composition of Top Management Teams

Duration in Years	Total	Percentage
0 - 5	171	25.07%
6 - 10	169	24.78%
11 - 15	136	19.94%
16 -20	103	15.10%
21 - 25	64	9.38%
Over 25	39	5.72%
Total	682	100%

Source: Primary Data (2018)

Table 4.5 revealed that 25.07% of the managers had been in their firms for five years or less while 24.78% had durations of 6 to 10 years in their firms. 19.94% of the top managers had been in their firms for 11 to 15 years while 15.1% had tenure of 16 to 20 years. Only 9.38% of the managers had stayed in their firms for 21 to 25 years while 5.72% had been there for over 25 years. Given that most (74.93%) of the managers had been in their organization for more than 5 years, this study inferred that most of the managers were accultured to their organization's norms and their behaviours were likely to conform to those norms in line with the findings by Wiersema and Bantel (1992).

4.6.3 Age Composition

The age composition of the TMT is an important consideration since it influences the performance of the firm. Wiersema and Bantel (1992) observed that the older people became the more they became resistant to change and the less flexible they were. Further they are more concerned with financial and career security which leads to risk avoidance as well as how the TMT interprets and responds to the environment (Mkalama, 2014). To determine the age composition of the TMT, the responds were presented with categories of ages and were required to indicate the numbers of managers within those categories. The results were depicted in Table 4.6

Table 4.6: Age composition of Top Management Teams

Age in Years	Frequency	Percentage
Below 30	47	7%
31 -35	123	18%
36 - 40	162	24%
41 - 45	144	21%
46 - 50	111	16%
51 - 55	56	8%
Above 55	39	6%
Total	682	100%

Source: Primary Data (2018)

Table 4.6 indicated that only 7% of the top managers were below 30 years while 18% were between 31 and 35 years. 24% of the managers were between 36 and 40 years whereas 21% ranged between 41 and 45 years. Managers aged between 46 and 50 years were 16% and those ranging 51 to 55 years were 8%. The category with the least managers was those above 55 with only 6% of the managers. The findings revealed that the largest number of managers was between 36 and 40 years. Mkalama (2014) found that majority of the managers in state corporations were between 46 to 50 years and there only 5.72% were 35 years and below. This suggested that managers in the food and beverage manufacturing firms were relatively younger.

4.6.4 Education Level of Top Managers

A person's level of education reflects their ability to comprehend and process information. With increased education there is increased capacity to distinguish between stimuli and process information (Wiersema & Bantel, 1992) and innovativeness (Hambrick et al, 1996). The education level of the top managers is likely to shape their strategic alternatives and eventually affect the performance of the firm. Therefore the TMTs education level is an important characteristic in their understanding their actions. To measure education level, respondents were requested to stipulate the numbers of their top managers who had attained given education qualifications as their highest. Table 4.7 indicated the results obtained.

Table 4.7: Highest Education Levels of Top Management Teams

Education Level	Frequency	Percentage
Doctoral	88	12.90%
Masters	251	36.80%
Bachelors	233	34.16%
Diploma	70	10.26%
Certificate	32	4.69%
High School	8	1.17%
Total	682	100.00%

Source: Primary Data (2018)

From the results obtained, 12.9% of the managers had doctoral degrees while 36.8% had masters degrees as their highest education qualifications. Those with bachelors degrees amounted to 34.16% whereas those with diplomas were 10.26%. Managers with certificates as their highest education qualifications were 4.69%. Managers who had only high school qualifications were the least at 1.17%. These findings indicated that the managers with masters degrees accounted for the category with the highest number of top managers and 83.86% of the managers having at least a bachelors degree. In the oil marketing companies, managers with at least a bachelors degree accounted for 98% of the managers (Njagi, 2015) while in state corporations they were 97.65% (Mkalama, 2014). This implied that managers in the large food and beverage manufacturing firms had relatively lower education levels which could be ascribed to the large presence of private companies in this sector.

With the private companies entrance to the TMT would also be influenced heavily be ownership and family ties rather than academic qualification. However, the proportion of educated managers was significant to bestow the managers with increased capacity to distinguish stimuli and process information and to be innovative consistent with the assertions by Wiersema and Bantel (1992) and Hambrick et al (1996).

4.6.5 Functional Background of Top Managers

The functional background of a manager shapes his viewpoints and general outlook. In addition some professions are associated with creativity and innovativeness like information technology while others are associated with conservatism like accountancy. Wiersema and Bantel (1992) noted that functional specialization reflected a person's cognitive style and personality which affects the organizational outcomes. Mkalama (2014) noted that by building competences in certain functional areas, managers would increase the information base of the TMT. The increased informational base of the TMT would lead to superior performance of the TMT. This study sought to establish the functional backgrounds of the top managers. The respondents were requested to specify the top managers with outlined functional backgrounds. Table 4.8 set out the findings.

Table 4.8: Functional Backgrounds of Top Management Teams

Functional Areas	Frequency	Percentage
Accountancy and Finance	115	16.86%
Sales and Marketing	146	21.41%
Procurement and Supply Chain Management	89	13.05%
Human Resource Management	70	10.26%
Safety and Security Management	56	8.21%
Engineering	54	7.92%
Information Technology	45	6.60%
Operations Management	107	15.69%
Total	682	100%

Source: Primary Data (2018)

Table 4.8 revealed that most of the top managers had sales and marketing backgrounds amounting to 21.41% followed by accountancy and finance at 16.86%. This could be credited to the idea that food and beverages are fast moving consumer goods thus the need to focus on their sales and marketing evidenced by the high number of senior managers in these fields. The managers with operations management backgrounds were 15.69% while those from procurement and supply chain management amounted to 13.05%. This was followed by managers with backgrounds in human resource management at 10.26% then safety and security management at 8.21%. Managers from engineering amounted to 7.92% while those from information technology brought the rear at 6.6%.

These findings implied that the TMTs in the large food and beverage manufacturing firms were composed of managers with diverse backgrounds and therefore had larger information processing capabilities. Due to the diversity in backgrounds, the managers also had increased capacity to launch a wide array of competitive actions. Further, the TMTs possessed a variety of cognitive personalities which would influence performance as noted by Wiersema and Bantel (1992) and Mkalama (2014).

4.7 Group Cohesion

Group cohesion was the second variable of concern. Group cohesion designates the propensity of a group to remain together and stay united in pursuing its targets (Carron & Brawley, 2012). It reflects the ability of the team to get along and work together in achieving organizational goals. Group cohesion affects the performance of the organization by affecting how well the group is able to work together. Cohesive groups are able to pull in the same direction and achieve a common purpose. When the group is fragmented then performance suffers.

Group cohesion does not happen automatically a group is formed and so the group members have to work towards it through learning each other, agreeing or disagreeing and accommodating each other (Tuckman, 1965). A heterogeneous TMT has divergent skills and experiences but may also face increased disagreements and conflict which may hamper its ability to work together. Therefore in considering the performance of the TMT, it is imperative to take into account the cohesiveness between the managers and the resultant impact on performance. This study set out to establish the cohesiveness among TMTs in the food and beverage manufacturing firms along the dimensions of task and social cohesion.

4.7.1 Task Cohesion

Task cohesion denotes the ability of the team to work together and be united in performing organizational tasks. It represents the cohesiveness of the group on issues related to work and work goals. Task cohesion has a stronger impact on firm performance (Harun & Mahmood, 2012). This study therefore sought to ascertain the task cohesion within the TMT by use of a five point likert scale. The results were as shown in Table 4.9

Table 4.9: Task Cohesion of the Top Management Teams

Task Cohesion Statements	N	Mean	Std. Dev.	CV	t	Sig. (2-tailed)
TMT members are aware of the firm's goals	53	4.36	0.81	0.19	12.20	.000
The TMT is committed to the company's goals	53	4.13	0.76	0.18	10.84	.000
TMT members get along well at work	53	3.75	0.87	0.23	6.28	.000
TMT members are united	49	3.92	0.81	0.21	7.91	.000
TMT members act for the good of the company	52	3.83	0.88	0.23	6.78	.000
TMT members take responsibility for any mistakes	52	3.62	0.99	0.27	4.47	.000
TMT members all try to help if one member has a problem	53	3.79	0.99	0.26	5.84	.000
TMT members communicate freely	53	3.81	0.98	0.26	6.02	.000
TMT members consider each member important	52	3.87	0.95	0.25	6.57	.000
TMT members frequently involve each other in decision making	53	3.91	0.90	0.23	7.29	.000

Table 4.9 Continued…

Task Cohesion Statements	N	Mean	Std. Dev.	CV	t	Sig. (2-tailed)
TMT members consider each member's contributions	52	3.94	0.94	0.24	7.25	.000
TMT members give each other constructive feedback	52	3.81	0.74	0.19	7.85	.000
TMT members have effective conflict managements systems	52	3.81	1.03	0.27	5.66	.000
The TMT rarely seeks arbitration for conflicts	52	3.37	1.05	0.31	2.51	.015

Source: Primary Data (2018)

Table 4.9 revealed that most of the TMTs were moderately to highly cohesive on work related goals. This is evidenced by the mean scores ranging from 3.37 to 4.36 which correspond to moderate extent and high extent on the likert scores. The statement on the TMT's awareness of the firm's goals had the highest score with a mean of 4.36 followed by the TMT's commitment to the company's goals which had a mean score of 4.13. The statement that the TMT rarely seeks arbitration for conflicts had the lowest rating at 3.37.

The responses on task cohesion were all statistically significant as shown by the relatively high t-values and $p<0.05$ across all the statements. The responses on the statement that the TMT rarely seeks for arbitration for conflicts showed the most variation (CV=0.31) while the responses on the statement that the TMT is committed to the company's goals had the lowest variation (CV=0.18). This implied that for most of the firms the TMTs were committed to the goals of the organizations.

4.7.2 Social Cohesion

Social cohesion relates to how cohesive the group members outside the work activities. It indicates the degree by which the team members socialize and bond with each other away from the work environment. Social cohesion affects the performance of the firm although the effect is weaker than task cohesion (Harun & Mahmood, 2012). This study sought to measure the social cohesion among the TMT members through a five point likert scale. Table 4.10 presented the results obtained.

Table 4.10: Social Cohesion of the Top Management Teams

Social Cohesion Statements	N	Mean	Std. Dev.	CV	t	Sig. (2-tailed)
TMT members socialize together	52	3.96	0.82	0.21	8.50	.000
TMT members spend time together outside work	52	3.25	1.08	0.33	1.67	.102
TMT members regard each other as friends	52	3.88	0.83	0.21	7.67	.000
TMT members keep in touch with each other	52	3.60	0.93	0.26	4.60	.000
TMT members have frequent social gatherings and events	52	3.46	1.07	0.31	3.10	.003
TMT members have shared values	52	3.62	0.91	0.25	4.87	.000
Members resolve their social conflicts amicably	52	3.75	0.76	0.20	7.08	.000

Source: Primary Data (2018)

Table 4.10 revealed that most of the TMTs in the food and beverage manufacturing firms were socially cohesive on a moderate to high extent. The scores ranged from 3.25 to 3.96 which correspond to a moderate extent and a high extent on the likert scale. The statement that TMT members socialized together had the highest score of 3.96 while the statement that they spent time together outside work had the lowest score at 3.25. It was however notable that the scores relating to social cohesion were relatively lower than the scores on task cohesion suggesting lower rating of social cohesion compared to task cohesion.

The responses on all the statements on social cohesion were all statistically significant (relatively high t values and $p<0.05$) except for responses on the statement that TMT members spend time together outside work which had $p>0.05$.This statement also showed the most variation (CV=0.33) in the responses indicating that the practice of spending time outside work varied across TMTs in different firms. The statement that the TMT members resolved their social conflicts amicably had the least variation on responses (CV=0.2).

4.8 Competitive Repertoire

Competitive repertoire complexity was the third variable in this study. Competitive repertoire denotes the portfolio of competitive strokes made by a business within a given period (Connelly et al, 2017). Li et al (2015) observed that the competitive repertoire was critical in understanding the competitive strategy of an organization. Competitive repertoire complexity occurs when the competitive repertoire is composed of a wide array of actions of different types.

Competitive repertoire complexity has been associated with superior performance especially in dynamic environments since it makes it difficult for competitors to catch up or mimic the actions (Offstein, 2004). Due to this, competitive repertoire complexity is a crucial precursor to firm performance. Further, heterogeneous TMTs were associated with complex competitive repertoires (Hambrick et al, 1996) thus this study sought to define the competitive repertoire of the food and beverage manufacturers and their effect on performance. The respondents were requested to designate the competitive moves deployed by the firm within the five year period preceding the year of study. For this purpose, the competitive actions were classified into five categories. The findings are presented in Table 4.11.

Table 4.11: Competitive Repertoire of Food and Beverage Manufacturing Firms

Type of Actions	Frequency	Percentage
Marketing	5,614	52.49%
Production	1,091	10.20%
Technology	1,454	13.59%
Management	538	5.03%
Corporate	1,999	18.69%
Total	10,696	100%

Source: Primary Data (2018)

Table 4.11 revealed that marketing actions dominated the competitive actions undertaken by the food and beverage manufacturing firms accounting for 52.49% of the competitive actions. This could be associated with the pressure to sell that is inherent in the food and beverage sector given that the commodities are fast moving consumer goods. Corporate actions accounted for 18.69% of the competitive actions followed by technological actions which accounted for 13.59%. Production related actions accounted for 10.2% while management actions were the least at 5.03%.

4.9 Firm Performance

Firm performance was the dependent variable in this study. Corporate performance is one of the gauges of understanding the firm's effectiveness. Firm performance in this study was measured from the six SBSC dimensions. The financial measures were assessed through secondary data obtained from KRA. The non financial measures were assessed using a five point likert scale made up of statements encompassing the SBSC perspectives. The results were set out in Table 4.12.

Table 4.12: Non Financial Performance of Food and Beverage Manufacturing Firms

Statements	N	Mean	Std. Dev.	CV	t	Sig. (2-tailed)
Our market share has grown significantly	51	3.69	0.79	0.21	6.23	.000
Our sales have been growing steadily	51	3.78	1.01	0.27	5.57	.000
Our customer complaints have reduced significantly	52	4.04	0.82	0.20	9.18	.000
Our customers are satisfied with our services	52	3.90	0.69	0.18	9.40	.000

Table 4.12 Continued…

Statements	N	Mean	Std. Dev.	CV	t	Sig. (2-tailed)
We use our resources efficiently	52	3.85	0.83	0.21	7.39	.000
Members of staff are satisfied working for us	50	3.98	0.80	0.20	8.72	.000
Our employee turnover has been acceptable	52	3.83	0.81	0.21	7.36	.000
We continuously seek to learn and develop	51	3.98	0.86	0.22	8.14	.000
We have entered into new markets	51	3.88	0.82	0.21	7.72	.000
We have developed new products	52	3.81	0.84	0.22	6.92	.000
We train and develop our employees consistently	51	3.98	0.73	0.18	9.53	.000
We are a socially responsible company	49	3.92	0.93	0.24	6.90	.000
We budget and invest in CSR activities	52	3.92	0.93	0.24	7.19	.000
We do not pollute the environment	51	3.76	0.95	0.25	5.75	.000
We treat our effluent before discharging to the environment	51	3.94	0.86	0.22	7.83	.000
We use energy and water efficiently	51	3.94	0.73	0.19	9.18	.000
We rarely pay penalties to NEMA for pollution	52	3.81	1.01	0.27	5.76	.000

Source: Primary Data (2018)

Table 4.12 indicated that most of the firms responded that their performance improved to a high extent in the five years preceding the year of this study as evidenced by the scores ranging from 3.67 to 4.04 corresponding to a high extent on the likert scale. The responses were all significant as shown by the relatively high t values and $p<0.05$. Further there was low variation in the responses with the highest variation being CV=0.27.

4.10 Hypotheses Testing

This study aimed at establishing the effect of group cohesion and competitive repertoire complexity on the relationship between top management team heterogeneity and firm performance. In order to accomplish this, the study set out four hypotheses which were tested and the results presented in this section. The relationship between TMT heterogeneity and firm performance was tested with the aid of simple and multivariate regression analysis. The Baron and Kenny (1986) model was adopted to evaluate the mediating effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and firm performance.

The study adopted a 95% confidence level for testing the hypotheses. The data was interpreted on the basis of the R, R^2, F-ratio, t-values and the p-values. The values of R represent the correlation coefficient which indicates the strength of the prediction while R^2 is the coefficient of determination which indicates the ratio of variance in the dependent variable that is explained for by the independent variables. The F-ratio shows the overall goodness of fit of the regression model while the t-values show the significance of the individual variables.

The p-values provide the significance level for rejecting or failing to reject the hypotheses which at 95% confidence level is 0.05 (p=0.05). Where the calculated p-values were greater than 0.05 (p>0.05) the study failed to reject the hypotheses but if p-values were less than 0.05 (p<0) the hypotheses were rejected.

4.10.1 Top Management Team Heterogeneity and Firm Performance

The first objective in this study was to establish the effect of TMT heterogeneity on the performance of large food and beverage manufacturing firms. TMT heterogeneity was measured as the differences within the top management team in terms of gender, age, tenure in the organization, education level and functional background. This was consistent with the demographic characteristics set out by Hambrick and Mason (1984) in coalescing the upper echelons perspective. To examine the first objective, this study set out the first hypothesis, ***H_1: TMT heterogeneity has no significant effect on firm performance***.

