

**RELATIONSHIP BETWEEN ORGANIZATIONAL
CLIMATE, EMPLOYEE PSYCHOLOGICAL
EMPOWERMENT AND INNOVATION IN MARKET
RESEARCH FIRMS IN KENYA**

JAMES GACHAHI WANGOMBE

DOCTOR OF PHILOSOPHY

(Human Resources Management)

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**Relationship between Organizational Climate, Employee Psychological
Empowerment and Innovation in Market Research Firms in Kenya**

James Gachahi Wangombe

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

Signature:Date:

James Wangombe

This thesis has been submitted for examination with our approval as the University supervisors.

Signature: Date:

Dr. Hazel Gachunga

JKUAT, Kenya

Signature: Date:

Dr. Renson Muchiri Mwangi

KCA University, Kenya

DEDICATION

This thesis is dedicated to my mother for her resilience, love and inculcation of values of determination that formed the foundation of my academic journey. For a peaceful environment she accorded us to discover ourselves. To my family; my dear wife, Regina, children, Mary, Eric and Eddie; your love, support, understanding and encouragement during this journey was inspiring.

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ABBREVIATIONS AND ACRONYMS

EFA	Exploratory Factor Analysis
ESOMAR	European Society for Opinion and Market Research
MSRA	Marketing and Social Research Association
MSRFs	Marketing and Social Research Firms
OC	Organizational Climate
POS	Perceived Organization Support
SBO	SBO Research Ltd
TNS	TNS Research International Ltd
2-D diversity	Acquired and Inherent Diversity

DEFINITION OF TERMS

Creativity – Creativity is the generation of new ideas or creation of new, meaningful, unique, original and useful (utility) products or services (operational definition).

Employee psychological empowerment – Psychological empowerment is the process of promoting the feeling of self-efficacy among employees through the identification of condition that caused powerlessness and also through the reduction of the powerlessness state in the organization (Conger & Kanungo, 1988).

Innovation - Innovation is defined as the process of bringing new ideas and using them to solve problems. Innovation is a knowledge management process that involves recognizing a problem, creating solutions for the problem and creating support for the solutions (Subramaniam & Youndt, 2005).

Organizational climate – This is defined as set of perceptions, feelings and attitude which organizational employees have about the significant factors of the company (Evans, 1996).

ABSTRACT

The 21st century global business environment is bedeviled with fast changing technology, growing volatility, global competition, organization change, social conflicts, environmental degradation and high rate of unemployment among others. To overcome these challenges, nations and organizations need to hire creative and innovative employees. Innovation has been found to be one of the most critical tools in today's fast changing environment that can enable nations, organizations, change managers, employees and society to overcome the many challenges and enhance the common good of the society. The purpose of the study was to find out the relationship between organizational climate (OC), employee psychological empowerment (EPE) and innovation in market and social research firms (MSRFs) in Kenya. This was motivated by inconsistent empirical findings of the previous scholars on the effect of organizational climate on innovation. Besides, it was inspired by the omission of the employee psychological empowerment as an intervening variable between OC and innovation. The study was anchored on four theories; organizational climate, intrinsic motivation, componential and leadership theories. We therefore first investigated the relationship of OC and EPE and then EPE on innovation. Further, direct effect of OC on innovation was also assessed. To address these objectives, this study used cross-sectional research design. The data was collected using a structured questionnaire and analyzed using Structural Equation Modelling (SEM). The study found that the effect of training support on EPE and innovation was insignificant while work place support on EPE had partial effect but insignificant effect on innovation. However, transformational leadership was found to be significant on both EPE and innovation. Further, the EPE had partial effect on innovation. The findings offer more insights to the theorists of intrinsic motivation that intrinsic motivation taps on some organizational climate factors to promote innovation. The results could be helpful to human resources practitioners and policy makers when deciding on a mix of organizational climate factors to promote innovation in institutions. The study hinted on the consideration of multiple organizational factors as opposed to a single factor to enhance innovation at micro level in their work place.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The 21st century global business environment is bedeviled with fast changing technology, growing volatility, global competition, organization change, social conflicts, environmental degradation and high rate of unemployment among others (George & Zhou, 2007; Runco, 2004). To overcome these challenges, nations and organizations need to hire creative and innovative employees (Zhou & Oldham, 2004; Eustace & Martins, 2014). This is because innovation has been found to be one of the most critical tools in today's fast changing environment that can enable nations, organizations, change managers, employees and society to overcome the many challenges and enhance the common good of the society (George & Zhou, 2007; Batey, 2012).

To overcome the above challenges, organizations must pursue innovation by all means being a critical factor for competitiveness and success. Without innovative companies, a national economy can hardly be competitive (George & Zhou, 2007; Batey, 2012). It has been depicted that creative nations focus on innovation as a critical resource that drives their economic prosperity while lack of innovation has resulted in economic stagnation (Toynbee, 2012; Amabile & Khaire, 2008). It is empirically depicted in the global market research sector, that less innovative African nations and organizations for example, have stagnated and meagerly share 5% of the global market research revenue compared to the more creative economies of USA, Europe and Asia which dominate the sector's revenue at 95% (ESOMAR, global market research, report of 2011).

This growing importance of creativity and innovation therefore, has portended the need for identifying those factors that promote or demote innovation to solve the many global and organizational challenges experienced in this century (Eustace &

Martins, 2014). This fact among others, has resulted to organizations considering innovation majorly from a financial perspective and at a macro level, neglecting other factors at micro level which too have an impact on the innovation. This has resulted in many studies proliferating focusing on different interests and approaches in trying to identify those factors that influence creativity and innovation as well as understanding more about the two constructs (Govindarajan & Trimble, 2010). Some scholars have, therefore, separated the two terms with creativity to the generation of meaningful, useful and new ideas while innovation has been taken to mean commercialization of the generated ideas, although it has been reported to be a degenerating research field (Glover, Ronning & Rynolds, 1989; Nayak, 2008). Some of the scholars interested in this area of innovation have focused on person, process, product and work environment (press) using different approaches like psychoanalytic, psychometric, cognitive, social, psychological, scientific and neurobiological (Batey, 2012) in trying to identify those factors that influence creativity. Those focusing on innovation have majorly focused on the problem solving ability of the generated ideas (Govindarajan & Trimble, 2010). In all the studies, researchers have concurred that innovation is very critical for solving the global and organizational challenges sustainably (Dul & Ceylan, 2011; Nystrom, Ramamurthy & Wilson, 2002).