To test this hypothesis, the study first tested the effect of the individual characteristics contributing to TMT heterogeneity. The study tested the effect of gender, age, tenure in organization, education level and functional background heterogeneities on firm performance. Performance was measured in line with the six performance perspectives outlined by the SBSC namely financial performance, customer performance, internal processes performance, learning and development performance, social performance and environmental performance. Tables 4.13 to Tables 4.18 present the results obtained.

Table 4.13: TMT Heterogeneity Components on Financial Performance

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.437	.191	.105	.2719894		
ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.820	5	.164	2.217	.068
	Residual	3.477	47	.074		
	Total	4.297	52			
Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.294	.837		1.547	.129
	Gender Heterogeneity	-.143	.323	-.060	-.441	.661
	Tenure Heterogeneity	-.364	.320	-.165	-1.137	.261
	Age Heterogeneity	-2.745	1.199	-.390	-2.290	.027
	Education Level Heterogeneity	.351	.398	.142	.881	.383
	Functional Background Heterogeneity	-.603	1.053	-.084	-.573	.569

Source: Primary Data (2018)

Table 4.13 revealed that on the overall the components of TMT heterogeneity had a moderate correlation with financial performance (R=0.437) and they accounted for 19.1% of the variation in financial performance. The results F(5, 47) = 2.217 which was less than the critical F(5, 47) = 2.41 indicated that the overall model was not a good fit and thus the components did not predict financial performance in a statistically significant manner as further evidenced by p=0.68 > 0.05.

There were mixed findings observed for the TMT heterogeneity components. Gender heterogeneity (B= -0.143, p=0.661), tenure heterogeneity (B= -0.364, p=0.261) functional background heterogeneity (B= -0.603, p=0.569) had a negative and statistically not significant effect on financial performance. On the other hand, education level heterogeneity had a positive but statistically not significant effect on financial performance with B=0.351 and p=0.383. Age heterogeneity had a negative effect on financial performance and was the only component which was statistically significant (B= -2.745, p=0.027). The effect of TMT heterogeneity components on financial performance was expressed in the regression equation:

Pf = 1.294 –2.745Xa

Where: Pf = Financial performance

Xa = Age heterogeneity

The regression equation showed that age heterogeneity had a negative effect on financial performance. A unit increase in age heterogeneity would result in 2.745 decrease in financial performance implying that TMTs composed of managers from different age groups experienced a decline in financial performance. Age heterogeneity therefore harms financial performance.

Table 4.14: TMT Heterogeneity Components on Customer Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455	.207	.123	.46359

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.644	5	.529	2.461	.046
	Residual	10.101	47	.215		
	Total	12.745	52			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.721	1.426		2.610	.012
	Gender Heterogeneity	-.466	.551	-.115	-.846	.402
	Tenure Heterogeneity	-1.084	.545	-.286	-1.990	.052
	Age Heterogeneity	5.332	2.043	.440	2.610	.012
	Education Level Heterogeneity	-1.637	.678	-.385	-2.414	.020
	Functional Background Heterogeneity	1.492	1.795	.120	.831	.410

Source: Primary Data (2018)

Table 4.14 showed that on the overall the components of TMT heterogeneity had a moderate effect on customer performance as shown by R=0.455. The components accounted for 20.7% of the variation in customer performance. On the overall the model was a good fit given that F(5, 47) = 2.461 was greater than the critical F(5, 47) = 2.41 implying that the TMT heterogeneity components predicted customer performance in a statistically significant manner. This was further shown by p=0.046 < 0.05.

Further, there were mixed findings pertaining to the effect of each of the components on the customer performance. Gender and tenure heterogeneity had negative and statistically not significant effect on customer performance with B= -0.466, p=0.402 and B = -1.084, p=0.052 respectively. On the other hand functional background heterogeneity had a positive but statistically not significant effect on customer performance with B= 1.492, p=0.410. Age heterogeneity had a positive and statistically significant effect on customer performance (B=5.332, p=0.012) while education level heterogeneity had a negative and statistically significant effect on customer performance (B= -1.637, p=0.020). The effect of TMT heterogeneity components on customer performance were summed up in the regression equation:

$Pc = 3.721 + 5.332Xa – 1.637Xe$

Where: Pc = Customer performance

Xa = Age heterogeneity

Xe = Education level heterogeneity

The regression equation showed that age heterogeneity had a positive effect on customer performance. A unit increase in age heterogeneity resulted in 5.332 increase in customer performance. This implied that when the TMT was composed of managers from different age groups, customer performance was enhanced. However, education level heterogeneities had a negative effect on customer performance. A unit increase in education level heterogeneity led to 1.637 decrease in customer performance. This meant that when the TMT was composed of managers with different education levels, customer performance was impacted negatively.

Table 4.15: TMT Heterogeneity Components on Internal Processes Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.484	0.234	0.149	0.42631

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.499	5	.500	2.750	.030
	Residual	8.178	45	.182		
	Total	10.677	50			

Table 4.15 Continued…

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.689	1.428		2.583	.013
	Gender Heterogeneity	-.760	.517	-.202	-1.470	.148
	Tenure Heterogeneity	-1.249	.504	-.359	-2.479	.017
	Age Heterogeneity	2.739	1.900	.243	1.442	.156
	Education Level Heterogeneity	-1.495	.635	-.377	-2.356	.023
	Functional Background Heterogeneity	2.082	1.789	.169	1.163	.251

Source: Primary Data (2018)

Table 4.15 revealed that the TMT heterogeneity components on the overall had a moderate effect on internal processes performance as shown by R=0.484. The components explained 23.4% of the variations in internal processes performance. The overall model was a good fit with F(5, 47) = 2.75 which was greater than the critical F(5, 47) = 2.41 thus the components predicted internal processes performance in a statistically significant manner. This was also evidenced by $p=0.03 < 0.05$.

There were mixed findings regarding the effect of each of the components on internal processes performance. Gender heterogeneity had a negative and statistically not significant effect on internal processes performance with B= -0.76, p=0.148. Age heterogeneity and functional background heterogeneity had positive albeit statistically not significant effect on internal processes performance with B=2.739, p=0.156 and B=2.082, p=0.251 respectively. On the other hand, tenure heterogeneity and education level heterogeneity had statistically significant negative effect on internal processes performance with B= -1.249, p=0.017 and B= -1.495, p=0.023 respectively. The effect of the TMT heterogeneity components on internal processes performance were summarized in the regression equation:

$Pi = 3.689 – 1.249Xt – 1.495Xe$

Where: Pi = Internal processes performance

Xt = Tenure in organization heterogeneity

Xe = Education level heterogeneity

The regression equation implied that tenure and education level heterogeneities had a negative effect on internal processes performance. A unit increase in tenure heterogeneity would yield a 1.249 decrease in internal processes performance while a 1.495 decrease in internal processes performance would result from a unit increase in education level heterogeneity. This implied that TMTs composed of managers with differences in terms of tenures in the organization and education levels impacted negatively on the internal processes and was harmful to the internal processes performance.

Table 4.16: TMT Heterogeneity Components on Learning and Development Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.356	.127	.012	.38090

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.800	5	.160	1.103	.375
	Residual	5.513	38	.145		
	Total	6.314	43			

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.564	1.553		3.583	.001
	Gender Heterogeneity	.754	.994	.123	.759	.453
	Tenure Heterogeneity	-.942	.512	-.308	-1.839	.074
	Age Heterogeneity	1.722	2.089	.159	.824	.415
	Education Level Heterogeneity	-.834	.644	-.234	-1.294	.203
	Functional Background Heterogeneity	-1.399	1.685	-.133	-.831	.411

Source: Primary Data (2018)

Table 4.16 revealed that TMT heterogeneity components had a weak correlation with learning and development performance as evidenced by R = 0.356 and they only accounted for 12.7% of the variations in learning and development performance. The model was not a good fit as shown by F(5, 47) = 1.103 which was less than the critical F(5, 47) = 2.41 and so the TMT heterogeneity components did not predict learning and development performance in a statistically significant manner. This was further revealed by p=0.375 > 0.05.

The findings also revealed that individually, all the components of TMT heterogeneity had no significant effect on learning and development performance. Further, different components of heterogeneity had different effects on learning and development performance. Gender heterogeneity and age heterogeneity had a positive though statistically not significant effect on learning and development performance with B= 0.754, p=0.453 and B=1.722, p=0.415 respectively. Tenure heterogeneity (B= -0.942, p=0.074), education level heterogeneity (B= -0.834, p=0.203) and functional background heterogeneity (B= -1.399, p=0.411) had negative and statistically not significant effect on learning and development performance.

Table 4.17: TMT Heterogeneity Components on Social Performance

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.336	.113	.018	.60273		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.170	5	.434	1.195	.326
	Residual	17.074	47	.363		
	Total	19.244	52			
Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.259	1.854		2.837	.007
	Gender Heterogeneity	-.458	.717	-.092	-.640	.525
	Tenure Heterogeneity	-.717	.708	-.154	-1.012	.317
	Age Heterogeneity	-1.599	2.656	-.107	-.602	.550
	Education Level Heterogeneity	-1.069	.882	-.205	-1.212	.231
	Functional Background Heterogeneity	.024	2.333	.002	.010	.992

Source: Primary Data (2018)

Table 4.17 revealed that on the overall the components of TMT heterogeneity had weak correlation with social performance as indicated by R = 0.336. However, these components explained only 11.3% of the variations observed in social performance. The model was not a good fit as shown by F (5, 47) = 1.195 which was less than the critical F(5, 47) = 2.41 implying that the components did not predict social performance in a statistically significant way as further evidenced by p = 0.326 >0.05.

Most of the TMT heterogeneity components had a negative effect on social performance as shown by B= -0.458, p = 0.525 for gender heterogeneity, B= -0.717, p = 0.317 for tenure heterogeneity, B= -1.599, p = 0.55 for age heterogeneity and B= -1.069, p = 0.231 for education level heterogeneity. Functional background heterogeneity had a positive effect on social performance (B= 0.024, p = 0.992). These results further implied that none of the components of TMT heterogeneity had a statistically significant effect on social performance when considered individually.

Table 4.18: TMT Heterogeneity Components on Environmental Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.368	.135	.021	.55688

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.842	5	.368	1.188	.333
	Residual	11.784	38	.310		
	Total	13.626	43			

Table 4.18 Continued…

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.125	2.271		.936	.355
	Gender Heterogeneity	.835	1.453	.093	.575	.569
	Tenure Heterogeneity	-.675	.749	-.150	-.902	.373
	Age Heterogeneity	2.103	3.054	.133	.688	.495
	Education Level Heterogeneity	-1.818	.942	-.347	-1.930	.061
	Functional Background Heterogeneity	3.044	2.463	.197	1.236	.224

Source: Primary Data (2018)

Table 4.18 indicated that the TMT heterogeneity components had weak correlation with environmental performance (R = 0.368). The components accounted for only 13.5% of the variations observed in environmental performance. The model was not a good fit as evidenced by F (5, 47) = 1.188 which was less than the critical F (5, 47) = 2.41 implying that the components did not predict environmental performance in a statistically significant manner. This was also shown by $p = 0.333 > 0.05$.

TMT heterogeneity components had mixed effects on environmental performance when considered individually. Gender heterogeneity, age heterogeneity and functional background heterogeneity had positive albeit statistically not significant effect on environmental performance with B = 0.835, p = 0.569, B = 2.103, p = 0.495 and B = 3.044, p = 0.224 respectively. Tenure and education level heterogeneities had a negative and statistically not significant effect on environmental performance as evidenced by B = -0.675, p = 0.373 for tenure heterogeneity and B = -1.818, p = 0.061 for education level heterogeneity.

A composite was developed from the individual components of TMT heterogeneity in order to test the effect of TMT heterogeneity on firm performance. The effect was evaluated against the six dimensions of performance. The results were presented in Table 4.19 to Table 4.24.

Table 4.19: TMT Heterogeneity and Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.275	.076	.057	.2790865

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.325	1	0.325	4.169	.046
	Residual	3.972	51	0.078		
	Total	4.297	52			

Table 4.19 Continued…

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.216	.384		3.167	.003
	TMT Heterogeneity	-1.666	.816	-.275	-2.042	.046

Source: Primary Data (2018)

Table 4.19 indicated that TMT heterogeneity had weak correlation with financial performance as evidenced by R = 0.275. Further, 7.6% of the changes in financial performance were accounted for by TMT heterogeneity variations. The results, F(1, 51) = 4.169 which was greater than the critical F(1, 51) = 4.03 suggested that the model was a good fit and therefore TMT heterogeneity had a statistically significant influence on financial performance. This was also shown by $p = 0.046 < 0.05$. Due to this, the study rejected the hypothesis that TMT heterogeneity has no significant effect on firm performance for financial performance. The regression equation for this relationship was summed up as:

$Pf = 1.216 – 1.666Xh$

Where: Pf = Financial performance

Xh = TMT heterogeneity

The regression equation revealed that TMT heterogeneity had a negative effect on financial performance and that for every unit increase in TMT heterogeneity, financial performance would decline by 1.666. This implied that TMT heterogeneity was harmful to financial performance and TMTs composed of different managers would suffer a decline in financial performance.

Table 4.20: TMT Heterogeneity and Customer Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.134	.018	.001	.49539

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.229	1	.229	.934	.338
	Residual	12.516	51	.245		
	Total	12.745	52			

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.646	.682		6.816	.000
	TMT Heterogeneity	-1.400	1.448	-.134	-.966	.338

Source: Primary Data (2018)

Table 4.20 indicated that TMT heterogeneity had almost no correlation with customer performance as evidenced R = 0.134. In addition, only 1.8% of the variations in customer performance were accounted for by the variations in TMT heterogeneity. The model was not a good fit as shown by F(1, 51) = 0.934 which was less than the critical F(1, 51) = 4.03 thus TMT heterogeneity did not predict customer performance in a statistically significant way. This was also evidenced by p = 0.338 > 0.05. The study therefore failed to reject the hypothesis that TMT heterogeneity has no significant effect on firm performance with respect to customer performance.

Table 4.21: TMT Heterogeneity and Internal Processes Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.311	.097	.078	.44369

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.031	1	1.031	5.236	.026
	Residual	9.646	49	.197		
	Total	10.677	50			

Table 4.21 Continued…

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.409	.619		8.739	.000
	TMT Heterogeneity	-3.006	1.313	-.311	-2.288	.026

Source: Primary Data (2018)

Table 4.21 indicated that TMT heterogeneity had weak correlation with internal processes performance as evidenced R = 0.311. In addition, only 9.7% of the variations in internal processes performance were explained by the variations in TMT heterogeneity. The model was a good fit as shown by F(1, 51) = 5.236 which was greater than the critical F(1, 51) = 4.03 thus TMT heterogeneity predicted internal processes performance in a statistically significant way. This was also evidenced by p = 0.026 < 0.05. The study therefore rejected the hypothesis that TMT heterogeneity has no significant effect on firm performance with respect to internal processes performance. The regression equation was summarized as follows:

$Pi = 5.409 – 3.006Xh$

Where: Pi = Internal processes performance

Xh = TMT heterogeneity

The regression equation revealed that TMT heterogeneity had a negative effect on internal processes performance. This implied that with every unit increase in TMT heterogeneity, internal processes performance declined by 3.006. This meant that TMT heterogeneity was harmful to internal processes performance. Organizations with heterogeneous TMTs experienced a decline in internal processes performance.

Table 4.22: TMT Heterogeneity and Learning and Development Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.144	.021	.002	.40781

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.180	1	.180	1.083	.303
	Residual	8.482	51	.166		
	Total	8.662	52			

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.652	.567		8.200	.000
	TMT Heterogeneity	-1.232	1.184	-.144	-1.041	.303

Source: Primary Data (2018)

Table 4.22 indicated there was almost no correlation between TMT heterogeneity and learning and development performance evidenced by R = 0.144 and TMT heterogeneity only accounted for 2.1% of the variations in learning and development performance. Further, F(1, 51) = 1.083 was less than the critical F(1, 51) = 4.03 indicating that the overall model was not a good fit and so TMT heterogeneity did not affect learning and development performance in a statistically significant way. This was also shown by p = 0.303 > 0.05. The study therefore failed to reject the hypothesis that TMT heterogeneity has no significant effect on firm performance as far as learning and development performance was concerned.

Table 4.23: TMT Heterogeneity and Social Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317	.100	.083	.58265

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.931	1	1.931	5.687	.021
	Residual	17.314	51	.339		
	Total	19.244	52			

Table 4.23 Continued…

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.877	.802		7.331	.000
	TMT Heterogeneity	-4.063	1.704	-.317	-2.385	.021

Source: Primary Data (2018)

Table 4.23 revealed that TMT heterogeneity had weak correlation with social performance as evidenced by R = 0.317 and that TMT heterogeneity accounted for 10% of the variations in social performance. The model was a good fit as indicated by F(1, 51) = 5.687 which was greater than the critical F(1, 51) = 4.03 implying that TMT heterogeneity predicted social performance in a statistically significant way. This was also shown by $p = 0.021 < 0.05$. The hypothesis that TMT heterogeneity has no significant effect on firm performance was rejected for social performance. The relationship between TMT heterogeneity and social performance was summarized in the regression equation:

$Ps = 5.877 – 4.063Xh$

Where: Ps = Social performance

Xh = TMT heterogeneity

The regression equation indicated that TMT heterogeneity had a negative effect on social performance. Further, for every unit increase in TMT heterogeneity, social performance declined by 4.063 units. This implied that TMT heterogeneity was harmful to social performance. TMTs made up of managers with different characteristics affected social performance negatively.

Table 4.24: TMT Heterogeneity and Environmental Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.201	.040	.022	.58116

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.725	1	.725	2.146	.149
	Residual	17.225	51	.338		
	Total	17.950	52			

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.072	.808		6.273	.000
	TMT Heterogeneity	-2.472	1.688	-.201	-1.465	.149

Source: Primary Data (2018)

Table 4.24 revealed that there was weak correlation between TMT heterogeneity and environmental performance as indicated by R = 0.201 and that TMT heterogeneity only accounted for 4% of the variations in environmental performance. The model was not a good fit as indicated by F (1, 51) = 2.146 which was less than the critical F(1, 51) = 4.03 thus TMT heterogeneity did not predict environmental performance in a statistically significant way. This was also shown by p = 0.149 > 0.05. The study failed to reject the hypothesis that TMT heterogeneity has no significant effect on firm performance in relation to environmental performance.

4.10.2 Top Management Team Heterogeneity, Group Cohesion and Firm Performance

The second objective of this study was to assess the effect of group cohesion on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. Group cohesion was defined as the capacity of the group members to get along and work jointly to deliver organizational goals. This was measured in terms of task cohesion and social cohesion. Task cohesion considered the ability of the TMT to work together and deliver on organizational goals while social cohesion focused on the ability of the TMT to get along outside work.

To test the effect of group cohesion on the relationship between TMT heterogeneity and firm performance, the study set out a second hypothesis, ***H_2: Group cohesion has no significant mediating effect on the relationship between TMT heterogeneity and firm performance***. This hypothesis was tested using the Baron and Kenny (1986) model which involves four steps.

The first step in the Baron and Kenny (1986) model requires that the dependent variable is regressed against the independent variable. Performance was regressed against TMT heterogeneity and the results were as shown in Tables 4.19 to 4.24. The results indicated that the correlation between TMT heterogeneity and performance ranged from weak correlation to almost no correlation as indicated by R = 0.275 for financial performance, R = 0.134 for customer performance, R = 0.311 for internal performance, R = 0.144 for learning and development performance, R = 0.317 for social performance and R = 0.201 for environmental performance.

Further the results indicated that TMT heterogeneity had a statistically significant influence on financial performance, internal processes performance and social performance as indicated by F (1, 51) = 4.169 (p = 0.046), F (1, 51) = 5.236 (p = 0.026) and F = (1, 51) = 5.687 (p = 0.021) respectively which were greater than the critical F(1, 51) = 4.03 with p-values < 0.05. The relationship with the other measures of performance was statistically not significant. This implied that the first condition in the Baron and Kenny (1986) model was fulfilled for financial, internal processes and social performance.

The second step in the Baron and Kenny (1986) model requires that the mediator variable is regressed against the independent variable. Group cohesion was regressed against TMT heterogeneity. For this purpose a composite measure was computed consisting of task and social cohesion measures consistent with the suggestion by Chang et al (2006). Table 4.25 depicted the results obtained.

Table 4.25: TMT Heterogeneity and Group Cohesion

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.279	.078	.060	.4190401		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.755	1	.755	4.299	.043
	Residual	8.955	51	.176		
	Total	9.710	52			
Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.975	.577		8.628	.000
	TMT Heterogeneity	-2.540	1.225	-.279	-2.073	.043

Source: Primary Data (2018)

Table 4.25 indicated that TMT heterogeneity was weakly correlated with group cohesion (R = 0.279). Further, TMT heterogeneity accounted for 7.8% of the variations in group cohesion. The results, F(1, 51) = 4.299 which was greater than the critical F(1, 51) = 4.03 suggested that TMT heterogeneity predicted group cohesion in a statistically significant manner. This was also evidenced by $p = 0.043 < 0.05$. This implied that the second condition in the Baron and Kenny (1986) model for testing for mediation was satisfied.

The regression equation depicting the relationship between TMT heterogeneity and group cohesion was summarized as:

$Xc = 4.975 – 2.54Xh$

Where Xc = Group cohesion

Xh = TMT heterogeneity

The regression equation revealed that for each unit increase in TMT heterogeneity, group cohesion would decline by 2.54 units. This implied that the more heterogeneous the TMT was, the less cohesive it would get suggesting that TMT heterogeneity was harmful to the cohesion within the TMT. TMTs composed of managers with different characteristics would experience reduced ability to get along and work together to deliver the goals of the organization.

The third step in testing for mediation involves regressing the dependent variable against the mediator variable. In line with this firm performance was regressed against group cohesion. Group cohesion was tested as a composite variable consisting of task and social cohesion. Performance was gauged in terms of financial, internal processes and social performance since these measures had satisfied the first condition in the Baron and Kenny (1986) model. The results were presented in Table 4.26 to Table 4.28.

Table 4.26: Group Cohesion and Financial Performance

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.336	.113	.095	.2734452		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.484	1	.484	6.469	.014
	Residual	3.813	51	.075		
	Total	4.297	52			
Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.409	.334		-1.224	.227
	Group Cohesion	.223	.088	.336	2.543	.014

Source: Primary Data (2018)

Table 4.26 indicated that group cohesion had weak correlation with financial performance as shown by R = 0.336. Further, group cohesion accounted for 11.3% of the variation in financial performance. The model was a good fit to the data as shown by F(1, 51) = 6.469 which was greater than the critical F(1, 51) = 4.03 implying that group cohesion had a statistically significant effect on financial performance. This was further shown by $p = 0.014 < 0.05$. Due, to this the third condition in the Baron and Kenny (1986) model was satisfied with regard to financial performance. The regression equation representing this relationship was depicted as:

Pf = 0.223Xc – 0.409

Where Pf = Financial performance

Xc = Group cohesion

The regression equation indicated that for every unit increase in group cohesion, financial performance increased by 0.223. This implied that the more cohesive the TMT was, the more the firm gained in terms of financial performance. Firms with high group cohesion were therefore likely to have better financial performance indicating that group cohesion was beneficial to the firm's financial performance.

Table 4.27: Group Cohesion and Internal Processes Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.404	.163	.146	.42703

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.741	1	1.741	9.550	.003
	Residual	8.935	49	.182		
	Total	10.677	50			

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.381	.527		4.514	.000
	Group Cohesion	.428	.139	.404	3.090	.003

Source: Primary Data (2018)

Table 4.27 indicated that group cohesion and internal processes were moderately correlated as evidenced by R = 0.404 and that group cohesion accounted for 16.3% of the variations in internal processes. Further, F (1, 51) = 9.55 which was greater than the critical F(1, 51) = 4.03 implying that the model was a good fit and thus group cohesion had a statistically significant relationship with internal processes performance. This was further shown by p = 0.003 < 0.05. This satisfied the third condition in the Baron and Kenny (1986) model as far as internal processes performance was concerned. The relationship between group cohesion and internal processes performance was expressed as:

$Pi = 2.381 + 0.428Xc$

Where Pi = Internal processes performance

Xc = Group cohesion

The regression equation revealed that group cohesion had a positive effect on internal processes with every unit increase in group cohesion resulting to 0.428 increase in internal processes. This implied that group cohesion was beneficial to internal processes performance. Organizations with cohesive TMTs were likely to perform better in terms of internal processes than organizations with less cohesive TMTs.

Table 4.28: Group Cohesion and Social Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.301	.090	.072	.58588

Table 4.28 Continued…

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.738	1	1.738	5.064	.029
	Residual	17.506	51	.343		
	Total	19.244	52			

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.373	.716		3.313	.002
	Group Cohesion	.423	.188	.301	2.250	.029

Source: Primary Data (2018)

Table 4.28 revealed that group cohesion had weak correlation with social performance as indicated by R = 0.301 and that group cohesion accounted for 9% of the changes in social performance. The model was a good fit as indicated by F (1, 51) = 5.064 which was greater than the critical F(1, 51) = 4.03 implying that the effect of group cohesion on social performance was statistically significant. This was also shown by p = 0.029 < 0.05. This satisfied the third condition in the Baron and Kenny (1986) model with regard to social performance. The regression equation was summarized as:

Ps = 2.373 + 0.423Xc

Where Ps = Social performance

Xc = Group cohesion

The regression equation indicated that group cohesion had a positive effect on social performance. Further, each unit increase in group cohesion resulted in 0.423 increase in social performance. This implied that group cohesion was beneficial to social performance. Organizations with cohesive TMTs would therefore perform better in terms of social performance compared to less cohesive TMTs.

The final step in testing for mediation with the Baron and Kenny (1986) model involves regressing the dependent variable against the independent and mediator variables. The effect of TMT heterogeneity and group cohesion on performance was tested for the three measures of performance that had satisfied the first three conditions namely financial, internal processes and social performance. The results were outlined in Table 4.29 to Table 4.31.

Table 4.29: TMT Heterogeneity, Group Cohesion and Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.275[a]	.076	.057	.2790865
2	.385[b]	.148	.114	.2705601

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

Table 4.29 Continued…

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.325	1	.325	4.169	.046[b]
	Residual	3.972	51	.078		
	Total	4.297	52			
2	Regression	.637	2	.318	4.351	.018[c]
	Residual	3.660	50	.073		
	Total	4.297	52			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.216	.384		3.167	.003
	TMT Heterogeneity	-1.666	.816	-.275	-2.042	.046
2	(Constant)	.287	.584		.492	.625
	TMT Heterogeneity	-1.192	.824	-.197	-1.447	.154
	Group Cohesion	.187	.090	.281	2.065	.044

a. Dependent Variable: Financial Performance

Source: Primary Data (2018)

Table 4.29 revealed that the overall model including TMT heterogeneity and group cohesion was weakly correlated with financial performance (R = 0.385) which was an improvement from R = 0.275 when TMT heterogeneity was considered alone. Further, the model combining TMT heterogeneity and group cohesion accounted for 14.8% of the variations in financial performance which was an increase of 7.6% from when TMT heterogeneity was considered alone. The model was also a good fit for the data as evidenced by F (2, 50) = 4.35 which was greater than the critical F (2, 50) = 3.18 implying that they were statistically significant in predicting financial performance. This was also shown by $p = 0.018 < 0.05$. This satisfied the final condition in the Baron and Kenny (1986) model in testing for mediation as far as financial performance was concerned. Therefore the study inferred that group cohesion is a mediator to the relationship between TMT heterogeneity and financial performance.

The findings in the second model in Table 4.29 indicated that TMT heterogeneity had a negative effect on financial performance (B = -1.192) while group cohesion had a positive effect on financial performance (B = 0.187). Further, the results revealed that when group cohesion was controlled for in the second model, TMT heterogeneity was no longer significant (p = 0.154) which suggested that group cohesion fully mediated the relationship between TMT heterogeneity and financial performance. This implied that to understand the effect of TMT heterogeneity on financial performance, group cohesion should be considered.

Table 4.30: TMT Heterogeneity, Group Cohesion and Internal Processes Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.311[a]	.097	.078	.44369
2	.450[b]	.202	.169	.42119

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.031	1	1.031	5.236	.026[b]
	Residual	9.646	49	.197		
	Total	10.677	50			
2	Regression	2.162	2	1.081	6.093	.004[c]
	Residual	8.515	48	.177		
	Total	10.677	50			

a. Dependent Variable: Internal Processes Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

Table 4.30 Continued…

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.409	.619		8.739	.000
	TMT Heterogeneity	-3.006	1.313	-.311	-2.288	.026
2	(Constant)	3.575	.934		3.827	.000
	TMT Heterogeneity	-2.012	1.307	-.208	-1.539	.130
	Group Cohesion	.362	.143	.341	2.525	.015

a. Dependent Variable: Internal Processes Performance

Source: Primary Data (2018)

Table 4.30 revealed that there was moderate correlation between TMT heterogeneity and group cohesion and internal processes performance as depicted by R = 0.45 which was an improvement from the weak correlation (R = 0.311) between TMT heterogeneity and internal processes performance. The overall model combining TMT heterogeneity and group cohesion accounted for 20.2% of the variations in internal processes performance which was an increase from 10.5% when TMT heterogeneity was considered in isolation.

The overall model was also a good fit as evidenced by F (2, 50) = 6.093 which was greater than the critical F (2, 50) = 3.18 implying that TMT heterogeneity and group cohesion had a statistically significant effect on internal processes performance. This was further evidenced by p = 0.004 < 0.05. This fulfilled the final condition in the Baron and Kenny (1986) model and thus the study inferred that group cohesion mediated the relationship between TMT heterogeneity and firm performance as depicted by internal processes performance.

The findings in the second model in Table 4.30 indicated that TMT heterogeneity had a negative effect on internal processes performance as shown by B = -2.012 while group cohesion had a positive effect on internal processes performance as indicated by B = 0.362. Further when group cohesion was controlled in the second model, TMT heterogeneity became statistically not significant implying that group cohesion fully mediated the relationship between TMT heterogeneity and internal processes performance. Therefore to understand the effect of TMT heterogeneity on internal processes performance, group cohesion should be considered.

Table 4.31: TMT Heterogeneity, Group Cohesion and Social Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317[a]	.100	.083	.58265
2	.386[b]	.149	.115	.57225

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

Table 4.31 Continued…

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.931	1	1.931	5.687	.021[b]
	Residual	17.314	51	.339		
	Total	19.244	52			
2	Regression	2.871	2	1.435	4.383	.018[c]
	Residual	16.374	50	.327		
	Total	19.244	52			

a. Dependent Variable: Social Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.877	.802		7.331	.000
	TMT Heterogeneity	-4.063	1.704	-.317	-2.385	.021
2	(Constant)	4.265	1.235		3.454	.001
	TMT Heterogeneity	-3.240	1.742	-.253	-1.859	.069
	Group Cohesion	.324	.191	.230	1.694	.096

a. Dependent Variable: Social Performance

Source: Primary Data (2018)

Table 4.31 revealed that TMT heterogeneity and group cohesion had weak correlation with social performance as indicated by R = 0.386 which was slightly higher compared to the correlation between TMT heterogeneity and social performance (R = 0.317). The model combining TMT heterogeneity and group cohesion accounted for 14.9% of the variations in social performance compared with 10% accounted for by TMT heterogeneity only. Further, the combined model was a good fit as shown by F (2, 50) = 4.383 which was greater than the critical F (2, 50) = 3.18 implying that TMT heterogeneity and group cohesion predicted social performance in statistically significant manner. This was also evidenced by $p = 0.018 < 0.05$. This fulfilled the final condition in the Baron and Kenny (1986) model and thus the study inferred that group cohesion mediated the relationship between TMT heterogeneity and firm performance as depicted by social performance.

The second model in Table 4.31 indicated that TMT heterogeneity had a negative effect on social performance as shown by B = -3.24 while group cohesion had a positive effect as shown by B = 0.324. Further, when group cohesion was controlled for in the second model, both TMT heterogeneity and group cohesion became statistically not significant.

4.10.3 Top Management Team Heterogeneity, Competitive Repertoire Complexity and Firm Performance

The third objective in this study was to evaluate the effect of competitive repertoire complexity on the relationship between TMT heterogeneity and the performance of large food and beverage manufacturing firms in Kenya. Hambrick and Mason (1984) contended that TMT demographic attributes affect performance through their effect on strategies. This study tested this relationship using the competitive repertoire to capture the complete array of strategies pursued by organizations. Further, TMT heterogeneity is associated with competitive repertoire complexity due to the increased ability of the TMT to process information and support a wide variety of competitive action (Hambick et al, 1996; Offstein, 2004).

To capture this objective, a third hypothesis was set, ***H_3: Competitive repertoire complexity has no significant mediating effect on the relationship between TMT heterogeneity and firm performance***. To test this hypothesis competitive repertoire complexity was measured in terms of competitive repertoire concentration and competitive repertoire range. This hypothesis was tested using the Baron and Kenny (1986) model for testing mediation. The first step in the model requires that the dependent variable is regressed against the independent variable. TMT heterogeneity had a statistically significant effect on financial, internal processes and social performance as shown in Table 4.19, Table 4.21 and Table 4.23 satisfying the first condition in testing for mediation as far as financial, internal processes and social performance were concerned.

The second step requires that the mediator variable is regressed against the independent variable. This was done by regressing competitive repertoire complexity against TMT heterogeneity. To achieve this, the effect of TMT heterogeneity was tested on both competitive repertoire concentration and competitive repertoire range. The results were depicted in Table 4.32.