Although researchers have concurred that innovation is very critical for solving problems affecting organizations, nations, society, change managers, scholars, individuals, organizations on their part have found it difficult to maintain high level of employee innovation (Shalley *et al.*, 2008, Shalley *et al.*, 2009; Shalley *et al.*, 2004; Shin & Zhou, 2003, Shin & Zhou, 2007). Additionally, most organizations consider innovation from a financial perspective and at a strategic level, neglecting other factors at micro level which too have impact on the innovation.

Among the factors that scholars have paid less attention is organizational climate and its impact to innovation at employee level. Organizational climate has been identified as a factor that can stimulate innovation. Some scholars have fronted that organizational climate defined as the perceptions or feelings employees form about the working environment and characteristics of certain employees within the environment such as supervisors and leaders (Amabile, 1996; Dul & Ceylan, 2011)

influence innovation. If these organizational climate factors and individual characteristics are assessed, they may predict the level of innovation existing and propose interventions to improve it (Dodd, Smith & Wards, 2002). In testing this proposition, scholars have used different measurements, some based on outcomes, others based on levels of operations, while others based on different rating styles, different models, and different techniques of data analyses (Amabile, 1996, Furnham *et al.*, 2008; Amabile & Gryskiewicz, 1989; Silvia, 2008; Kaufman, Plucker & Baer, 2008; Mumford, 2003; Runco, 2004; Alice, 2011).

Use of different models, individual characteristics and different number of questions in the instrument used by different scholars had too resulted in inconsistent findings on the relationship between organizational climate and innovation (Hunter *et al.*, 2004). An example was a study assessing leadership characteristics which found that structured and task oriented leadership climates either inhibit or promote creativity and innovation (Ekval, 1996). Another study by Dul and Ceylan (2011) found that the perception of working environment (organizational climate) and characteristics of certain individuals within the environment such as supervisors and leaders can either promote or inhibit the level of innovation. Recent studies continue to yield varied results as depicted by Fen lin (2007) who found inverted U-shape relationship, Ndanuko (2012) found a positive significant relationship while Potočnik & Anderson, 2012 and Haque (2014) found a negative association. These inconsistent results caused Mathisen and Einarsen (2004), Boso *et al.* (2013), Mumford and Hunter (2005) and Hunter *et al.* (2007) to argue that the inconsistency could be due to something else unknown yet.

Wermberg and Banas (2000) recommended that certain unknown organizational climate factors can be combined with other macro factors to resolve the inconsistency. This was reciprocated by Alice *et al.* (2016), Alice (2011) and Furnham *et al.* (2008) who by focusing on employee psychological empowerment found that it stimulates innovation by providing employees with social, emotional and technical support needed to influence innovation. But even with such insight, the few researchers who attempted to study the influence of psychological empowerment on innovation have

focused on managers alone leaving out the lower cadre staff (Nijstand & Stroebe, 2006; Choi *et al.*, 2005; Choi *et al.*, 2009; Choi & Thomson, 2006). This has not yet solved the problem of inconsistency on outcomes but have left the scholars divided on the outcomes of influences of organizational climate to innovation. This has equally left organizations less aware of organizational climate variables to focus on if they aim at yielding high levels of innovations (Muturi, Ochieng & Douglas, 2015). It is on this premise that the researchers considered a model with some omitted OC variables mediated by EPE to find out the influence they have on innovation in organizations using employees in the service sector which have not been researched before. This study further documents and compliments the OC theories.

This study therefore considered employees rating of organizational climate variables that included supervisor support, training support, co-worker support, leadership and employee psychological empowerment indicated by meaning, competence, impact, and self-determination as the mediating variable between OC and innovation. Innovation was measured by idea generation and implementation. Since most of the previous analytical methodology applied were correlation and regression analyses which did not resolve the inconsistency, this study progressively applied structural equation modelling technique to analyze these multiple relationships in order to improve the accuracy in the effort to further improve the results.

1.2 Statement of the Problem

The 21st century global business environment is bedeviled with many challenges like fast changing technology, growing volatility, global competition, organization change, social conflicts, environmental degradation and high rate of unemployment among others (George & Zhou, 2007; Runco, 2004). To overcome these challenges organizations need to have a pool of creative and innovative employees (Zhou & Oldham, 2004; Eustace & Martins, 2014). Innovation has been found to be one of the most critical tools in today's fast changing environment that can enable organizations, change managers, employees to overcome the many challenges (George & Zhou, 2007; Batey, 2012). ESOMAR (2011) reported that failure to respond to the growing

need of innovation has resulted to stagnation of African Research firms contributing as little as 5% of the global market research revenue over the years.

This growing need to solve the many emerging problems have resulted in organizations considering innovation majorly from a financial perspective and at a strategic level, neglecting other factors at the macro level which too have impact on innovation. This innovational strategy myopia, has left organizations unaware of how to upscale employee innovations as critical asset in their possession (Shalley *et al.*, 2009; Shalley *et al.* 2004; Shin & Zhou, 2003). In an attempt to cultivate employee innovations, scholars have identified several factors to consider (Amabile & Khaire, 2008). Among the factors identified that can stimulate employee innovativeness is the perception or feeling employees form about the working environment (organizational climate) and characteristics of certain employees (Amabile, 1996; Dul & Ceylun, 2011). If these organizational climate factors and individual characteristics are assessed, they are suspected to estimate the level of innovation in an organization to drive growth (Dodd, Smith & Wards, 2002; Moss, 2007).

Some scholars forthwith have studied organizational formal rules and structures as organizational climate dimensions to assess employee innovations and concluded that the two factors could positively influence level of innovation in organizations, but were inadequate in the absence of other variables outside organizational climate. In furtherance to the above finding, scholars tried to test organizational climate impact on employee innovations using different measurements in their studies. Some tests were based on outcomes, others based on levels of operations, others on different rating styles and different models, different techniques of data analyses but they all produced varied results (Furnham *et al.*, 2008; Amabile & Gryskiewicz, 1989; Silvia, 2008 Kaufaman, Plucker & Baer, 2008; Mumford, 2003, Runco, 2004; Alice, 2011, Hunter *et al.*, 2004).

In most of those studies, the common analytical methodologies applied were correlation and regression (Alice, 2011) which did not resolve the inconsistency of results either. Inconsistent results have continued to proliferate, with recent studies

reporting inverted U-shape relationship (Fen lin, 2007), significant positive relationship (Ndanuko, 2012) and negative influence (Purohit & Wadhwa, 2012; Haque, 2014). Differing results have continued even with inclusion of factors outside organizational climate as suggested by some scholars. Inclusion of employee empowerment for example has been reported to positive, negative and no significant link relations with employee innovation (Çakar & Ertürk, 2010; Ertürk, 2012; Allen & Helms, 2006; Muindi, 2011 and Kmiecik *et al.* (2012)).