Table 4.32: TMT Heterogeneity and Competitive Repertoire Complexity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.126	.016	.003	.0954150
2	.022	.000	.000	.59743

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.007	1	.007	.821	.369
	Residual	.464	51	.009		
	Total	.472	52			
2	Regression	.009	1	.009	.024	.877
	Residual	18.203	51	.357		
	Total	18.212	52			

Table 4.32 Continued…

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.437	.131		3.329	.002
	TMT Heterogeneity	-.253	.279	-.126	-.906	.369
2	(Constant)	5.150	.822		6.265	.000
	TMT Heterogeneity	-.272	1.747	-.022	-.156	.877

1: Dependent Variable: Competitive Repertoire Concentration

2: Dependent Variable: Competitive Repertoire Range

Source: Primary Data (2018)

Model 1 in Table 4.32 revealed that TMT heterogeneity had almost no correlation with competitive repertoire concentration (R = 0.126). TMT heterogeneity only accounted for 1.6% of the variations in competitive repertoire concentration. Further the results, F (1, 51) = 0.821 which was less than the critical F (1, 51) = 4.03 implied that TMT heterogeneity did not predict competitive repertoire concentration in a statistically significant manner. This was also revealed by p = 0.369 > 0.05. This implied that the second condition in the Baron and Kenny (986) model for testing for mediation was not met when competitive repertoire complexity was measured using repertoire concentration.

Model 2 in Table 4.32 revealed no correlation between TMT heterogeneity and competitive repertoire range (R = 0.022). In addition, TMT heterogeneity did not explain the variations in competitive repertoire range. The model was not a good fit with F (1, 51) = 0.024 which was less than the critical F (1, 51) = 4.03 implying that TMT heterogeneity was not a statistically significant predictor of competitive repertoire range. This was also evidenced by p = 0.877 > 0.05. Therefore the second condition in testing for mediation was not satisfied.

There was no significant relationship between TMT heterogeneity and firm competitive repertoire complexity. This implied that competitive repertoire complexity had no statistically significant mediating effect on the relationship between TMT heterogeneity and firm performance. The study therefore failed to reject the hypothesis that competitive repertoire complexity had no significant effect on the relationship between TMT heterogeneity and firm performance.

4.10.4 Top Management Team Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Firm Performance

The final objective of this study was to determine the joint effect of TMT heterogeneity, group cohesion and competitive repertoire complexity on the performance of large food and beverage manufacturing firms in Kenya. Carpenter (2002) noted that TMT heterogeneity affected firm performance negatively at higher levels of complexity due to accelerated conflict among the TMT. TMT heterogeneity and competitive repertoire complexity increase the pressure on the TMT and is likely to trigger fragmentation within the TMT on one hand but can also be the source of competitive advantage if the TMT is cohesive. This suggests the need to take into consideration the collective effect of TMT heterogeneity, group cohesion and competitive repertoire complexity on performance.

To achieve this objective, this study set a corresponding hypothesis, ***H_4: TMT heterogeneity, group cohesion and competitive repertoire complexity have no significant joint effect on firm performance***. This hypothesis was tested against financial, customer, internal processes, learning and development, social and environmental performance. To achieve this, the effect was tested for both competitive repertoire concentration and competitive repertoire range. The results are shown in Table 4.33 to Table 4.38.

Table 4.33: TMT Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.275[a]	.076	.057	.2790865
2	.385[b]	.148	.114	.2705601
3	.443[c]	.197	.147	.2654296
4	.485[d]	.235	.188	.2589598

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Competitive Repertoire Concentration

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Competitive Repertoire Range

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.325	1	.325	4.169	.046[b]
	Residual	3.972	51	.078		
	Total	4.297	52			
2	Regression	.637	2	.318	4.351	.018[c]
	Residual	3.660	50	.073		
	Total	4.297	52			
3	Regression	.845	3	.282	3.997	.013[d]
	Residual	3.452	49	.070		
	Total	4.297	52			
4	Regression	1.011	3	.337	5.026	.004[e]
	Residual	3.286	49	.067		
	Total	4.297	52			

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

e. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Table 4.33 Continued…

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.216	.384		3.167	.003
	TMT Heterogeneity	-1.666	.816	-.275	-2.042	.046
2	(Constant)	.287	.584		.492	.625
	TMT Heterogeneity	-1.192	.824	-.197	-1.447	.154
	Group Cohesion	.187	.090	.281	2.065	.044
3	(Constant)	.070	.587		.119	.906
	TMT Heterogeneity	-1.061	.812	-.175	-1.307	.197
	Group Cohesion	.171	.089	.258	1.922	.060
	Competitive Repertoire Concentration	.673	.392	.223	1.718	.092
4	(Constant)	-.560	.664		-.844	.403
	TMT Heterogeneity	-1.099	.789	-.181	-1.392	.170
	Group Cohesion	.208	.087	.312	2.389	.021
	Competitive Repertoire Range	.144	.061	.297	2.362	.022

a. Dependent Variable: Financial Performance

Source: Primary Data (2018)

Model 3 in Table 4.33 indicated that TMT heterogeneity, group cohesion and competitive repertoire concentration had moderate correlation with financial performance (R = 0.443). Further, the variables accounted for 19.7% of the variations in financial performance which was a 4.9% increase from when competitive repertoire concentration was not included. However, TMT heterogeneity had the highest contribution with R^2 change = 0.076, followed by group cohesion with R^2 change = 0.072 and finally competitive repertoire concentration with R^2 change = 0.049. Model 3 depicting the joint effect had F (3, 49) = 3.997 which was greater than the critical F (3, 49) = 2.85 meaning it was a good fit. This was also shown by $p = 0.013 < 0.05$. This implied that the variables predicted financial performance in a statistically significant way. However, the effect of the individual variables was statistically not significant.

Model 4 in Table 4.33 indicated that TMT heterogeneity, group cohesion and competitive repertoire range were moderately correlated (R = 0.485) with financial performance. The variables explained 23.5% of the variation in financial performance which was an increase of 8.7% when competitive repertoire range was not considered. Further competitive repertoire range had the highest contribution with R^2 change = 0.087 followed by TMT heterogeneity with R^2 change = 0.076 then group cohesion with R^2 change = 0.072. The joint effect model captured by model 4 was a good fit as evidenced by F (3, 49) = 5.026 which was greater than the critical F (3, 49) = 2.85 implying that it predicted financial performance in a statistically significant way. This was also shown by $p = 0.004 < 0.05$. Further, group cohesion and competitive repertoire range had p = 0.021 and p = 0.022 which were less than p = 0.05 meaning they were independently significant.

The findings on the joint effect of TMT heterogeneity, group cohesion and competitive repertoire complexity indicated that the variables had a significant joint effect on financial performance. TMT heterogeneity had a negative effect on financial performance while group cohesion and competitive repertoire complexity had a positive effect. This implied that TMT heterogeneity and competitive repertoire complexity benefitted financial performance when the TMT was cohesive.

Table 4.34: TMT Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Customer Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.134[a]	.018	.001	.49539
2	.360[b]	.130	.095	.47098
3	.361[c]	.130	.077	.47568
4	.429[d]	.184	.134	.46073

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.229	1	.229	.934	.338[b]
	Residual	12.516	51	.245		
	Total	12.745	52			
2	Regression	1.654	2	.827	3.728	.031[c]
	Residual	11.091	50	.222		
	Total	12.745	52			
3	Regression	1.658	3	.553	2.442	.075[d]
	Residual	11.087	49	.226		
	Total	12.745	52			

Table 4.34 Continued…

Model		Sum of Squares	df	Mean Square	F	Sig.
4	Regression	2.344	3	.781	3.681	.018[e]
	Residual	10.401	49	.212		
	Total	12.745	52			

a. Dependent Variable: Customer Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

e. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.646	.682		6.816	.000
	TMT Heterogeneity	-1.400	1.448	-.134	-.966	.338
2	(Constant)	2.662	1.016		2.619	.012
	TMT Heterogeneity	-.387	1.434	-.037	-.270	.789
	Group Cohesion	.399	.157	.348	2.534	.014
3	(Constant)	2.691	1.051		2.560	.014
	TMT Heterogeneity	-.404	1.455	-.039	-.278	.782
	Group Cohesion	.401	.160	.350	2.510	.015
	Competitive Repertoire Concentration	-.091	.702	-.017	-.129	.898
4	(Constant)	3.812	1.181		3.227	.002
	TMT Heterogeneity	-.513	1.404	-.049	-.365	.717
	Group Cohesion	.370	.155	.323	2.392	.021
	Competitive Repertoire Range	-.196	.109	-.234	-1.803	.078

a. Dependent Variable: Customer Performance

Source: Primary Data (2018)

Model 3 in Table 4.34 indicated that the joint model had weak correlation (R = 0.361) with customer performance. The joint effect accounted for 13% of the variations in customer performance which was similar to the variations accounted for when competitive repertoire complexity was excluded implying that competitive repertoire complexity had no additional effect. Group cohesion accounted for the largest part of the variations with R^2 change = 0.112 followed by TMT heterogeneity with R^2 change = 0.018. The joint model was not a good fit as evidenced by F (3, 49) = 2.442 which was less than the critical F (3, 49) = 2.85. This was also evidenced by p = 0.075 > 0.05. This implied that it did not predict customer performance in a statistically significant manner. Further, only group cohesion had a statistically significant individual effect on customer performance with p = 0.015 < 0.05.

Model 4 in Table 4.34 depicted the collective effect and revealed that the overall model was moderately correlated with customer performance with R = 0.429. TMT heterogeneity, group cohesion and competitive repertoire range collectively accounted for 18.4% of the variations in customer performance. Group cohesion accounted for the biggest amount of the variations in customer performance with R^2 change = 0.112 followed by competitive repertoire range with R^2 change = 0.054 then TMT heterogeneity with R^2 change = 0.018. The joint model had F (3, 49) = 3.681 which was greater than the critical F (3, 49) = 2.85 implying that it was a good fit and therefore TMT heterogeneity, group cohesion and competitive repertoire range had a statistically significant joint effect on customer performance. This was also revealed by p = 0.018 < 0.05. Further, only group cohesion had a statistically significant individual effect on customer performance as shown by p = 0.021 which was less than p = 0.05.

The findings on the collective effect of TMT heterogeneity, group cohesion and competitive repertoire complexity revealed that the variables had a statistically significant effect on customer performance when competitive repertoire complexity was measured in terms of competitive repertoire range. In this case, TMT heterogeneity and competitive repertoire complexity had a negative effect on customer performance implying they were detrimental to customer performance. Conversely, group cohesion had a positive effect on customer performance implying that it was beneficial to customer performance.

Table 4.35: TMT Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Internal Processes Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.311[a]	.097	.078	.44369
2	.450[b]	.202	.169	.42119
3	.466[c]	.217	.167	.42174
4	.537[d]	.288	.243	.40203

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.031	1	1.031	5.236	.026[b]
	Residual	9.646	49	.197		
	Total	10.677	50			
2	Regression	2.162	2	1.081	6.093	.004[c]
	Residual	8.515	48	.177		
	Total	10.677	50			

Table 4.35 Continued…

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	2.317	3	.772	4.343	.009[d]
	Residual	8.359	47	.178		
	Total	10.677	50			
4	Regression	3.080	3	1.027	6.353	.001[e]
	Residual	7.597	47	.162		
	Total	10.677	50			

a. Dependent Variable: Internal Processes Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

e. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.409	.619		8.739	.000
	TMT Heterogeneity	-3.006	1.313	-.311	-2.288	.026
2	(Constant)	3.575	.934		3.827	.000
	TMT Heterogeneity	-2.012	1.307	-.208	-1.539	.130
	Group Cohesion	.362	.143	.341	2.525	.015
3	(Constant)	3.745	.953		3.930	.000
	TMT Heterogeneity	-2.108	1.313	-.218	-1.605	.115
	Group Cohesion	.378	.145	.357	2.616	.012
	Competitive Repertoire Concentration	-.587	.627	-.123	-.936	.354

Table 4.35 Continued…

4	(Constant)	4.867	1.043		4.664	.000
	TMT Heterogeneity	-2.107	1.249	-.218	-1.687	.098
	Group Cohesion	.333	.137	.314	2.424	.019
	Competitive Repertoire Range	-.227	.095	-.294	-2.384	.021

a. Dependent Variable: Internal Processes Performance

Source: Primary Data (2018)

Model 3 in Table 4.35 showed the joint effect with competitive repertoire concentration and it revealed that TMT heterogeneity, group cohesion and competitive repertoire concentration were moderately correlated with internal processes performance as shown by R = 0.466. The variables accounted for 21.7% of the variations in internal processes performance. Group cohesion accounting for most of the variations with R^2 change = 0.105, followed by TMT heterogeneity with R^2 change = 0.097 then competitive repertoire concentration with R^2 change = 0.015. The joint model was a good fit as evidenced by F (3, 49) = 4.343 which was greater than the critical F (3, 49) = 2.85 implying that TMT heterogeneity, group cohesion and competitive repertoire concentration jointly predicted internal processes performance in a statistically significant manner. This was also shown by p = 0.009 < 0.05. Group cohesion was independently statistically significant with p = 0.012 which was less than p = 0.05.

Model 4 in Table 4.35 with competitive repertoire range indicated that TMT heterogeneity, group cohesion and competitive repertoire range were moderately correlated with internal processes performance as evidenced by R = 0.537. The variables jointly explained 28.8% of the variations in internal processes performance. Group cohesion accounted for most of the variations with R^2 change = 0.105 followed by TMT heterogeneity with R^2 change = 0.097 then competitive repertoire range with R^2 change = 0.086. The model was a good fit and the variables had a statistically significant joint effect on internal processes as evidenced by F (3, 49) = 6.353 which was greater than the critical F (3, 49) = 2.85. This was also evidenced by p = 0.001 < 0.05. Group cohesion and competitive repertoire range were independently significant as shown by p = 0.019 and p = 0.021 respectively.

Table 4.36: TMT Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Learning and Development Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.144[a]	.021	.002	.40781
2	.348[b]	.121	.086	.39017
3	.362[c]	.131	.078	.39189
4	.412[d]	.170	.119	.38304

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Table 4.36 Continued…

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.180	1	.180	1.083	.303[b]
	Residual	8.482	51	.166		
	Total	8.662	52			
2	Regression	1.050	2	.525	3.448	.040[c]
	Residual	7.612	50	.152		
	Total	8.662	52			
3	Regression	1.102	3	.367	2.381	.081[d]
	Residual	7.560	49	.154		
	Total	8.662	52			
4	Regression	1.472	3	.491	3.345	.026[e]
	Residual	7.189	49	.147		
	Total	8.662	52			

a. Dependent Variable: Learning and Development Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

e. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.652	.567		8.200	.000
	TMT Heterogeneity	-1.232	1.184	-.144	-1.041	.303
2	(Constant)	3.126	.838		3.730	.000
	TMT Heterogeneity	-.494	1.174	-.058	-.421	.676
	Group Cohesion	.310	.130	.328	2.390	.021

Table 4.36 Continued…

3	(Constant)	3.268	.863		3.788	.000
	TMT Heterogeneity	-.582	1.185	-.068	-.491	.626
	Group Cohesion	.320	.131	.339	2.444	.018
	Competitive Repertoire Concentration	-.434	.578	-.101	-.751	.456
4	(Constant)	3.954	.957		4.134	.000
	TMT Heterogeneity	-.472	1.153	-.055	-.409	.684
	Group Cohesion	.291	.128	.309	2.279	.027
	Competitive Repertoire Range	-.153	.090	-.222	-1.697	.096

a. Dependent Variable: Learning and Development Performance

Source: Primary Data (2018)

Model 3 in Table 4.36 revealed that TMT heterogeneity, group cohesion and competitive repertoire concentration were weakly correlated with learning and development performance as shown by R = 0.362. The variables accounted for 13.1% of the variations in learning and development performance. Group cohesion accounted for most of the variations with R^2 change = 0.1 followed by TMT heterogeneity with R^2 change = 0.021 then competitive repertoire concentration with R^2 change = 0.01. The overall model was not a good fit with F (3, 49) = 2.381 which was less than the critical F (3, 49) = 2.85 implying that the variables did not predict learning and development performance in a statistically significant manner. This was also evidenced by p = 0.081 > 0.05. Independently, group cohesion had a statistically significant effect on learning and development performance with p = 0.018 < 0.05.

Model 4 in table 4.36 revealed that TMT heterogeneity, group cohesion and competitive repertoire range had moderate correlation with learning and development performance with R = 0.412. The combined variables accounted for 17% of the variations in learning and development performance. Group cohesion accounted for most of the variations with R^2 change = 0.1 followed by competitive repertoire range with R^2 change = 0.05 then TMT heterogeneity with R^2 change = 0.021. The combined model was a good fit with F (3, 49) = 3.345 which was greater than the critical F (3, 49) = 2.85 implying that the variables had a statistically significant joint effect on learning and development performance. This was also shown by p = 0.026 < 0.05. Group cohesion also had a statistically significant effect independently with p = 0.027 < 0.05.

Table 4.37: TMT Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Social Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317[a]	.100	.083	.58265
2	.386[b]	.149	.115	.57225
3	.391[c]	.153	.101	.57680
4	.422[d]	.178	.127	.56825

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Table 4.37 Continued…

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.931	1	1.931	5.687	.021[b]
	Residual	17.314	51	.339		
	Total	19.244	52			
2	Regression	2.871	2	1.435	4.383	.018[c]
	Residual	16.374	50	.327		
	Total	19.244	52			
3	Regression	2.942	3	.981	2.948	.042[d]
	Residual	16.302	49	.333		
	Total	19.244	52			
4	Regression	3.422	3	1.141	3.532	.021[e]
	Residual	15.823	49	.323		
	Total	19.244	52			

a. Dependent Variable: Social Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

e. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.877	.802		7.331	.000
	TMT Heterogeneity	-4.063	1.704	-.317	-2.385	.021
2	(Constant)	4.265	1.235		3.454	.001
	TMT Heterogeneity	-3.240	1.742	-.253	-1.859	.069
	Group Cohesion	.324	.191	.230	1.694	.096

Table 4.37 Continued…

3	(Constant)	4.138	1.275		3.246	.002
	TMT Heterogeneity	-3.163	1.764	-.247	-1.793	.079
	Group Cohesion	.315	.194	.224	1.626	.110
	Competitive Repertoire Concentration	.395	.851	.062	.464	.645
4	(Constant)	5.294	1.457		3.633	.001
	TMT Heterogeneity	-3.352	1.732	-.261	-1.935	.059
	Group Cohesion	.298	.191	.212	1.563	.125
	Competitive Repertoire Range	-.175	.134	-.170	-1.306	.198

a. Dependent Variable: Social Performance

Source: Primary Data (2018)

Model 3 in Table 4.37 showed that TMT heterogeneity, group cohesion and competitive repertoire concentration had moderate correlation with social performance as evidenced by R = 0.391. The variables jointly accounted for 15.3% of the variations in social performance. TMT heterogeneity explained most of the variations in social performance with R^2 change = 0.1, followed by group cohesion with R^2 change = 0.049 then competitive repertoire concentration with R^2 change = 0.004. The joint model was a good fit as evidenced by F (3, 29) = 2.948 which was greater than the critical F (3, 49) = 2.85 implying that the variables had a statistically significant joint effect on social performance. This was also evidenced by $p = 0.042 < 0.05$. Further, none of the variables had a statistically significant independent effect on social performance.

Model 4 in Table 4.37 revealed that TMT heterogeneity, group cohesion and competitive repertoire range had a moderate correlation with social performance as indicated by R = 0.422. The variables jointly accounted for 17.8% of the variations in social performance. TMT heterogeneity accounted for most of the variations with R^2 change = 0.1 followed by group cohesion with R^2 change = 0.049 then competitive repertoire range with R^2 change = 0.029. The combined model was a good fit as evidenced by F (3, 49) = 3.532 which was greater than the critical F (3, 49) = 2.85 implying that the variables jointly affected social performance in a statistically significant manner. This was also shown by p = 0.021 < 0.05. However, none of the variables were independently statistically significant.

Table 4.38: TMT Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Environmental Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.201[a]	.040	.022	.58116
2	.244[b]	.059	.022	.58108
3	.258[c]	.067	.009	.58477
4	.261[d]	.068	.011	.58426

a. Predictors: (Constant), TMT Heterogeneity

b. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.725	1	.725	2.146	.149[b]
	Residual	17.225	51	.338		
	Total	17.950	52			

Table 4.38 Continued…

2	Regression	1.067	2	.533	1.580	.216[c]
	Residual	16.883	50	.338		
	Total	17.950	52			
3	Regression	1.194	3	.398	1.164	.333[d]
	Residual	16.756	49	.342		
	Total	17.950	52			
4	Regression	1.223	3	.408	1.194	.322[e]
	Residual	16.727	49	.341		
	Total	17.950	52			

a. Dependent Variable: Environmental Performance

b. Predictors: (Constant), TMT Heterogeneity

c. Predictors: (Constant), TMT Heterogeneity, Group Cohesion

d. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Concentration

e. Predictors: (Constant), TMT Heterogeneity, Group Cohesion, Repertoire Range

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.072	.808		6.273	.000
	TMT Heterogeneity	-2.472	1.688	-.201	-1.465	.149
2	(Constant)	4.115	1.248		3.297	.002
	TMT Heterogeneity	-2.010	1.749	-.163	-1.149	.256
	Group Cohesion	.195	.193	.143	1.006	.319

Table 4.38 Continued…

3	(Constant)	4.287	1.287		3.330	.002
	TMT Heterogeneity	-2.116	1.769	-.172	-1.196	.237
	Group Cohesion	.207	.196	.152	1.057	.296
	Competitive Repertoire Concentration	-.526	.863	-.085	-.610	.545
4	(Constant)	4.618	1.459		3.165	.003
	TMT Heterogeneity	-1.996	1.759	-.162	-1.135	.262
	Group Cohesion	.183	.195	.135	.939	.352
	Competitive Repertoire Range	-.093	.138	-.094	-.676	.502

a. Dependent Variable: Environmental Performance

Source: Primary Data (2018)

Model 3 in Table 4.38 revealed that there was weak correlation between TMT heterogeneity, group cohesion and competitive repertoire concentration and environmental performance as indicated by R = 0.258. The variables jointly accounted for 6.7% of the variations in environmental performance. TMT heterogeneity accounted for most of the variations with R^2 change = 0.04, followed by group cohesion with R^2 change = 0.02 then competitive repertoire concentration with R^2 change = 0.008. The combined model was not a good fit as shown by F (3, 49) = 1.164 which was less than the critical F (3, 49) = 2.85 implying that the joint effect of the variables on environmental performance was statistically not significant. This was also evidenced by p = 0.333 > 0.05. In addition, all the variables independently were statistically not significant.

Model 4 in Table 4.38 revealed that TMT heterogeneity, group cohesion and competitive repertoire range had a weak correlation with environmental performance as shown by R = 0.261. TMT heterogeneity accounted for most of the variations with R^2 change = 0.04 followed by group cohesion with R^2 change = 0.02 then competitive repertoire range with R^2 change = 0.009. The combined model was not a good fit as indicated by F (3, 49) = 1.194 which was less than the critical F (3, 49) = 2.85 implying that the variables joint effect on environmental performance was statistically not significant. This was also shown by p = 0.322 > 0.05. In addition, all the variables did not have a statistically significant independent effect on environmental performance.

4.11 Summary of Hypotheses Testing

This study intended to determine the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and firm performance. To achieve this overall objective, four hypotheses were enumerated. Table 4.39 outlines a summary of the conclusions made for each hypothesis.

Table 4.39: Summary of Hypotheses Conclusions

Performance Perspective	**H_1**	**H_2**	**H_3**	**H_4**
Financial	Rejected	Rejected	Failed to Reject	Rejected
Customer	Failed to Reject	Failed to Reject	Failed to Reject	Rejected[a]
Internal Processes	Rejected	Rejected	Failed to Reject	Rejected
Learning & Development	Failed to Reject	Failed to Reject	Failed to Reject	Rejected[a]

Table 4.39 Continued…

Performance Perspective	H_1	H_2	H_3	H_4
Social	Rejected	Rejected	Failed to Reject	Rejected
Environmental	Failed to Reject	Failed to Reject	Failed to Reject	Failed to Reject

[a]: With competitive repertoire complexity measured as competitive repertoire range

H_1: TMT heterogeneity has no significant effect on firm performance

H_2: Group cohesion has no significant mediating effect on the relationship between TMT heterogeneity and firm performance

H_3: Competitive repertoire complexity has no significant mediating effect on the relationship between TMT heterogeneity and firm performance

H_4: TMT heterogeneity, group cohesion and competitive repertoire complexity have no significant joint effect on firm performance

Source: Primary Data (2018)

4.12 Chapter Summary

Chapter four presented the findings of the study. To begin with, the response rate was set out followed by the results from the reliability and validity tests. This was followed by the tests for multiple regression assumptions. Descriptive statistics were then outlined relating to the TMT characteristics, group cohesion, competitive repertoire complexity and firm performance. Finally, the findings relating to the study hypotheses were presented.

The next chapter presents the discussions relating to the findings in chapter four. Each objective of this study is set out in its respective section. The objective and study hypothesis are set out before the findings are discussed. The findings are then compared and contrasted with those of other related authors and with expectations from theory. Conclusions are also set out relating to whether the hypothesis were rejected or failed to be rejected.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discusses the findings from the testing of hypotheses in chapter four. The discussions are presented for each of the specific objectives. To begin with the objective is laid out and the respective hypothesis specified. The approach adopted in testing the hypothesis is then discussed. The conclusions made are then outlined before being compared and contrasted with literature reviewed.

The effect of TMT heterogeneity components on performance was first tested. The study found that gender heterogeneity and functional background heterogeneity had no significant effect on any measure of performance. Tenure heterogeneity and education level heterogeneity only affected internal processes performance significantly. Age heterogeneity had a significant effect on financial performance and customer performance. On the overall, TMT heterogeneity had a significant effect on financial performance, internal processes performance and social performance.

The study examined whether group cohesion and competitive repertoire complexity mediated the relationship between TMT heterogeneity and firm performance. Group cohesion was found to have a significant mediating effect on the relationship when firm performance was quantified in terms of financial, internal processes and social perspectives. Competitive repertoire had no significant mediating effect on the relationship. Finally, the study found that TMT heterogeneity, group cohesion and competitive repertoire complexity jointly affected all performance perspectives significantly except for environmental performance.

5.2 Top Management Team Heterogeneity and Firm Performance

The first objective of this study was to establish the effect of TMT heterogeneity on the performance of large food and beverage manufacturing firms in Kenya. TMT heterogeneity bestows on the TMT a variety of skills, experiences and talents which widens the viewpoints of the TMT and their information processing capacity. A heterogeneous TMT is therefore more empowered to make superior decisions that can lead to superior performance for the organization. Further, a heterogeneous TMT can launch a wide array of competitive moves that can confound the competition leading to superior performance and is therefore associated with superior performance.

To test this expectation the study set the hypothesis, ***H_1: TMT heterogeneity has no significant effect on firm performance***. TMT heterogeneity components namely gender, tenure in the organization, age, highest education level and functional background were first tested for their effect on performance independently. The six measures of performance derived from the SBSC were regressed against the components of TMT heterogeneity. There were mixed findings for each of the components against the different measures of performance.

Age heterogeneity had a statistically significant effect on financial and customer performance but the effect on internal processes, learning and development, social and environmental performance was statistically not significant. Further, age heterogeneity had a negative effect on financial performance but a positive one on customer performance. This was aligned to findings by Tihanyi et al (2000) who noted that the presence of younger managers in the TMT as was the case among the food and beverage manufacturing firms led to volatile performance.

Education level heterogeneity had a statistically significant effect on customer performance and internal processes performance. However, its effect on financial, learning and development, social and environmental performance was statistically not significant. This partially supported the findings by Mkalama (2014) who found that education had no statistically significant effect on performance. Education level heterogeneity had a negative effect on customer performance and internal processes performance implying that the more the TMT was composed of managers with different education qualifications, the more customer and internal processes performance declined.

Tenure heterogeneity had a statistically significant effect on internal processes. However its effect on the other measures of performance namely financial, customer, learning and development, social and environmental performance was statistically not significant which supported findings by Mkalama (2014). The effect of tenure heterogeneity on internal processes was negative indicating that the more the TMT was composed of managers with different tenures in the organization, the more internal processes performance suffered. This contradicted the findings by Certo et al (2006) who found a positive relationship between tenure heterogeneity and financial performance. This could be attributed to contextual and methodological differences since this study applied a cross sectional survey, while the study by Certo et al (2006) was a meta-analysis.

Gender heterogeneity had no statistically significant influence on all the measures of performance. This was consistent with the findings by Mkalama (2014) who established that gender did not affect performance in a statistically significant manner. However, it contradicted the findings by Dezso and Ross (2012) who found that gender disparity in the TMT improves firm's financial performance. Schwab et al (2016) also found a curvilinear relationship between managerial gender variety and firm performance as measured by employee productivity. These differences could be attributed to methodological and contextual differences. These studies were carried out in the USA public companies and Portugal using panel data which is longitudinal in nature while the current study applied cross sectional data in Kenya.

Functional background heterogeneity had no statistically significant effect across all the performance measures. This implied that whether there was a variety of managers from different backgrounds or not, firm performance was not affected significantly. Thus the skills and experiences associated with functional backgrounds did not reflect on the firm's outcomes. This contradicted the findings by Certo et al (2006) and Mkalama (2014) who found that functional background had a positive effect on performance. The differences in findings could be attributed to contextual differences.

To determine the overall effect of TMT heterogeneity on firm performance, a composite was developed from the components of TMT. Each of the six performance dimensions was regressed against overall TMT heterogeneity. This study found that TMT heterogeneity affected different dimensions of performance differently. TMT heterogeneity had a statistically significant effect on financial performance. Further, it affected financial performance negatively.

This was aligned to the assertions by Knight et al (1999) that although diversity is portrayed as a positive force which results in performance, it is negative since it hinders strategic consensus which affects performance. This contradicted findings by Awino (2013) who found a positive but statistically not significant relationship between TMT diversity and financial performance of commercial banks. This could be attributed to the contextual differences between commercial banks and food and beverage manufacturers.

This study found that TMT heterogeneity had a negative effect on customer performance but this effect was statistically not significant. This was consistent with the findings by Awino (2013) among commercial banks and Kinuu (2014) among firms listed on the Nairobi Securities Exchange. This implied that when performance was measured in terms of the customer perspective of the SBSC, the variety of characteristics in the TMT were not sufficient to affect firm performance.

TMT heterogeneity had a statistically significant effect on internal processes performance. Further, it had a negative effect on internal processes performance. This implied that the more the TMT became heterogeneous the more internal processes performance declined. This was contrary to the findings by Awino (2013) who found the relationship statistically not significant. The relationship between TMT heterogeneity and learning and development performance was negative albeit statistically not significant. This implied that TMT heterogeneity could not account for the variations in learning and development performance. This supported the findings by Awino (2013) among the commercial banks in Kenya.

TMT heterogeneity had a negative effect on social performance which was statistically significant. This implied that TMT heterogeneity was harmful to social performance. This could be attributed to the increased differences among the TMT members which would trigger group dysfunctions (Knight et al, 1999), hindering the TMT from tapping into the potential afforded by the variety of skills and experiences within the TMT. Finally, TMT heterogeneity had a negative but statistically not significant effect on environmental performance. This implied that the effect of TMT heterogeneity alone was not sufficient to affect a firm's environmental performance in a statistically significant manner.

On the overall, this study established that TMT heterogeneity had a significant effect on financial, internal processes and social performance measures but the effect was not significant for customer, learning and development and environmental performance which partially supported the findings by Awino (2013), Muchemi (2013) and Mutuku (2012) who found the relationship not significant. This confirmed the upper echelons propositions that the features of the TMT affect the performance of the organization for some performance measures and therefore the senior executives in an organization matter (Hambrick & Mason, 1984; Hambrick, 2007). Hambrick (2007) noted that since leadership was a shared activity, the characteristics of the leading coalition would enter into the decision making process and thereby the organization's outcomes. The findings that TMT heterogeneity affected performance therefore provided additional empirical evidence to buttress the upper echelons theory.

It is notable that TMT heterogeneity was found to affect all the measures of performance negatively. TMT heterogeneity bestows wider perspectives, cognitive abilities and capacity to solve problems which results in positive effect on performance as demonstrated by Hambrick et al (1996), Carpenter (2002), Certo et al (2006), Mkalama (2014) and Njagi (2015). However, TMT heterogeneity can also lead to schisms that make it difficult to share information (Ancona & Caldwell, 1992) and in some cases create outright acrimony and mistrust (Hambrick et al, 1996) thereby becoming a liability to the organization.

This study provided further evidence from the large food and beverage manufacturing firms in Kenya that TMT heterogeneity was detrimental to performance. This was aligned with Knight et al (1999), Hambrick et al (2015) and Yohannes and Ayako (2016) who found that TMT heterogeneity affected performance negatively. This can be explained by increased conflict and divisions among the TMT when heterogeneity increases which hinders the ability of the TMT to work together to deliver on performance.

5.3 Top Management Team Heterogeneity, Group Cohesion and Firm Performance

The second objective of this study was to assess the effect of group cohesion on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. Group cohesion was defined as the capability of the group members to get along and work jointly to deliver the goals of the organization. To test the effect of group cohesion on the relationship between TMT heterogeneity and firm performance, the study set out a second hypothesis, ***H_2: Group cohesion has no significant mediating effect on the relationship between TMT heterogeneity and firm performance***. This hypothesis was tested for only financial, internal processes and social performance since the first condition in the Baron and Kenny (1986) model was only fulfilled for these performance measures.

In testing the second condition in the Baron and Kenny (1986) model, this study established that TMT heterogeneity had a statistically significant effect on group cohesion. This met the second condition in testing for the mediating effect of group cohesion. Specifically, TMT heterogeneity affected group cohesion negatively. This implied that the more the TMT became diverse in its characteristics, the more it became fragmented. This could be attributed to the differences that TMT members perceived amongst themselves making it difficult for them get along.

This conclusion was aligned to the assertions by Carpenter et al (2004) who observed that in studying TMTs it was imperative to focus on the subgroups among them rather than viewing them as an aggregate whole. Further, it gave credence to the observation by Ancona and Caldwell (1992) and Hambrick et al (1996) that TMT heterogeneity can result in fault lines and acrimony among the TMT members becoming a liability to the organization. The results also reinforced the findings by Knight et al (1999) and Lau and Murnighan (1998) that demographic diversity can influence group processes negatively and complicate managers' work.