This had left scholars to unanimously agree that the inconsistency is due to something else unknown yet, given that the models used used in the past had been found to have internal consistency (Mathsen & Einasen, 2004; Boso *et al.* 2013; Mumford & Hunter, 2004; Hunter *et al.*, 2007). This motivated the researcher, with reference to the findings by Wermberg and Banas (2000), that certain organizational climate factors combined with other macro factors can contribute to reducing this long-standing inconsistency. The researcher's motivation was further strengthened by Alice *et al.* 2016; Furnham and Batey (2006) who had found that focusing on employee psychological empowerment stimulate innovation when leaders provide employees with social, emotional and technical support. Given that such insight has not attracted many scholars, and those who attempted focused on managers alone, leaving out the lower cadre staff (Nijstand & Stroebe, 2006; Choi & Thomas, 2006) this portended a gap for the researcher to bridge. Given that the debate on inconsistency has left the scholars divided on the influences of organizational climate to innovation, organizations still remain unaware of critical organizational climate variables to focus on if they want to yield high levels of innovations (Muturi, Ochieng & Douglas, 2015). It is on this premise that the researcher considered a model with organizational climate variables mediated by employee psychological empowerment to find out the influence they have on innovation in organizations to to add a voice to previous findings.

Our study therefore considered validated organizational climate variables indicated by training support, supervisor support, co-worker support, leadership and employee psychological empowerment indicated by meaning, competence, self-determination and impact of the job as the mediating variable for innovation which was measured by

factors on idea generation and implementation by the employee which has not been tried before. Since most of the previous studies applied correlation and regression as analytical methods which did not resolve the inconsistency (Alice, 2011) our study therefore applied structural equation modelling (SEM) technique to analyze these multiple relationships and improve accuracy in the effort to improve the results. This model was tested on Marketing and Social research Firms (MSRFs in Kenya) which ESOMAR (2011) reported a growing need of innovation to reduce stagnation resulting as little as 5% contribution to the global market research revenue over the years. The study was guided by the objectives below.

1.3 Research Objectives

1.3.1 General Objective

To establish the relationship between organizational climate, employee psychological empowerment and innovations on market and social research firms (MSRFs) in Kenya.

1.3.2 Specific Objective

- i. To determine the effect of training support on employee psychological empowerment and innovation of employees of MSRFs in Kenya.
- ii. To estimate the effect of supervisor support on employee psychological empowerment and innovations in MSRFs in Kenya.
- iii. To explore the effect of co-worker support on employee psychological empowerment and innovations in MSRFs in Kenya
- iv. To determine the effect of transformational leadership on employee psychological empowerment and innovations in MSRFs in Kenya.
- v. To determine the mediating effect of employee psychological empowerment on organizational climate and innovations on MSRFs in Kenya.

1.4 Hypothesis

- H01. Training support has insignificant effect on employee psychological empowerment and innovation in MSRFs in Kenya.

- H02. Supervisor support has insignificant effect on employee psychological empowerment and innovation in MSRFs in Kenya
- H03. Co-worker support has insignificant effect on employee psychological empowerment and innovation in MSRFs in Kenya
- H04. Transformational leadership has insignificant effect on employee psychological empowerment and innovation in MSRFs in Kenya
- H05. Employee psychological empowerment has insignificant mediating effect on organizational climate and innovations on MSRFs in Kenya.

1.5 Justification of this Research

Past analysis of studies on effects of organizational climate on innovative behavior have reported contradictory results and this has weakened the conclusion for generality of the effects of organizational climate on innovation (Hunter *et al.*, 2007). This research therefore can be resourceful to policy makers to make decisions on how to promote innovations in organizations by focusing on employee empowerment.

Although it has been found that high performing firms report low gap between actual and ideal perception on organizational climate, 22% compared to 45% of low performing firms, it is still unclear which among the variables of organizational climate has the most influence on innovation and creativity to result to this (Mumford & Hunter, 2007). This study aimed at bridging this gap by documenting the extent of effects of some climate variables that are known to have an influence on innovation. This will be helpful to change managers especially at MSRAFs and academicians to know where to focus their effort.

Employee empowerment was found to be a critical component in influencing creative behaviors yet very few studies focus on this element. This study therefore aimed at adding to the existing body of knowledge the effects of organizational contextual factors on creativity and innovation which Human Resource managers can advise to enhance level of creativity and innovation in a very key sector of the economy, the Market Research sector. This study aimed at bringing out insights through organizational climate, employee empowerment and the characteristics of the

leadership needed in the 21st century organizations. This may help businesses refocus their growth strategy, competition and change management agenda. African firms may take advantage of the shift of global focus on Africa as an emerging market.

Despite MRFs being the providers of insightful ideas ideal for innovation, there has been very little interest of studying these firms to understand the effects their climates play in their innovation. This will attract other researchers to focus on this key sector of the economy and further increase their research share which is currently insignificant at 5% and 1% for Africa and MSRA firms consecutively in the global research (Keiser *et al*, 2004).

Hausan (2011) called for a need for more literature on effects of organization climate on creativity and innovation in organization. This will therefore answer some questions on predictability of creativity and innovation and that scholars have asked over the years. This may in the long run broaden the understanding of the constructs of creativity and innovation.

1.6 Scope of the Study

The scope of this study was defined in terms of choice of institutions, geographic coverage, period of study, and contents of the research understudy to address the research objectives as accurately as possible.

This study was conducted in Marketing and Social Research Association (MSRA) firms in Kenya. These marketing research firms operate across African countries only. According to the annual report of MSRA (2013), adoption of new methods and penetrating new market, especially outside Africa has posed a key challenge to MSRFs. This could be due to slow adoption to new technology on computerized data collection, online research, access to new sophisticated and affordable software, poor collaboration among the firms, high cost of operations, inefficient resources (human and capital resources), high competition, poor corporate governance, and lack of standardized quality control tools among others. These and other challenges impact negatively on creativity and innovation. To address the above challenges,

organizational climate, employee empowerment and innovation could be an avenue which may mitigate some of the challenges and further enhance employee innovations. This research was therefore conducted in MSRA for two reasons.

The first reason was to find out a way to increase the level of employee innovation of MSRA firms to minimize the existing challenges and increase market share in global research business. Secondly, the study was to test the relationship between organizational climates, employee empowerment and employee innovation which has not been tested in research firms before, particularly in Kenya. This study was done in Kenya, specifically in Nairobi, because most of the head offices of all the fifteen MSRA firms (MSRFs) are located in Nairobi.