Further, the findings by this study were aligned to the expectations from the self categorization theory on which the group cohesion variable was hinged. This theory holds that people mentally classify themselves as either part of a group or not pegged on their similarities or differences (Turner et al, 1994 and Hogg & Terry, 2000). As TMT heterogeneity increases, TMT members are confronted by more dissimilarity which spurs them to categorize themselves as not belonging to the group. This fragments the group into cognitive categories as each TMT member goes through the self categorization process. The result is the group cohesion declines as the group is fragmented along the different attributes within a heterogeneous TMT. Therefore this study provided empirical backing to the self categorization theory.

The third step in the Baron and Kenny (1986) model consisted of evaluating the effect of group cohesion on firm performance which was done for the three performance measures that met the first condition namely financial, internal processes and social performance. This study established that group cohesion had a statistically significant effect on all three performance perspectives meeting the third condition for mediation.

Specifically group cohesion affected financial, internal processes and social performance positively. This implied that group cohesion was beneficial to performance. This was aligned to the conclusions by Beal et al (2003), Van Vianen and De Dreu (2001), Chang et al (2006), Shin and Park (2009) and Harun and Mahmood (2012).

The findings that group cohesion had a positive effect on corporate performance provided empirical evidence in support of the self categorization theory and the resource based view. Consistent with the self categorization when group members perceive themselves as belonging to the group, they are attracted to the group and its goals resulting in increased cohesion which helps them to deliver on overall group goals (Hogg et al, 1995). Further, the resource based view holds that organizations with valuable, unique and unmatched endowments have the ability to command superior performance (Wernerfelt, 1984 and Barney, 2001). Further, when the resources are distinct and cannot be transferred from one firm to another, the firm can build sustained competitive advantage (Barney, 1991). In line with this group cohesion among the TMT can be seen as important, unique, inimitable and non transferrable resource which accords the firm the ability to gain superior performance. Therefore firm performance increases with increase in group cohesion.

The final step in testing for mediation with the Baron and Kenny (1986) model consisted of analyzing the effect of TMT heterogeneity and group cohesion on performance. This was done for financial, internal processes and social performance as identified in the first step. This study found that TMT and group cohesion had a statistically significant effect on all three perspectives of performance that is financial, internal processes and social performance. This met the final condition in testing for mediation and thus the study inferred that group cohesion mediated the relationship between TMT heterogeneity and financial, internal processes and social performance. This study therefore rejected the hypothesis that group cohesion has no significant mediating effect on the relationship between TMT heterogeneity and firm performance when performance was viewed in terms of financial, internal processes and social perspectives.

This study also noted that when group cohesion was considered alongside TMT heterogeneity the amount of variation accounted for increased for all the performance perspectives compared to when TMT heterogeneity was considered alone. This was aligned to the findings by Knight et al (1999) that group processes strengthened the relationship between TMT heterogeneity and strategic consensus. In addition this study corroborated the findings by Marchewka (2014) that TMT characteristics affected group dynamics which then affected firm performance. Peterson et al (2003) studying CEOs also established that the CEO personality influenced TMT dynamics which affected firm performance. This implied that the ability of the TMT to deliver relied on the group dynamics between TMT members.

In revisiting the upper echelons theory, Hambrick (2007) noted that the degree to which the TMT affected performance positively depended on the TMTs ability to engage in joint and communal relations. Hambrick et al (2015) observed that the only way that TMT heterogeneity affects the TMT dynamics was to the level that individuals in the TMT transact with one another. This study by proving that group cohesion affected the relationship between TMT heterogeneity and firm performance gave further credence to the findings by Hambrick et al (2015) that TMT heterogeneity affected firm performance when the TMT was structured in such a way that the members were interdependent.

5.4 Top Management Team Heterogeneity, Competitive Repertoire Complexity and Firm Performance

The third objective in this study was to evaluate the effect of competitive repertoire complexity on the relationship between TMT heterogeneity and the performance of large food and beverage manufacturing firms in Kenya. Hambrick and Mason (1984) proposed that TMT demographic attributes affect performance through their effect on strategies. This implied that strategies mediated the relationship between TMT characteristics and performance. This study tested this relationship using the competitive repertoire to capture the complete array of strategies pursued by organizations. Further, TMT heterogeneity is associated with competitive repertoire complexity due to the increased capacity of the TMT to process information and support a wide variety of competitive action.

To capture this objective, a third hypothesis was set, ***H_3: Competitive repertoire complexity has no significant mediating effect on the relationship between TMT heterogeneity and firm performance***. To test this hypothesis competitive repertoire complexity was measured in terms of competitive repertoire concentration and competitive repertoire range. This hypothesis was evaluated through the Baron and Kenny (1986) model for testing mediation.

The first condition had been met since TMT heterogeneity had significant effect on financial, internal processes and social performance. To test the second condition competitive repertoire concentration and competitive repertoire range were regressed against TMT heterogeneity. The study established that TMT heterogeneity had no statistically significant effect on competitive repertoire concentration and competitive repertoire range. This implied that the second requirement in mediation was not satisfied. This study therefore inferred that competitive repertoire complexity did not mediate the relationship between TMT heterogeneity and firm performance. This study therefore failed to reject the hypothesis that competitive repertoire complexity had no significant mediating effect on the relationship between TMT heterogeneity and firm performance.

The findings of this study contradicted the findings by Yohannes and Ayako (2016) who found that generic strategies mediated the relationship between TMT characteristics and corporate performance. Carpenter (2002) also established that the firm's international strategy mediates the relationship between TMT heterogeneity and performance. This could be attributed to methodological differences in that these studies investigated single and generic strategies as opposed to the entire array of strategies deployed by the firm. When the entire array of competitive actions was considered, the characteristics of the TMT did not fully reflect on the strategic choices. This was however partially supportive of the findings by Hambrick et al (1996) that heterogeneous TMTs were slower and more unlikely to respond to competitor initiatives.

Further, this study did not support the expectation that TMT heterogeneity would be associated with competitive repertoire complexity as demonstrated by Hambrick et al (1996), Offstein (2004) and Gagnon (2006). This was attributed to contextual differences given that these studies had been conducted in the USA airlines and pharmaceutical companies and Quebec small and medium sized firm. This study was conducted among large food and beverage manufacturers in Kenya whereby the dynamic environment imposes certain competitive moves adopted by the firms rather than being deliberately chosen by the TMT. The association between TMT heterogeneity and the competitive repertoire assumes that the TMT has to be actively engaged in strategy choice such that the choices will reflect the idiosyncrasies that the TMT brings to the decision situation.

Due to the presence of imposed and emergent competitive actions, the TMT characteristics may not enter into the competitive repertoire adopted by the firms thus the lack of relationship between TMT heterogeneity and competitive repertoire complexity. This study therefore corroborated the assertions by Lee (2012) who noted that to crystallize the effect of competitive repertoire on performance, it was vital to distinguish between strategically initiated actions from incidental ones.

The expectation in this study lined up with the information processing theory was that as the TMT became more heterogeneous the more it was capable of launching a complex repertoire of competitive actions. The information processing theory argues that organizational subunits are faced by uncertainty as a result of their characteristics and so must develop information and process it to deal with the uncertainty (Tushman & Nadler, 1978). Shaffer and Kipp (2010) noted that different strategies imposed different information needs. Competitive repertoire complexity requires the organization to gather and process a wide array of information which is possible with a heterogeneous TMT since it has a wider capacity than a homogeneous one.

This study's findings were not consistent with the information processing theory. This is because TMT heterogeneity did affect competitive repertoire complexity in a statistically significant manner. However, this study confirmed one of limitations associated with the information processing theory. The theory is accused of failing to explain reactive situations or complex contexts where little or no information is available or time for processing (Shaffer & Kipp, 2010). The context of this study was the large food and beverage manufacturing firms which due to the nature of the sector necessitated emergent competitive actions.

5.5 Top Management Team Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Firm Performance

The final objective of this study was to determine the joint effect of TMT heterogeneity, group cohesion and competitive repertoire complexity on the performance of large food and beverage manufacturing firms in Kenya. To achieve this objective, this study set a corresponding hypothesis, ***H_4: TMT heterogeneity, group cohesion and competitive repertoire complexity have no significant joint effect on firm performance***. This hypothesis was tested against financial, customer, internal processes, learning and development, social and environmental performance. Competitive repertoire complexity was captured in terms of both competitive repertoire concentration and competitive repertoire range.

This study established that TMT heterogeneity, group cohesion and competitive repertoire complexity had a statistically significant joint effect on financial, internal processes and social performance. In addition, when competitive repertoire complexity was evaluated in terms of repertoire range, the joint variables had a statistically significant influence on all the performance perspectives except for environmental performance. This confirmed the findings by Certo et al (2006) that the relationship between TMT heterogeneity and firm performance was not a direct one. Further, Knight et al (1999) established that TMT heterogeneity did not significantly affect strategic consensus if group processes were not considered. This study therefore rejected the hypothesis that TMT heterogeneity, group cohesion and competitive repertoire complexity have no significant joint effect on firm performance as far as financial, internal processes and social performance were concerned.

This study also established that when the variables were considered together, TMT heterogeneity had a negative effect on all the performance perspectives except learning and development. Group cohesion had a positive effect on all performance perspectives. Competitive repertoire concentration had a negative effect on all performance measures except financial and social performance while competitive repertoire range had a negative effect on all performance measures except financial performance. This implied that TMT heterogeneity and competitive repertoire complexity tended to be harmful to performance unless the TMT was cohesive. This supported the findings by Carpenter (2002) that TMT heterogeneity had a negative effect on performance for firms with high complexity due to increased conflict among the TMT. Unless the TMT was able to work together, differences in the TMT characteristics and deployment of a large number of various competitive actions would impair firm performance. This was also consistent with Connelly et al (2017) who found that competitive repertoire complexity was harmful to performance in the short term and could overburden the TMT in the long term.

Finally this study established that the amount of variation accounted for by TMT heterogeneity, group cohesion and competitive repertoire complexity increased compared to when competitive repertoire complexity was excluded. This suggested that although competitive repertoire complexity was not a statistically significant mediator to the relationship between TMT heterogeneity and firm performance, it affected business performance either as an independent or a moderator variable. This gave credence to the findings by Ferrier and Lyon (2004) that TMT heterogeneity was a moderator to the relationship between competitive repertoire simplicity and firm performance.

5.6 Chapter Summary

Chapter five presented a discussion of the findings made by this study. The chapter was set out in line with each study objective. The hypothesis relating to the objective of interest was first outlined before a description of how the hypothesis was tested was given. The conclusions arrived from testing the hypothesis were then highlighted and discussed in line with existing literature. Specifically, the conclusions were compared to theoretical expectations and empirical studies with the comparisons and contrasts discussed.

To begin with the effect of TMT heterogeneity on firm performance was considered. The study concluded that TMT heterogeneity was detrimental to performance which was consistent with the upper echelons theory and some previous scholars. The study then considered group cohesion and competitive repertoire complexity as mediators to this relationship and concluded that group cohesion was a significant mediator as expected from the self categorization theory. Finally the study concluded that TMT heterogeneity, group cohesion and competitive repertoire complexity jointly affected performance significantly and could be seen as in-house resources for competitive advantage in line with the resource based view.

The next chapter presents a summary of the findings, conclusions and recommendations. The chapter begins with a summary of the findings from chapter four including findings from the descriptive statistics and the hypotheses testing. Next conclusions made are set out for each hypothesis along with the related discussions. Implications drawn from the findings are then set out before the limitations of the study are outlined. Finally suggestions for further research are given.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the findings, conclusions and recommendations. The chapter begins with the summary of the findings that were presented in detail in chapters four and five. The conclusions made from the results are then set out before the limitations are presented. The chapter then details the recommendations made by the study and the implications of the findings to theory, practice and policy. Finally suggestions for further research are outlined.

6.2 Summary of Findings

This study aimed at determining the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. To achieve this objective, primary data was collected from 53 firms and secondary data on the financial performance of the firms was obtained from KRA. The data was analyzed and the findings detailed in chapters four and five. The key findings of this study were set out in this section.

To begin with the study aimed at ascertaining the demographic characteristics of the TMT members in these firms. The study established that 69.06% of the TMT members were male suggesting that men dominated the TMTs in the large food and beverage manufacturing sector. The largest percentage (25.07%) of the managers had been in their organization for 5 years or less.

Further most of the managers (24%) were between the ages of 36 to 40 years while 21% were between 41 and 45 years which accounted for most of the managers. In addition, 83.86% of the managers had at least a bachelors degree indicating that most of the managers had university education. Finally, most of the top managers in these firms were in sales and marketing followed by accounting and finance.

The study also established that most of the TMTs among the large food and beverage manufacturing firms were moderately to highly cohesive. The firms had mean scores ranging from 3.37 to 4.36 for task cohesion and 3.25 to 3.96 for social cohesion. Further, the study sought to determine the competitive moves deployed by the firms and determined that most of the competitive actions employed by these firms were marketing actions (52.49%). Finally most of the firms indicated that their non financial performance had improved by a high extent with average scores ranging from 3.67 to 4.04.

The overall objective of this study was captured through four specific objectives and corresponding hypotheses. The first objective was achieved by setting the hypothesis that TMT heterogeneity had no significant relationship effect on firm performance. The individual effects of TMT heterogeneity were tested against financial and non financial performance. Only age heterogeneity had a significant effect on financial performance while age heterogeneity and education level heterogeneity had a significant effect on customer performance. Tenure heterogeneity and education level heterogeneity affected internal processes performance in a significant manner. None of the components independently predicted social, learning and development and environmental performance significantly.

The TMT heterogeneity components were then composited to test the overall effect of TMT heterogeneity on firm performance. The findings revealed that on the overall TMT heterogeneity had a significant negative effect on financial, internal processes and social performance. TMT heterogeneity explained 7.6% of the variations in financial performance, 9.7% in internal processes performance and 10% in social performance. Therefore the study rejected the hypothesis that TMT heterogeneity had no significant effect on firm performance with reference to financial, internal processes and social performance.

The second objective of this study was captured by the hypothesis that group cohesion had no significant mediating effect on the relationship between TMT heterogeneity and firm performance. This hypothesis was tested in four steps corresponding to the Baron and Kenny (1986) model for testing mediation. In the first step, TMT heterogeneity was demonstrated to have a significant negative effect on financial, internal processes and social performance. In the second step, TMT heterogeneity was uncovered to have a significant negative effect on group cohesion and it explained 7.8% of the variations in group cohesion. In the third step, group cohesion was shown to have a significant positive effect on financial, internal processes and social performance and it accounted for 11.3%, 16.3% and 9% of the variations in financial, internal processes and social performance respectively. The final step revealed that group cohesion fully mediated the relationship between TMT heterogeneity and firm performance. The study therefore rejected the hypothesis that group cohesion had no significant mediating effect on the TMT heterogeneity and firm performance relationship.

The third objective was expressed through the hypothesis that competitive repertoire complexity had no significant mediating effect between TMT heterogeneity and firm performance. This hypothesis was also evaluated through the Baron and Kenny (1986) model for testing mediation. In the first step, TMT heterogeneity was shown to have a significant negative effect on financial, internal processes and social performance. The second step revealed that TMT heterogeneity had no significant effect on competitive repertoire complexity. Due to this, the study concluded that competitive repertoire complexity did not mediate the relationship between TMT heterogeneity and firm performance. Therefore, the study failed to reject the hypothesis that competitive repertoire complexity had no significant mediating effect on the relationship between TMT heterogeneity and firm performance.

The fourth objective was captured through the hypothesis that TMT heterogeneity, group cohesion and competitive repertoire complexity had no significant joint effect on firm performance. This hypothesis was tested using both competitive repertoire concentration and competitive repertoire range. The findings revealed that TMT heterogeneity, group cohesion and competitive repertoire concentration jointly affected financial, internal processes and social performance significantly. On the other hand, TMT heterogeneity, group cohesion and competitive repertoire range jointly affected all performance perspectives significantly except for environmental performance. In addition when the collective effect of the variables was considered the amount of variation accounted for increased across all the performance measures. The study therefore rejected the hypothesis that TMT heterogeneity, group cohesion and competitive repertoire complexity had no significant joint effect on firm performance.

6.3 Conclusion

This study set out to determine the effect of group cohesion and competitive repertoire complexity on the relationship between TMT heterogeneity and performance of large food and beverage manufacturing firms in Kenya. Four specific objectives and hypotheses were laid out to achieve the main objective of the study. The hypotheses were tested before conclusions were made arising from the findings.

The study revealed that TMT heterogeneity had a significant negative effect on firm performance. In their influential propositions, Hambrick and Mason (1984) posited that the attributes of senior executives affected the givens they brought to any decision situation especially when dealing with strategic decisions. They argued that observable manager attributes could be used to predict the organizational strategies and performance. In line with this they proposed the upper echelons theory. This study concluded that TMT heterogeneity affects firm performance negatively thus confirming the upper echelons proposition.

The study established that group cohesion had a significant mediating effect on the relationship between TMT heterogeneity and firm performance. Hambrick (2007) observed that it was important for the TMT to work together as a collective whole. Further, TMT heterogeneity is double edged in that it provides the TMT with a variety of skills and experiences which can benefit performance. However it can also trigger conflict and fragmentation within the TMT which harms performance. This study concluded that TMT heterogeneity was harmful to performance as shown by the negative effect on performance since it weakened the cohesiveness of the TMT.

The study also concluded that if the TMT was able to foster cohesiveness then it would benefit the firm in terms of positive performance. Further, group cohesion fully mediated this relationship and so for TMT heterogeneity to yield positive results, the TMT has to be cohesive. This confirmed the self categorization theory which holds that a cohesive group is able to overlook the idiosyncratic differences of the group members and work together to deliver group goals.

The study established that competitive repertoire complexity had no significant mediating effect on the relationship between TMT heterogeneity and firm performance. In outlining the upper echelons theory, Hambrick and Mason (1984) contended that TMT traits affected firm performance through affecting their strategic choices. This study tested this proposition using the firms' competitive repertoire complexity and concluded that TMT heterogeneity did not affect firm performance through their competitive repertoire. Further, competitive repertoire complexity was not associated with TMT heterogeneity among the large food and beverage manufacturing firms. This study concluded that the relationship envisaged in the upper echelons theory did not hold when the complete array of competitive actions by an organization was considered. This was attributed to the existence of many incidental activities within the firm's competitive actions.

The study found a joint significant effect between TMT heterogeneity, group cohesion and competitive repertoire complexity. Although the study concluded that competitive repertoire did not mediate the relationship between TMT heterogeneity and firm performance, it still had a significant direct effect on corporate performance. Competitive repertoire complexity could be deployed to confuse rivals but could also overburden managers by increasing their information processing requirements as proposed by the information processing theory as seen by the positive results on financial performance and negative ones on customer, internal processes, learning and development, social and environmental performance.

This study concluded that competitive repertoire complexity did not mediate the relationship between TMT heterogeneity and firm performance but it had a significant effect on firm performance either independently or as a moderator. However, the process by which it affected performance was not clearly delineated by this study. Finally, the study concluded that TMT heterogeneity, group cohesion and competitive repertoire complexity constitute resources that can be exploited for value as envisioned in the resource based view. Food and beverage manufacturing firms would therefore benefit in paying attention to these variables when trying to improve their performance.

6.4 Implications and Recommendations of the Study

This study focused on the TMT and their effect on the performance on the firm and was conducted among food and beverage manufacturing firms in Kenya. This was against a backdrop of mixed findings by TMT researchers. The study argued that there was an underlying assumption in TMT research that TMTs were teams in reality capable of deploying their collective abilities. This study observed that in reality TMTs could be really subgroups or even individuals in terms of how they operated in the organization and that the power might be with the kitchen cabinet rather than the cabinet as in the case with governments. This assumption if tested could provide more fruitful directions. The study therefore set out to ascertain the effect of group cohesion and competitive repertoire complexity on this relationship.

The study established that the components of TMT heterogeneity had different effects on the different perspectives of performance. On the overall, TMT heterogeneity was found to affect financial, internal processes and social performance negatively. The study also established group cohesion had a positive effect on performance and it mediated the effect of TMT heterogeneity on performance. Competitive repertoire complexity on the overall had a positive effect on financial performance but a negative one on the non financial measures of performance. The following theoretical, policy and practical implications and recommendations were made.

6.4.1 Theoretical Implications and Recommendations

This study adopted a positivist approach as its research philosophy which commences with theory then data is collated to either accept or disprove the theory. This study was anchored on the upper echelons theory. The variables were also supported by the self categorization theory, the resource based view and the information processing theory. Data was collected to provide empirical evidence aligned to these theories.

The upper echelons theory holds that the attributes of the senior managers can be used to predict the strategies and the outcomes of the firm (Hambrick & Mason, 1984). The study established that on the overall TMT heterogeneity had a significant effect on business performance. In addition, Hambrick (2007) noted the need for future research to focus on the process by which TMT characteristics affected performance. This study contributed to this course of research by demonstrating the value of group cohesion in understanding the effect of the TMT on performance. The study recommended that future upper echelons scholars would benefit in considering the upper echelons theory alongside the self categorization theory to recognize the existence of subgroups and dominant coalitions within the TMT.

The self categorization theory argues that people classify themselves as either being part of a group or not based on the characteristics they have similar to other group members (Turner et al, 1994; Hogg & Terry, 2000). Based on how individuals perceive themselves and the other team members, they are either drawn to the group or repelled by it which determines cohesion (Hogg & Terry, 2000). This study demonstrated that a cohesive TMT had a positive effect on firm performance thereby providing empirical evidence to support the self categorization theory.

The resource based view contends that firms possessing valuable, atypical, incomparable and non replaceable resources can achieve superior advantage. The resources can be anything that proves to be a strength or weakness and can be attached temporarily to a firm (Wernerfelt, 1984). The theory encourages organizations to focus internally in finding the sources of their competitive advantages. This study demonstrated that TMT heterogeneity, group cohesion and competitive repertoire can be sources of competitive benefit for a firm when properly deployed. This provided empirical backing to the resource based view that businesses can derive their competitive benefit by focusing internally.

The information processing theory holds that people do not just respond to stimuli but rather they gather information and process it before responding. Different situations pose different information needs and this helps in shedding light on why organizations perform differently in similar settings (Shaffer & Kipp, 2010). In line with this theory, competitive repertoire complexity would put pressure on managers to collate and process information to sustain the complexity and so would only be sustainable with a heterogeneous TMT and would ultimately affect firm performance. This expectation was not supported suggesting that the TMT was not the dominant coalition in selection and deployment of competitive actions. However, competitive repertoire had a significant effect on performance especially when considered jointly with TMT heterogeneity and group cohesion. This study provided evidence that the information theory is informative in understanding organizational outcomes and the actions of senior managers. The study recommended that the information processing theory would need to be altered to account for people's reactive actions and decision making under pressure as was the case with the context of this study.

6.4.2 Policy Implications and Recommendations

This study was conducted in the private sector where the policy prescriptions are largely on the prerogative of the organizations themselves. The policies adopted by the organizations are therefore idiosyncratic to the organizations. This study determined that TMT heterogeneity had the potential to harm firm performance. By shedding light on the negative effects of heterogeneity in TMTs, policy makers would be cautious in trying to introduce diversity in management teams. Specifically they would need to reconsider the motivations for diversity policies such as the one-third gender rule given that gender heterogeneity and functional heterogeneity had no significant effect on performance. Organizations would therefore need to draft policies for recruitment, selection, training and development that would weigh the negative TMT heterogeneity effects against other business objectives.

With the implementation of the Kenyan Constitution of 2010, many organizations especially the government agencies and parastatals had been sensitized on gender, disability and age representativeness in organizations. However, this study noted that TMT heterogeneity without cohesion was harmful. Further, group cohesion was beneficial to firm performance. Diversity has become the reality of most organizations. This would inform policy makers on the importance of putting measures such as team building activities, team meetings, team objectives, openness to suggestions and support and communication channels to foster cohesion in their attempts to diversify their management teams. This study highlighted the merit of addressing cohesion in organizations. Policy makers in the private sector would benefit from instituting policies that foster cohesion even among their senior executives.

The study would also benefit policy makers in the food and beverage manufacturing sector in designing their competitive actions. The study demonstrated that the competitive repertoire complexity had a significant effect on performance. Specifically, it affected financial performance positively but was harmful to the other performance perspectives. This would be informative to strategists in the food and beverage manufacturing sector in developing competitive actions. A wide scope of competitive moves of different types would yield financial benefits but at the expense of the other performance perspectives. The study noted that competitive actions in the sector were riddled with incidental activities which had not been strategically initiated by the TMT suggesting that the TMTs in the industry did not possess the power in strategy choice. Strategists in these firms would therefore benefit from a clear review of their strategic planning process to balance the positive effect on financial performance and the negative effect on other organization performance measures and empower the TMTs in strategic decision making to tap into their potential.

6.4.3 Implications and Recommendations on Practice

This study had various implications to managers in practice. To begin with, organizations and specifically human resource managers would require deliberate efforts to ensure that their senior management teams were balanced in terms of managerial characteristics. Managers would therefore need to hire and develop managers with different characteristics in order to leverage on the variety of skill, talents and viewpoints that they have. TMTs would also need to acknowledge the importance that their differences played in their decisions and organizational outcomes. They would need to take advantage of tools provided by organizations to share and discuss ideas such as meetings and communication channels.

Secondly, managers needed to put in measures to build cohesive teams in their organizations. This study noted that on average the firms studied had higher scores on task cohesion than social cohesion. Managers needed to create opportunities for their team members to build cohesion. Activities like team buildings, shared fun days, team lunches and dinners and family days needed to be encouraged in organizations since they would increase interactions among members outside the work environment and which translate to positive firm performance. TMT members would also need to be conscious of the importance of working together harmoniously and resolve conflicts among them amicably.

Finally, this study noted the importance played by the competitive repertoire of the firms. Notably, strategies in this study were measured from the pattern of actions deployed by the firms. From the findings, it was imperative for the TMTs in these firms to sustain a wide scope of actions. This study noted that the environment facing firms in the food and beverage sector was very dynamic and to keep up, a complex repertoire of actions was required in terms of the range and the concentration. Managers would need to design sustainable actions in the face of the dynamic environment. However, the managers needed to be more deliberate in their choice of actions rather than rely on incidental actions to minimize the harmful effect on non financial objectives. This study recommended that the owners and directors in these organizations needed to reconsider their motivations in installing TMTs and the powers they bestowed on them. This would ensure that they benefitted from the TMTs as opposed to TMT strategic roles being ceremonial or being reduced to operational roles.

6.5 Limitations of the Study

This study akin to other studies encountered various limitations. However, the study was able to overcome the challenges and report meaningful results. To begin with, the study had challenges in collecting the data. Most of the firms in the food and beverage manufacturing sector were private companies with no legal requirements to disclose their information. Due to this, many respondents were not willing to respond to questionnaires and some even had policies not to respond to questionnaires. Despite this, the study managed to obtain responses from 53 firms. The study also made use of secondary data for the financial performance measures which the respondents were most secretive about. This helped to assure on the quality of data obtained.

Secondly, the study set out to evaluate the competitive repertoire of the firms in question. This posed a challenge because there were no documented records of the competitive actions of the firms. Due to this, the study had to obtain primary data from the respondents which could not be comprehensive enough given that some actions would be forgotten over time. However, the study obtained responses from members of the TMT who would be involved in the crafting the moves. The study therefore managed to obtain indicative responses for a wider period of time.

Thirdly, this study applied a cross sectional research design which involves collecting data about the study objects at a singular point in time. This study acknowledged that a longitudinal study might be more informative given that the effects of the variables may take long to materialize. However, such a longitudinal study was not feasible given the hesitance of many firms to subject themselves to academic study. To overcome this limitation, the study adopted larger time frames for measurement of performance and competitive actions.

Lastly, the population of study was restricted to the food and beverage sector in order have a comparative population especially in terms of the competitive repertoire. This implied that the findings may not have been entirely generalizable to firms in other industries and sectors. However, this limitation did not affect the generalizability of the findings to firms in the sector and therefore the quality of the findings was not compromised.

6.6 Suggestions for Further Study

The findings from this study opened up avenues for future studies. To begin with this study established that competitive repertoire complexity jointly with TMT heterogeneity and group cohesion had an effect on performance. However, it did not mediate the relationship between TMT heterogeneity and firm performance as earlier envisaged. This study suggested that future researchers would pick up from these findings and seek to isolate the path through which competitive repertoire complexity affects performance and the link between the TMT and the competitive repertoire.

The study was based on the food and beverage manufacturing firms in Kenya. These firms were distinct in their actions given that they dealt with fast moving consumer goods. Due to this, future studies could focus on other firms in other contexts. Specifically the study could be replicated in the service industry and among public companies in order to isolate any contextual differences. In addition, this context was characterized by a general reluctance to respond to questionnaire and therefore to take into account the high non response rate, future researchers in this context could adopt census studies. Future researchers could also replicate this study in longitudinal studies in order to isolate trends since some measures like competitive repertoire complexity have been shown to have different effects with time. This study acknowledged the difficulty in this research design. However, scholars could attempt this through case studies especially among firms that were more receptive to scholarly studies.

Finally, this study made use of TMT demographic characteristics. In applying these measures the study still left the black hole envisaged by Hambrick and Mason (1984). However it attempted to isolate the path through which TMT heterogeneity affected performance and demonstrated that this relationship was mediated by group cohesion. Future studies could replicate this study applying psychological traits heterogeneity to determine if the findings will still hold. In addition, this study only focused on competitive repertoire complexity among the measures of competitive repertoire. Future studies could replicate this study with other aspects of competitive repertoire such as competitive heterogeneity. Group cohesion was the only aspect of group dynamics that was applied in this study and future studies could adapt different aspects like group conflict in replicating this study.

6.7 Chapter Summary

This was the final chapter of this thesis. The chapter started by outlining the findings of this study. A summary of the descriptive findings was first given followed by the findings for each hypothesis and the inferences made. On the overall this study inferred that TMT heterogeneity was detrimental to firm performance and that group cohesion fully mediated this relationship. On the other hand, competitive repertoire complexity did not mediate the relationship but had a significant effect on performance when considered alongside TMT heterogeneity and group cohesion.

Next the conclusions drawn from the study were laid out for each objective. The implications and recommendations on theory, policy and practice of the study were then given. On the overall this study noted the need to reconsider the upper echelons theory in the light of the subgroups within the TMT. Firms also needed to consider the power vested with their TMTs especially in the strategic decision making process. In addition, firms needed to reconsider their policies in terms of diversity and managing diverse working teams.

The chapter then set out the limitations that were faced in this study. Finally the chapter closed by setting out the suggestions for future studies and the recommendations. The study acknowledged the difficulties experiences in data collection within the food and beverage manufacturing sector and highlighted possible avenues for scholars to explore in future such as longitudinal studies.

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APPENDICES

Appendix I: Research Questionnaire

Part A: General Information

1. Company Name:.....
2. Year of Incorporation:.....
3. Name (Optional):.....
4. Title / Designation: .....

Part B: Demographic Details

Top management team heterogeneity is one of the variables of interest in this study. It involves the differences in the demographic characteristics of the top managers. For this purpose, top managers are all the managers responsible for the key functional areas including the Chief Executive Officer (CEO) or equivalent and all managers of functions or departments.

5. How many top managers does your organization have?.....
6. How many of your top managers are:
   Male.....
   Female.....

7. How many of the top managers have worked in the organization for the following years.

Number of Years in the Organization	Number of Top Managers
0 - 5	
6 - 10	
11 - 15	
16 - 20	
20 - 25	
Over 25 years	

8. How many of the top managers are within the following age brackets?

Age Bracket	Number of Top Managers
Below 30	
30 – 35	
36 – 40	
41 – 45	
46 – 50	
50 – 55	
Above 55	

9. How many of the top managers have the following educational qualifications as their highest?

Qualification	Number of Top Managers
Doctoral degree	
Masters degree	
Bachelors degree	
Diploma	
Certificate	
High School	

10. How many of the top managers are in the following areas of professional specializations?

Professional Specialization	Number of Top Managers
Accountancy & Finance	
Sales & Marketing	
Procurement /Supply Chain	
Human resource management	
Safety & Security management	
Engineering	
Information Technology	
Others (specify)	

Part C: Group Cohesion

11. To what extent do you agree with the following statements regarding the Top Management Team's (TMT) ways of working

Statements	Very High Extent	High Extent	Moderate Extent	Low Extent	Very Low Extent
TMT members are aware of the firm's goals					
The TMT is committed to the company's goals					
TMT members get along well at work					
TMT members are united					
TMT members act for the good of the company					
TMT members take responsibility for any mistakes					
TMT members all try to help if one member has a problem					

Statements	Very High Extent	High Extent	Moderate Extent	Low Extent	Very Low Extent
TMT members communicate freely					
TMT members consider each member important					
TMT members frequently involve each other in decision making					
TMT members consider each member's contributions					
TMT members give each other constructive feedback					
TMT members have effective conflict managements systems					
The TMT rarely seeks arbitration for conflicts					

12. To what extent do you agree with the following statements regarding the Top Management Team's (TMT) social interactions

Statements	**Very High Extent**	**High Extent**	**Moderate Extent**	**Low Extent**	**Very Low Extent**
TMT members socialize together					
TMT members spend time together outside work					
TMT members regard each other as friends					
TMT members keep in touch with each other					
TMT members have frequent social gatherings and events					
TMT members have shared values					
Members resolve their social conflicts amicably					

Part D: Competitive Repertoire Complexity

13. Kindly indicate the number of time your firm has undertaken the following competitive actions in the past five years

Actions types and actions	Number of actions
Marketing	
Price increases	
Price reductions	
Changes in pricing structure e.g. discounts and commissions	
Entry price cuts	
Advertisements	
Promotions e.g. samples	
Product endorsements	
New product launches	
Withdrawal of products	
Product improvements	
Changing product classifications	
Changing distribution channels	
Creation of distribution channels	
Production / Operations	
Production volume increases	
Production volume reductions	
Capacity increases	
Capacity reductions	
New production facilities	
Closing production facilities	
Enhancements to operational efficiency	
Technology / R&D	
Acquiring new technology for manufacturing	
Acquiring new technology for product discoveries	
Developing new technology for manufacturing	
Developing new technology for product discoveries	
Acquiring intellectual property rights e.g. patents, copyrights and trade marks	
Selling intellectual property rights	
Intellectual property fillings	
Discovery of new combinations e.g. flavours, colours	
Conducting marketing tests	
Increase in R&D investment	
Decrease in R&D investment	