The variables of this study were research firms specific at micro level. The climate variables used in the study were derived from the theories, models and empirical studies which fit the objectives of the study. This confirms content validity of the constructs. The variables measuring organizational climate, leadership, employee empowerment, innovations are described in the conceptual framework. The main theory was be intrinsic motivation theory while the other theories and models used included transformational leadership theory, componential theory of innovation and employee psychological empowerment.

1.7 Limitations of the Study

Important empirical insights from this study on MSRFs in Kenya have elicited firms. However, various limitations may deter generalization of the results. The study focused on individuals of a single industry and more so members of the professional body, Marketing and Social Research Association (MSRA) which was found to be voluntary to join. The study, therefore, may have suffered from common source biasness which may hinder generalization across other industries. If the study is tested in other industries, this may strengthen the result for generalization. Future studies should expand to cover a cross-section of industries. The selection of organizational climate variables was limited to very few factors and therefore not exhaustive as would be the ideal situation to provide a comprehensive predication of innovation in

organizations based on organizational climate and employee psychological empowerment.

The study applied cross-sectional survey design which is commonly used in social sciences owing to its very nature of cost and time saving. However, this design may not offer a trend on effects of organizational climate and innovation over a period of time and therefore a longitudinal design may be more ideal in future studies.

The choice of the questions and application of all quantitative approach without a qualitative perspective may have biasedly tilted the outcome. The choice of the questions too may not have offered all the probable alternatives.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed both theoretical and empirical literature on effects of organizational climate factors on employee psychological empowerment and further on innovation. The study aimed at exploring the effect of organization climate on employee psychological empowerment and innovation as conceptualized below. The researcher based the study on three theories to find out the effect of organizational climate on employee psychological empowerment and innovation. These theories are intrinsic motivation theory, transformational leadership theory and componential theory. This section identified a research gap of inconsistency of findings and omissions of critical variables in assessing employee innovations in businesses and sought to address the problem as discussed below.

This study was structured into seven major parts. Part one contained the key concepts of the study. Part two reported on theories and empirical studies on organizational climate and their relationship with employee psychological empowerment. Part three dealt with the conceptual framework. Part four contained sub-topics containing organizational climate variables indicated by training support, supervisor support, co-worker support, transformational leadership and employee psychological empowerment indicated by meaning, competence, self-determination and impact of the job as the mediating variable for innovation which was measured by factors on idea generation and implementation. Part five was the mediating effect of employee psychological empowerment on organizational climate and employee innovations. Part six and seven covered the critique to the relevant literature and the research gap while the eighth part entailed the chapter summary.

2.2 Theoretical Review

Organizational climate and innovations are constructs that have continued to attract many scholars in the last fifty years of study. This has therefore culminated in the development of theories around them in the verge of understanding the constructs as management tools in a fast changing environment. Organizational climate theories

explained in general the effects of various organizational variables to the business outcome of creativity and innovation. Intrinsic motivation theory was evaluated in the context of employee empowerment to deliver innovation and majorly explained the constructs of training support in the organizational climate among other variables. The componential theory of creativity proposed by Amabile (1983) is founded on social and psychological components critical for individual to produce creative products or solution. Leadership theories on the same breath emerged to explain and demonstrate the influence leadership has on various business outcomes among them creativity and innovation. This research particularly focused on transformational leadership theory (Burns, 1978) to explain the leadership influence as an organizational climate factor on employee empowerment and innovation in businesses.

2.2.1 Intrinsic Motivation Theories

The theory states that an individual is intrinsically motivated to behave in a certain way when he feels internally rewarded by the behavior chosen (Deci, 1975; Deci & Ryan, 1985). Previous research linked organizational climate to service outcomes. Employees are affected by behavioral expectations, norms and co-workers' perceptions of work environment, since they serve as formal and informal rules governing the socialization process and provide a mental guide. Behavioral expectations and norms as well as patterns of shared perceptions is readily influenced by the organization through the management strategies.

Employee work attitudes and behaviors may be influenced by the individual's own perceptions of the work environment as well as by their shared perceptions with co-workers of the same working environment. A positive organizational climate is thought to enhance employee motivation and increase the likelihood that employees will allocate discretionary effort to their work tasks. Work motivation described as a set of internal and external factors, initiate work behavior and determine direction, intensity and duration the employee engages. Employees work in order to satisfy their material and psychological needs(Douglas & Morris, 2006).

To identify the relevant motivational factors which influence employees' work activities and the performance at the workplace, Herzberg's two factor theory of

motivation is key. According to Herzberg's theory, the extrinsic factors do not produce satisfaction and work performance, but their presence represents a precondition for motivators to produce their effects. The absence of intrinsic factors (motivators) determines dissatisfaction and their presence in employees' work represents a source of work motivation and satisfaction (Stroh, Northcraft, & Neale, 2002).

The physical environment too (furniture, equipment), the technological environment (work processes, the organization of the workplace, machines, equipment), the social environment (employees' attitudes, behaviors, rules, the support offered to employees, rewards), the political environment and the economic environment are some of the elements of organizational climate which influence employee' motivation, work satisfaction and performance (Huțu, 2005).

To be creative and innovative on products, processes and services, individuals must feel internally motivated and rewarded. Intrinsic motivation is driven by competence, relatedness and autonomy. It is also shaped externally by recognition, reward, co-operation, autonomy and curiosity. The challenge now is how the owners of the business can create an ideal climate to intrinsically promote continuous innovation which is rewarding, challenging and interesting to all individuals (Brown, 2007). The two authors look at the leader as the person responsible for this kind of climate. This has motivated the researcher to consider leadership as an organizational climate factor that can influence employee psychological empowerment to promote innovation which from the reviewed literature has rarely been applied in this perspective before.

Theorists of intrinsic motivation have identified and generalized the factors that may increase intrinsic motivation for innovation to include recognition, challenges, curiosity, rewards and fun but have not assessed the extent of increment at an industry and employee specific level. This study used training support, workplace support (supervisor and co-worker), and transformational leadership as climate variables mediated by employee psychological empowerment to estimate the level of innovation to find out their effect on innovation in market research industry in Kenya which has not been done in the past.

2.2.2 Transformational Leadership Theory

Burns (1978) is said to be the proponent of this theory. The theory states that a transformational leader creates high performance team who deliver value through high level of morality and motivation. This kind of leadership is a process found in all levels of the business, teams, departments, divisions and organization as a whole. This leadership demonstrates a visionary, inspiring, daring, risk taking and challenging mind-set on all the activities of the business. These are ideal characteristics for the business to try new things to survive and grow (innovation). These leaders are said to deliver change in organizations. These leaders are said to possess inspirational motivation, intellectual stimulation, idealized influence and individualized consideration ideal for creativity and innovation (Burns, 1978). This leadership encourages new ideas from workers and allows them to make and learn from mistakes. They challenge the inefficient processes and discard them. They mentor followers and reward them for creativity and innovation. They allow followers to make decisions and support them to implement their ideas (Bass, 1985). This leadership uses social and spiritual values to influence followers.

Transformational leaders are far looking for the survival of the business, emphasize co-operation, ethics and community value add. It is a leadership said to be critical to the proper functioning of the society and social institutions (Atonakis, Cianciolo & Sternberg, 2004). This makes this leadership preferred from transactional leadership which is said to be selfish and not short-lived. This leadership is measurable in terms of the leader influence to the followers and can be used to predict their behavior and performance outcomes (Bass, 1985). The proponent of the new instrumental leadership postulate that although it is unique, instrumental leadership goes beyond transformational leadership, and it was proposed to foster transformational leadership activities (Atonakis & House, 2014). Critics of transformational leadership assert that it is a self-promotional leadership that is hard to train and teach. Followers are likely to be manipulated by transformational leaders. They also claim that it is not ideal in a stable business environment and on a less educated/trained workforce which is the kind of environment facing 21st century businesses.

2.2.3 Componential Theory of Creativity and Innovation

The componential theory of creativity proposed by Amabile (1983) is founded on social and psychological components critical for individual to be eliciting creative products or solutions. The theory bases its definition of creativity as the production of ideas or outcomes that are both novel and appropriate to some goal. This theory encompasses organizational creativity and innovation, with the effect of the work environments created by managers in organizations. The size of creativity that an individual produces at any given point is a function of the creativity components operating at that time, within and around that person.

The theory is grounded on the premise that innovation is a deliberate introduction and application within a role, group or organization, ideas, processes, products or procedures, new to the particular department of adoption, started with a view to significantly benefit the individual, the team, the organization or the wider society. For organizations to survive and be sustainable, innovation and creativity must be accelerated. The theory postulates that creativity and innovation is dependent on the level of expertise (skills, training and knowledge), environment he/she is operating in particularly social environment (personality) and the intrinsic motivation. Support of innovation by the leaders is critical for high level of creativity and innovation.

A weakness of this theory is that control of what to innovate is needed because not all innovations and creativities are beneficial (Hunter *et.al.* 2007). The theory takes a human being as the parameter for innovation rather than profit or outcomes. The theory stipulates that innovation of a person is dependent on the judgment of others. Innovation, which is taken to mean commercialization of creativities, can have both impersonal and interpersonal processes of social comparison and judgment. This assumption overlooks that small innovation can also be important in the process. Creativity is majorly associated with individuals, while innovation implementation is taken to be accomplished by groups, organization or societies.

2.3 Empirical Literature Review

This section entails previous studies done relevant to the area under study. It captures findings and conclusions specific to the constructs the researcher is concentrating on.

2.3.1 Concept of Organizational Climate

These are the perceptions or feelings employees form about the working environment (organizational climate) and characteristics of certain employees within the environment such as supervisors and leaders (Amabile, 1996; Dul & Ceylan, 2011). Such feelings influence behaviors and attitudes of employee to innovate or not. If these organizational climate factors and individual characteristics are assessed, they can help estimate the level of innovation existing and propose interventions to improve it (Dodd, Smith & Wards, 2002; Moss, 2007). The above scholars asserted that perceptions formed by employees on working environment (organizational climate) and characteristics of certain individuals within the environment such as supervisors and leaders may either promote or inhibit the level of innovation. The above finding was further complimented by Nystrom, Ramamurthy & Wilson (2002) who found that organizational climate dimensions, size and resources combined positively to promote innovation. It has also been fronted that an organizational climate that employees perceived to allow them to access information on organizational vision and individual performance, improve level of their innovation (Speitzer *et al.*, 1995).

Further assessment of how organizational climate factors influence innovation, have resulted to some scholars focusing on organizational climate factors based on formal rules and structures and reported that these two factors could positively influence level of innovation in organizations, but are inadequate in the absence of psychological empowerment of employees and their managers (Speitzer *et al.*, 1995). If organizational climate factors and individual characteristics are assessed, they may help to estimate the level of innovation existing and propose interventions to improve it (Dodd, Smith & Wards, 2002; Moss, 2007). This continued to build interest for further research with inclusion of now employee psychological empowerment on influence of organizational climate on employee innovations.

2.3.2 Concept of Employee Psychological Empowerment

Empowerment is a continuous variable, people can be viewed as more or less empowered, rather than empowered or not empowered. Psychological empowerment is the motivational concept of self-efficacy. It is an intrinsic task motivation exemplified by four cognitive elements. These include meaning, competence, self-determination and impact. Meaning describes the value of a work goal or purpose, judged in regard to an employee's own ideals or standards (Thomas & Velthouse, 1990). Meaning is the fit between the work requirements, role, beliefs, values, and behaviors (Brief & Nord, 1990; Hackman & Oldham, 1980 & Hackman *et al.*, 2000) as cited in Spreitzer (1995). Competence refers to employee's self-efficacy in regard to belief and capability to perform activities with the skill he/she has (Gist, 1987). It is the personal mastery or effort-performance expectancy (Bandura, 1989). Self-determination on its part is the individual's sense of having choice in initiating and regulating actions (Deci & Ryan, 2000). Self-determination reflects freedom in the initiation and continuation of work behaviors and processes about work methods, pace, and effort (Bell & Staw. 1989) as cited Spreitzer (1995). Impact is the degree to which an employee can influence strategic, administrative, or operating outcomes at workplace (Ashforth, 1989). The four dimensions are argued to combine additively to create an overall construct of psychological empowerment which further enhance creativity and innovation. If one of the variables is missing, less empowerment is felt, though not completely eliminated. Empowerment is not an enduring personality trait generalizable across situations, but rather a set of cognitions shaped by a work environment (Thomas & Velthouse, 1990). Empowerment reflects people's perceptions about themselves in relation to their work environments (Bandura, 1989). Finally, empowerment is not a global construct generalizable across different life situations and roles but rather specific to the work and specific meaning unique across organizations.

When employees enjoy support of their organizational members they develop a sense of positive psychological conditions ideal for innovation. This emerging psychological condition has further attracted scholars to study the area focusing on

employee empowerment with a view to improve innovations at the workplace as it has been found to have a positive effect on trust, innovation and organizational performance (Berraies & Chaher, 2014).