Actions types and actions	Number of actions
Management / Human Resources	
Changes in compensation practices	
Major recruitment or selection initiative	
Major training or development initiative	
Downsizing or major layoffs	
Corporate	
E-commerce initiatives	
Entry into new product segments	
Entry into new market segments	
Exit from existing product segments	
Exit from existing market segments	
Creation or dissolution of alliances with customers	
Creation or dissolution of alliances with competitors	
Creation or dissolution of alliances with suppliers	
Creation or dissolution of other alliances	
Increase in vertical or horizontal integration	
Decrease in vertical or horizontal integration	
Increase or decrease in other acquisitions	
Divestment of other assets	
Enhancement to administrative efficiency	
Structural changes	
Political lobbying	
Lawsuits against competitors	
Lawsuits against other stakeholders e.g. suppliers, customers or employees	
Securing major approval and certifications e.g. ISO, WHO and FAO	
Receiving disapprovals	
Patent expirations	
Positive public relations	
Negative public relations	

14. Kindly indicate the following measures of your firm's performance for the last five financial years

Measure	2015	2014	2013	2012	2011
Financial Performance					
Net Profit before tax (Ksh)					
Corporation tax for the year (Ksh)					

Total assets at beginning of the year (Ksh)					
Total assets at end of the year (Ksh)					
Customer Performance					
Sales growth (%)					
Market share (%)					
Customer complaints (Number)					
Internal Processes					
Productivity per machine hour (%)					
Products return rate (%)					
Defective rate (%)					
Employee turnover (%)					
Capacity utilization (%)					
Learning & Development					
New markets entered (Number)					
New products developed (Number)					
Training spend (Ksh)					
Social Performance					
Number of CSR activities					
CSR spend (Ksh)					
Growth in CSR spend (%)					
Environmental Performance					
Energy usage per unit (kwh)					
Water usage per unit (l)					
Effluent treatment spend (Ksh)					
Spend on pollution impact assessment (Ksh)					
Penalties to NEMA (Ksh)					

15. To what extent do you agree with the following statements regarding your firm's performance in the last 5 years

Statements	Very High Extent	High Extent	Moderate Extent	Low Extent	Very Low Extent
Our profits have grown steadily over time					
We have been getting a good return on our investment					

Our market share has grown significantly					
Our sales have been growing steadily					
Our customer complaints have reduced significantly					
Our customers are satisfied with our services					
We have reduced our costs					
We use our resources efficiently					
We have reduced the rate of defective products produced					
Members of staff are satisfied working for us					
Our employee turnover has been acceptable					
We continuously seek to learn and develop					
We have entered into new markets					
We have developed new products					
We train and develop our employees consistently					
We are a socially responsible company					
We budget and invest in CSR activities					
We do not pollute the environment					
We treat our effluent before discharging to the environment					
We use energy and water efficiently					
We rarely pay penalties to NEMA for pollution					

.....**THANK YOU**.....

Appendix II: Organizational Performance Checklist

S.No.	Company Name	2015		2014		2013		2012		2011	
		Profit Before Tax	Total Assets at year end	Profit Before Tax	Total Assets at year end	Profit Before Tax	Total Assets at Year End	Profit Before Tax	Total Assets at Year End	Profit Before Tax	Total Assets at Year End
1	Agro Chemical And Food Company Ltd										
2	Alliance One Tobacco Kenya Ltd										
3	Alpha Fine Foods Ltd										
4	Alpine Coolers Limited										
5	Aquamist Ltd										
6	Bakers Corner Ltd										
7	Bakex Millers Ltd										
8	Beverage Services (K) Ltd										
9	Bidco Africa Ltd										
10	Bio Food Products Ltd										
11	British American Tobacco Kenya Ltd										
12	Brookside Dairy Ltd										
13	Bunda Cakes & Feeds Ltd										
14	Butali Sugar Mills Ltd										
15	C. Czarnikow Sugar East Africa Ltd										
16	C. Dormans Ltd										
17	Cadbury Kenya Ltd										
18	Caffe Del Duca Ltd										
19	Capwell Industries Ltd										
20	Centrofood Industries Ltd										
21	Chemelil Sugar Company Ltd										
22	Chirag Kenya Ltd										
23	Coca Cola East & Central Africa Ltd										
24	Danone Baby Nutrition Africa and Overseas										
25	Deepa Industries Ltd										
26	Del Monte Kenya Ltd										
27	Doinyo Lessos Creameries Ltd										
28	DPL Festive Ltd										
29	East African Breweries Ltd										
30	East African Sea Food Ltd										
31	Eastern Produce (K) Kakuzi										
32	Edible Oil Products										
33	Eldoret Grains Ltd										
34	Ennsvalley Bakery Ltd										
35	Excel Chemicals Ltd										
36	Farmers Choice Ltd										
37	Frigoken Ltd										
38	Glaciers Products										
39	Gold Crown Beverages (K) Ltd										
40	Green Forest Foods Ltd										
41	Heritage Foods Kenya Ltd										
42	Highlands Mineral Water Company Ltd										
43	Insta Products (EPZ) Ltd										
44	Jambo Biscuits (K) Ltd										
45	James Finlay Kenya Ltd										
46	Jetlak Foods Ltd										
47	Kapa Oil Refineries Ltd										
48	Karirana Estate Ltd										
49	Kenafric Industries Ltd										
50	Kenblest Ltd										

51	Kenchic Ltd										
52	Kenya Meat Commission										
53	Kenya Nut Company Ltd										
54	Kenya Seed Company Ltd										
55	Kenya Sweets Ltd										
56	Kenya Tea Packers Ltd (KETEPA)										
57	Kenya Wine Agencies Ltd										
58	Keroche Industries Ltd										
59	Kevian Kenya Ltd										
60	Kuguru Food Complex Ltd										
61	London Distillers (K) Ltd										
62	Mafuko Industries Ltd										
63	Manji Food Industries Ltd										
64	Mastermind Tobacco (K) Ltd										
65	Melvin Marsh International										
66	Menengai Oil Refineries Ltd										
67	Milly Fruit Processors Ltd										
68	Mini Bakeries (Nbi) Ltd										
69	Mjengo Ltd										
70	Mumias Sugar Company Ltd										
71	Nairobi Flour Mills Ltd										
72	NAS Airport Services Ltd										
73	Nestle Foods Kenya Ltd										
74	New Kenya Co-Operative Creameries Ltd										
75	Norda Industries Ltd										
76	Nutro Manufacturers EPZ Ltd										
77	Nzoia Sugar Company Ltd										
78	Palmhouse Diaries Ltd										
79	Patco Industries Limited										
80	Premier Food Industries Ltd										
81	Pristine International Ltd										
82	Proctor and Allan (E.A.) Ltd										
83	Promasidor Kenya Ltd										
84	Pwani Oil Products Ltd										
85	Rafiki Millers Ltd										
86	Razco Ltd										
87	Rift Valley Bottlers										
88	Sameers Agriculture & Livestock (Kenya) Ltd										
89	Sigma Supplies Ltd										
90	South Nyanza Sugar Company Ltd										
91	Spice World Ltd										
92	Sweet Rus Ltd										
93	The Breakfast Cereal Company (K) Ltd										
94	Tropikal Brand (Afrika) Ltd										
95	Trufoods Ltd										
96	Unga Group Ltd										
97	United Millers Ltd										
98	Vinepack Ltd										
99	Wanji Food Industries Ltd										
100	Winnie's Pure Health										
101	Wrigley Company (E.A.) Ltd										

Source: Researcher (2018)

Appendix III: Letter of Introduction from the University

UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF BUSINESS

Telephone: 4184160-5 Ext 215
Telegrams: "Varsity" Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, KENYA

06th January, 2017

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER FOR RESEARCH
PATRICIA GACHAMBI MWANGI– REGISTRATION NO. D80/94128/2014

The above named is a registered PhD candidate at the University of Nairobi, School of Business. He is conducting research on ***"Top Management Team Heterogeneity, Group Cohesion, Competitive Repertoire Complexity and Performance of Food and Beverage Manufacturing Firms in Kenya."***

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the research project. The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

Thank you.

Graduate Studies Office
P.O. Box 30197
NAIROBI
University of Nairobi School of Business

Dr. Florence Muindi
For: Associate Dean, Graduate Business Studies
School Of Business

FM/nwk

Appendix IV: National Commission for Science Technology and Innovation Research Permit

THIS IS TO CERTIFY THAT:
MS. PATRICIA GACHAMBI MWANGI
of UNIVERSITY OF NAIROBI, 0-620
Nairobi,has been permitted to conduct
research in *All Counties*

Permit No : NACOSTI/P/17/89723/15691
Date Of Issue : 14th February,2017
Fee Recieved :Ksh 2000

on the topic: *TOP MANAGEMENT TEAM HETEROGENEITY, GROUP COHESION, COMPETITIVE REPERTOIRE COMPLEXITY AND PERFORMANCE OF LARGE FOOD AND BEVERAGE MANUFACTURING FIRMS IN KENYA*

for the period ending:
13th February,2018

Applicant's Signature

Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No.A 12878

CONDITIONS: see back page

Appendix V: Food and Beverage Manufacturers in Kenya

1	Africa Spirits Limited	51	East African Malt Ltd
2	Agri Pro-Pak Ltd	52	East African Sea Food Ltd
3	Agricultural & Veterinary Supplies Ltd (Agri-Vet)	53	East African Seed Co. Ltd
4	Agriner Agricultural Development	54	Eastern Produce (K) Kakuzi
5	Agro Chemical And Food Company Ltd	55	Edible Oil Products
6	Alliance One Tobacco Kenya Ltd	56	Eldoret Grains Ltd
7	Al-Mahra Industries Ltd	57	Elekea Ltd
8	Alpha Fine Foods Ltd	58	Ennsvalley Bakery Ltd
9	Alpine Coolers Limited	59	Equator Bottlers Ltd
10	Aquamist Ltd	60	Erdemann Co. (K) Ltd
11	Arkay Industries Ltd	61	Europack Industries Ltd
12	Bakers Corner Ltd	62	Excel Chemicals Ltd
13	Bakex Millers Ltd	63	Farmers Choice Ltd
14	Belat Enterprises	64	Fresh Produce Exporters Association of Kenya
15	Belfast Millers Ltd	65	Frigoken Ltd
16	Beverage Services (K) Ltd	66	Githunguri Dairy Farmers Co-operative Society
17	Bidco Africa Ltd	67	Giloil Company Ltd
18	Bio Food Products Ltd	68	Githunguri Dairy Farmers Co-op Society
19	Bounty Ltd	69	Glaciers Products
20	British American Tobacco Kenya Ltd	70	Global Fresh Ltd
21	Broadway Bakery Ltd	71	Global Tea & Commodities (K) Ltd
22	Brookside Dairy Ltd	72	Gold Crown Beverages (K) Ltd
23	Bunda Cakes & Feeds Ltd	73	Gold Crown Foods (EPZ) Ltd
24	Bunge East Africa Ltd	74	Gonas Best Ltd
25	Butali Sugar Mills Ltd	75	Grain Industries Ltd
26	Buzeki Dairy Ltd	76	Green Forest Foods Ltd
27	C. Czarnikow Sugar East Africa Ltd	77	Happy Cow Ltd
28	C. Dormans Ltd	78	Heritage Foods Kenya Ltd
29	Cadbury Kenya Ltd	79	Highlands Canners Ltd
30	Caffe Del Duca Ltd	80	Highlands Mineral Water Company Ltd
31	Candy Kenya Ltd	81	Insta Products (EPZ) Ltd
32	Capwell Industries Ltd	82	Jambo Biscuits (K) Ltd
33	Centrofood Industries Ltd	83	James Finlay Kenya Ltd
34	Chai Trading Company Ltd	84	Jetlak Foods Ltd
35	Chemelil Sugar Company Ltd	85	Jjasm Mini-Distillery
36	Chirag Kenya Ltd	86	Juja Coffee Exporters
37	Coast Silos (K) Ltd	87	Jungle Group Holdings
38	Coastal Bottlers Ltd	88	Kabianga Dairy Ltd
39	Coca Cola East & Central Africa Ltd	89	Kambu Distillers Ltd
40	Coffee Agriworks Ltd	90	Kamili Packers Ltd
41	CoffTea Agencies	91	Kapa Oil Refineries Ltd
42	Danone Baby Nutrition Africa and Overseas	92	Karirana Estate Ltd
43	Deepa Industries Ltd	93	Kenafric Bakery
44	Del Monte Kenya Ltd	94	Kenafric Industries Ltd
45	Diamond Industries Ltd	95	Kenblest Ltd
46	Doinyo Lessos Creameries Ltd	96	Kenchic Ltd
47	DPL Festive Ltd	97	Kenlab Supplies Ltd
48	Dutch Water Ltd	98	Kentaste Products
49	East African Breweries Ltd	99	Kenya Breweries Ltd
50	Edible Oil Products	100	Kenya Meat Commission

101 Kenya Nut Company Ltd	150 Palmhouse Diaries Ltd
102 Kenya Seed Company Ltd	151 Patco Industries Limited
103 Kenya Sweets Ltd	152 Pearl Industries Ltd
104 Kenya Tea Development Agency	153 Pembe Flour Mills Ltd
105 Kenya Tea Growers Association	154 Pernod Ricard Kenya Ltd
106 Kenya Tea Packers Ltd (KETEPA)	155 Premier Flour Mills Ltd
107 Kenya Wine Agencies Ltd	156 Premier Food Industries Ltd
108 Kerio Valley Development Authority	157 Pride Industries Ltd
109 Keroche Industries Ltd	158 Pristine International Ltd
110 Kevian Kenya Ltd	159 Proctor and Allan (E.A.) Ltd
111 Kibos Sugar and Allied Industries	160 Promasidor Kenya Ltd
112 Kinangop Dairy Ltd	161 Pwani Oil Products Ltd
113 Kisii Bottlers Ltd	162 Rafiki Millers Ltd
114 Koba Waters Ltd	163 Raka Milk Processors Ltd
115 Krish Commodities Ltd	164 Razco Ltd
116 Kuguru Food Complex Ltd	165 Re-Suns Spices Ltd
117 Kwality Candies and Sweets Ltd	166 Rift Valley Bottlers
118 London Distillers (K) Ltd	167 Salim Wazarani Kenya Company Ltd
119 Mafuko Industries Ltd	168 Sameers Agriculture & Livestock (Kenya) Ltd
120 Mama Millers Ltd	169 SBC Kenya Ltd
121 Manji Food Industries Ltd	170 Selecta Kenya Gmbh & Sons KG
122 Mastermind Tobacco (K) Ltd	171 Sigma Supplies Ltd
123 Mayfeeds Kenya Ltd	172 South Nyanza Sugar Company Ltd
124 MDI Ltd	173 Spice World Ltd
125 Melvin Marsh International	174 Sunny Processors Ltd
126 Menengai Oil Refineries Ltd	175 Supa Sweets Ltd
127 Meru Water & Sewerage Services	176 Sweet Rus Ltd
128 Milly Fruit Processors Ltd	177 T.S.S. Grain Millers Ltd
129 Mini Bakeries (Nbi) Ltd	178 The Breakfast Cereal Company (K) Ltd
130 Miritini Kenya Ltd	179 Tropikal Brand (Afrika) Ltd
131 Mjengo Ltd	180 Trufoods Ltd
132 Mombasa Maize Millers	181 Trust Feeds Ltd
133 Morani Ltd	182 Trust Flour Mills Ltd
134 Mount Kenya Bottlers Ltd	183 Umoja Flour Mills Ltd
135 Mumias Sugar Company Ltd	184 Umoja Maintenance Centre (K) Ltd
136 Munyiri Special Honey Ltd	185 Unga Group Ltd
137 Mzuri Sweets Ltd	186 United Distillers and Vintners
138 Nairobi Bottlers Ltd	187 United Millers Ltd
139 Nairobi Flour Mills Ltd	188 Usafi Services Ltd
140 NAS Airport Services Ltd	189 Valley Confectionery Ltd
141 Nesfoods Industries Ltd	190 Valuepak Foods
142 Nestle Foods Kenya Ltd	191 Vinepack Ltd
143 New Kenya Co-Operative Creameries Ltd	192 W. E. Tilley (Muthaiga) Ltd
144 Nicey Nicey Maize Millers	193 Wanainchi Marine Products (K) Ltd
145 Nicola Farms Ltd	194 Wanji Food Industries Ltd
146 Njoro Canning Factory (Kenya) Ltd	195 West Kenya Sugar Company Ltd
147 Norda Industries Ltd	196 Winnie's Pure Health
148 Nutro Manufacturers EPZ Ltd	197 Wrigley Company (E.A.) Ltd
149 Nzoia Sugar Company Ltd	198 Xpressions Flora Ltd

Source: KAM (2016)

Appendix VI: Sample Size Determination Table

Sample Size for ±5%, ±7% and ±10% Precision Levels where Confidence Level Is 95% and P=.5.

Size of Population	Sample Size (n) for Precision (e) of:		
	±5%	±7%	±10%
100	81	67	51
125	96	78	56
150	110	86	61
175	122	94	64
200	134	101	67
225	144	107	70
250	154	112	72
275	163	117	74
300	172	121	76
325	180	125	77
350	187	129	78
375	194	132	80
400	201	135	81
425	207	138	82
450	212	140	82

Source: Israel (1992)