2.3.3 The Concept of Innovation

Creativity and innovation constructs are reported to be closely related and significantly overlap in terms of characteristics (Angle, 1989). In contrast, creativity is the generation of novel and useful ideas, primarily at the macro level (Amabile *et al.*, 1994 and Amabile *et al.*, 1996). Innovation on its part is the process by which these ideas are captured, filtered, funded, developed, modified, clarified, and eventually commercialized and/or implemented. Creativity is the precursor of innovation. In order for an organization to remain relevant and competitive in pursuit of its purpose, leadership must pay attention to both ends of the process, generating creative ideas frequently and utilizing its innovation process to realize the potential value of those ideas.

This growing importance of creativity and innovation portends the need for identifying those factors that promote or stifle creativity and innovation to solve the many global and organizational challenges experienced in this century (Eustace & Martins, 2014). This has resulted in many studies proliferating focusing on different interests and approaches in trying to identify those factors that influence creativity and innovation as well as understanding more about the two constructs (Govindarajan & Trimble, 2010). Some scholars interested in this area have focused on innovation on the premise of problem solving ability of the generated ideas (Govindarajan & Trimble, 2010). In all the studies, researchers have concurred that innovation is very critical for solving the global and organizational challenges sustainably (Dul & Ceylan, 2011; Nystrom, Ramamurthy & Wilson, 2002).

Although researchers have concurred that innovation is very critical for any organization, nations, society, change managers, scholars, individual development and change, organizations on their part have found it difficult to maintain high level of employee innovation in organizations (Shalley *et al.*, 2009; Shalley *et al.*, 2004; Shin

& Zhou, 2003). To address the issue of low level of employee innovation in organizations, scholars have identified several factors that may influence innovation (Amabile & Khaire, 2008). Among the factors identified that can stimulate innovation is the perception or feeling employees form about the working environment (organizational climate) and characteristics of certain employees within the environment such as supervisors and leaders (Amabile, 1996; Dul & Ceylan, 2011). If these organizational climate factors and individual characteristics are assessed, they can help estimate the level of innovation existing and propose interventions to improve it (Dodd, Smith & Wards, 2002; Moss, 2007).

2.3.4 Effect of Organizational Climate and Employee Psychological

Empowerment

The perceptions or feelings employees form about the working environment (organizational climate) and characteristics of certain employees within the environment such as supervisors and leaders can influence behaviors and attitudes of employee to innovate or not (Amabile, 1996; Dul & Ceylan, 2011). McLaughlin (2014) grouped organizational climate into four distinct types which are people oriented, innovation oriented, goal oriented and rule oriented climates. People oriented climate is depicted by the care and concern of the people behavior exemplified by the organization leadership. Innovation oriented climate is denoted by the support of new ideas and implementation of those in the firm's policy. Rule oriented climate is denoted by organization strictness to details and reward and punishment of those who fail to adhere to the laid down procedures especially in dangerous work environments. Goal oriented climate emphasizes on production level of the organization and her workforce. If these organizational climate factors and individual characteristics are assessed, they can help estimate the level of innovation existing and propose interventions to improve it (Dodd, Smith & Wards, 2002; Moss, 2007). The above finding was further complimented by Nystrom, Ramamurthy and Wilson (2002) who found that organizational climate dimensions, size and resources combined positively to promote innovation. It has also been fronted that an organizational climate that employees perceived to allow them to access information on organizational vision and individual performance, improve level of their

innovation (Speitzer *et.al.*, 1995). Psychological perspective or empowerment is defined as a psychological state that is linked to increased intrinsic task motivation based on an employee's sense of self-determination, meaning, impact and competence (Thomas & Velthouse, 1990) as cited by Berraies and Chaher (2014). Employees themselves must psychologically feel that they have power to act and to perform a task (Berraie & Chaher, 2014). According to Nyhan (2000) and Kahreh *et al.* (2011), empowerment is understood as the freedom or autonomy and the authority bestowed on the employees to execute and control their tasks to the best of their abilities. The psychological condition has been recognized as an important state or condition at work (May, Gilson & Harter, 2004). Individuals have a primary motive to seek meaning in their work which occurs when individuals feel useful and valuable and that they are making a difference. It has also been found that psychological conditions foster employee engagement in particular work behaviors through intrinsic motivation (Carmelli & Spreitzer, 2009). Jafari and Iranzadeh (2013) asserted that employee who makes self-determined choice about their day to day activities are likely to be more effective and efficient than non-empowered employee. According to Khan (1997), empowerment strengthen trust between employees and leaders. Nyhan (2000) posited that empowerment contributes to the development of interpersonal trust especially between employees and supervisors. Empowerment and organizational climate was found to have significant negative relationship with innovation while transformational leadership was found to have significant and positive relationship with innovation and empowerment (Montes, Moreno & Farnandez, 2006).

Offering training opportunities to workers reduces misunderstandings which may stifle creativity and innovation (Sieczka, 2011). Employees' willingness to train and acquire knowledge was found to enable companies to improve innovation capabilities (competences) (Patterson *et al.*, 2005). It is generally believed that R&D is more effective when firms have more skilled personnel due to investment in worker training (González, Miles & Pazó, 2012 & González, Miles & Pazó, 2016). Training for innovation cuts across all types of organizations and departments. Future prosperity for Africa will be realizable if skills and potentials of employees are enhanced irrespective of the industry they are operating in. Critical skills to inculcate to workers

include investigative, analytical and practical skills if innovation is to be realized. Available literature has reported that CEOs leadership training, management coaching and networking have immediately impacted on economic growth through innovation and job creation. It has found that poverty bedeviling Africa can be addressed through leadership and practical innovation in the private sector.

High quality co-worker interactions create a sense of belonging, a strong sense of social identity and meaning. Loss of social identity can lead to meaninglessness. Amara and Bietry (2008) on their part showed that there is a significant relationship between empowerment and employees' trust in their colleagues, in their superiors and in organization. Fen lin (2007) found in Taiwan that individual knowledge efficacy and enjoyment to help others together with the top management support significantly influence knowledge sharing process. Co-worker support denotes the extent to which employees believe their co-workers willingly provide them with work-related assistance to aid in the execution of their tasks. Such co-worker support motivates followers to enlarge their jobs and to engage in more pro-social behaviors that are needed to achieving collective goals. This is exemplified by helping co-workers with heavy workloads, sharing resources, and providing advice to co-workers who encounter work problems among others. Existing empirical studies also demonstrate employees who receive more support from their co-workers might obtain more job resources to deal with stressful and innovative tasks.

When an employee feels supported by his/her supervisor and the co-workers at work he/she is likely to experience psychological meaningfulness at work as support engenders feelings of being worthy, useful, and valued, that the person is making a unique contribution and is not taken for granted (Arora and Kamalanabhan,2013). It is proposed that the support felt from the supervisor and the co-workers lead to sense of psychological meaningfulness at work. Prior research has shown that support from the supervisor and co-workers may be an important precursor to innovation through their impact on psychological empowerment of meaningfulness, safety and availability.

Brunetto and Farr-Wharton (2007) and Brunetto and Farr-Wharton (2010) argued that leadership that empowers and strengthens employees elicit trust between the employer and employee which further result to high level of innovation. Managers must therefore create an organizational climate that promotes the development of capabilities (competencies) required to innovate. The management literature has reported that leadership practices that support capabilities development has a positive effect on innovation. Moye and Henkin (2006) emphasized also that empowerment is perceived by employees as a pointer that their leaders trust them. All the authors have concurred that trust between managers and employees fosters an ideal climate for innovation.

Braungart and McDonough (2000) proposed that the critical role in innovation projects is the leadership enabling the team through setting task boundaries, information, sharing resources allocated, instilling positive attitude, keeping the team focused and challenged through the leadership skill picked. The achievement of business goals and financial returns is increasingly dependent on delivery by front-line employees depending on their supervisor support. This emerges from the operation of a mix of HR/high-performance work practices in the context of a supportive management. It cannot be imposed from the top but depends on developing employee security, trust and buy-in to the goals and values of the organization (Johnson, 2005). With the increased importance of the positive climate, the human resources has shifted its focus to quality, innovation and reduction of the cost. Morale is how an employee feels about him or herself. It denotes how well or bad they feel about their self-image in relations to their work, conditions and how they are doing at their place. All these feeling are reinforced by the supervisor support and encouragement.

2.3.5 Impact of Training Support on Innovation

The componential theory postulates that creativity and innovation is dependent on the level of expertise (skills, training and knowledge). Training and teaching help individuals to discover and hone their creative potentials. Complimentary training provided when studying a certain discipline encourages creativity and innovation. According to the Indian National Center on Education and the Economy, 2005

(Adam, 2005), experiential learning increases the chances of innovation where the real world projects, internships, case studies and business planning are applied. Literature has shown that continuous training results in more effective and sustainable creativity and innovation and should not be stopped irrespective of budgets. Instead, alternative training like virtual training, e-learning and digital readers should be applied to reduce cost. Empirically, offering training opportunities to workers reduces misunderstandings which may stifle creativity and innovation (Sieczka, 2011). Employees' willingness to train and acquire knowledge was found to enable companies to improve innovation capabilities (Patterson *et al.*, 2005). Empowerment and organizational climate was found to have a significant negative relationship with innovation while transformational leadership was found to have a significant and positive relationship with innovation and empowerment (Montes, Moreno & Farnandez, 2006).

While wide training results in personal transformational and skills building, Meador & Zazove (2005) argues that sometimes formal education can be a barrier that confines individuals to a single way of thinking and limits creativity and innovation. He sites that the likes of Thomas Edison, Steve Jobs and David Darwin were renowned creators and innovators yet had little higher education. Literature has reported that the correlation between individual formal educations is an inverted U meaning formal education increases the probability of being creative before reaching to an optimal level and later decline (Adam, 2005). Fen lin (2007) found in Taiwan that individual knowledge efficacy and enjoyment to help others together with the top management support significantly influence knowledge sharing process.

Firms that invest in research and development (R&D) and workers' skills (on-the-job training) are hoped to be successful in innovation. However, from research it is less evident the extent to which these investments enhance the impact of one another on innovation. It is generally believed that R&D is more effective when firms have more skilled personnel due to investment in worker training (González, Miles & Pazó, 2012). This study focuses on innovation generated (measured by innovations ideas generation) and execution using a sample of Kenyan market research firms. Training

is believed to reinforce the effect of R&D on the likelihood of innovating, and it may even increase likelihood of some firms to become innovative. It is also opined that the impact of training varies according to firm size and industry and that complementarity is more applicable in large firms in the high-tech sector (González, Miles & Pazó, 2012). Training for innovation cuts across all types of organizations and departments.

Future prosperity for Africa is realizable if skills and potentials of employees are enhanced irrespective of the industry they are operating in. Critical skills to inculcate to workers include investigative, analytical and practical skills if innovation is to be realized. Available literature has reported that CEOs leadership training, management coaching and networking have immediately impacted on economic growth through innovation and job creation. It has found that poverty bedeviling Africa can be addressed through leadership and practical innovation in the private sector (Hamilton, 2016).

Training for innovation entails acquiring skills that are needed for innovation that enhances imagination, curiosity, behavior change, building self-confidence, eliciting energy, passion, leadership, corroborations and persuasions. Introduction of critical math in a curricular is taken to enhance innovation by virtue of its complexity (Zemira & Kramarski, 2014; OECD report, 2014). High education plays a pivotal role in providing skills for innovations but challenge is reported on what kind of teaching will deliver this innovation. It has been reported that problem based learning can be an effective way to develop different disciplines, specific and transferable skills for innovation (Hoidn & Kärkkäinen 2014). The current wave is in the investment in intangible assets (skills and competencies) which is overtaking investment in tangible assets. Human capital is the basic innovation input (Corrado, Hunter & Sichel, 2006).

Continuous training enhances knowledge which further increases an organization's propensity to innovate. A highly skilled workforce is the most crucial factor to a firm's performance in a turbulent environment while firms in a stable environment benefit more from training investment. Most human capital focuses on formal education for innovation which is independent from on the job training. These

researchers argued that training and innovation have a causal effect. They found a strong association between lagged training and innovation. Their findings concurred with that of Damanpour (1991) who also found that there is a statistically significant association between organization innovation and technical knowledge resources and specialization. This study looked at both formal or on the job trainings, age, education level and experience of employee for innovation which have not greatly received prominence in past studies (Forbes Insights, 2012).

2.3.6 Impact of Supervisor Support on Innovation

Supervisors who recognize employees' diversity earn the firm respect by valuing different cultures entertained in the business. Whereas the supervisor and diverse workforce play a double role of driving innovation and attracting great talents, retaining those talents is under the watch of the management of a firm (Forbes Insight, 2012). Other literature argues that the supervisors who positively recognize the members of the various teams in the firm encourage outstanding performance, continued performance, and improved performance which are outcomes of increased level of innovation. Managers should strive to give feedback to employees as this encourages them to continue with innovative activities. Therefore, without feedback, the employees will be unable to measure the results of their efforts. The growth of team/individuals innovative behavior depends on the frequency of feedback (contact) concerning their performance (Moreland & Myaskovsky 2000). For innovation to elicit, managers must identify skills and knowledge necessary to complete the assigned tasks. In particular, Bacon and Blyton (2006) proposed to supervisors to teach their workers self-management and the interpersonal skills as they are very ideal for innovation success. These important skills enhance communication or promotion of innovative ideas and interpersonal relationship. The self-management team skills enable employees manage his/her own activities and resources while working within the limits of the organization's duties (Letts, Ryan & Grossman, 2000).

Supervisors must be proactive and partner with trade unions, anticipate change and know what is happening in the wider world of work (Ulrich, 1997). There is strong evidence that a positive climate for employees created by supervisors will lead to

superior economic performance and innovation (Francis, 2004). The achievement of business goals and financial returns is increasingly dependent on delivery by front-line employees depending on their supervisor support. This emerges from the operation of a mix of HR/high-performance work practices in the context of a supportive management. It cannot be imposed from the top but depends on developing employee security, trust and buy-in to the goals and values of the organization (Johnson, 2005). With the increased importance of the positive climate, the human resources has shifted its focus to quality, innovation and reduction of the cost. Morale which depict how an employee feels about him or herself is reinforced by the supervisor support and encouragement (Johnson, 2004).

2.3.7 Effect of Coworker Support and Innovation

Co-worker support entails co-workers assisting one another in terms of sharing knowledge, expertise, encouragement and moral support (Zhou & George, 2001). Co-workers may bring their knowledge and expertise when an employee is faced with a difficult and novel task that requires a solution (Scott & Bruce, 1994). Employees may also acquire innovative ways from supportive co-workers that can result in efficiency (Perry-Smith, 2006). Working with helpful, supportive co-workers promotes a climate where new ideas can be discussed more openly and freely. Co-worker support therefore denotes the extent to which employees believe their co-workers willingly provide them with work-related assistance to aid in the execution of their tasks. Such co-worker support motivates followers to enlarge their jobs and to engage in more pro-social behaviors that are needed to achieving collective goals. This is exemplified by helping co-workers with heavy workloads, sharing resources, and providing advice to co-workers who encounter work problems among others. Existing empirical studies also demonstrate employees who receive more support from their co-workers might obtain more job resources to deal with stressful and innovative tasks. Co-worker support has been found to be positively related to individual innovative behavior at work (Arora & Kamalanabhan, 2013). In particular, Bacon and Blyton (2006) proposed to managers to teach their workers self-management and the interpersonal skills as they are very ideal for innovation success. These important skills enhance communication or promotion of innovative ideas and interpersonal relationship for co-worker support.

2.3.8 Effect of Transformational Leadership on Innovation

Burns (1978) is said to be the proponent of this theory. The theory states that a transformational leader creates high performance team who deliver value through high level of morality and motivation. This kind of leadership is a process found in all levels of the business, teams, departments, divisions and organization as a whole. This leadership demonstrates a visionary, inspiring, daring, risk taking and challenging mind-set on all the activities of the business. These are ideal characteristics for the business to try new things to survive and grow (innovation). These leaders are said to deliver change in organizations. These leaders are said to possess inspirational motivation, intellectual stimulation, idealized influence and individualized consideration ideal for creativity and innovation (Burns, 1978). This leadership encourages new ideas from workers and allows them to make and learn from mistakes. They challenge the inefficient processes and discard them. They mentor followers and reward them for creativity and innovation. They allow followers to make decisions and support them to implement their ideas (Bass, 1985). This leadership uses social and spiritual values to influence followers. Transformational leaders look for the survival of the business, emphasize co-operation, ethics and community value add. It is a leadership said to be critical to the proper functioning of the society and social institutions (Atonakis, Cianciolo & Sternberg, 2004).

This makes this leadership preferred from transactional leadership which is said to be selfish and short-lived. This leadership is measurable in terms of the leader influence to the followers and can be used to predict their behavior and performance outcomes (Bass, 1985). The proponent of the new instrumental leadership postulate that although it is unique and goes beyond transformational leadership, it was proposed to foster transformational leadership activities (Atonakis & House, 2004). Critics of transformational leadership assert that it is a self-promotional leadership that is hard to train and teach. Followers are likely to be manipulated by transformational leaders. They also claim that it is not ideal in a stable business environment and on less educated/trained workforce which is the kind of environment facing 21st century businesses.

Autonomy provided by the leader to the team members ensures timely completion of a task (McDonough & Barczak, 1991). Increase in centralization by senior management can hinder new product development. These two researchers also argue that formalization offer a common goal and direction ideal for innovation. Radical innovation needs to be avoided to win employee free participation in the innovation activity (Kanter, 2001). Leaders of new businesses and those of incumbent businesses portray different attitudes in innovation of products. Leadership contributes to loop and links in innovation teams. Clear goals, team leadership and co-operation were found to be key for successful project (Braungart & McDonough, 2000). Leadership need to understand its various roles in innovation to break down the barriers of innovation. Roles like power promoter whose influence demonstrates how the innovation fits the business, technical promoter who educate people about innovation and the new technology (Hauschildt & Kirchmann, 2001) all are necessary in firms. A manager brings in energy, excitement and urgency to new business development. Leaders play a distinctive role on innovation by setting the nature of interpersonal relationships, the nature of organization structure, nature of work, and focusing on support and reward in an organization. They also concluded that the leadership style engenders formal operating procedures that is key to more or less success of a business. Senior leadership should not micro manage the team but should be highly involved for innovation to elicit.

Transformational leadership (TL) behaviors, namely individualized consideration and motivation, is derived from a leader's vision and values and contributes to a culture that facilitates organizational innovation (Elenkov & Manev, 2005; Nutt, 2002). Yukl (2002) asserted that specific leadership behaviors may influence innovation through compliance as part of the organizational culture. Some authors (Van de Ven, 1986; Amabile, 1998; Sansone & Smith, 2000; Clegg, Unsworth, Epitropaki & Parker, 2002) have concluded that individual innovation helps to attain organizational success. Employees' innovative behavior depends greatly on their interaction with others in the workplace (Anderson *et al.*, 2004; Zhou & Shalley, 2003). According to Damanpour and Schneider (2006), innovation is directly influenced by top managers'

personal and positional characteristics. According to Buckler and Zien (1996), innovation is the purpose of the whole organization. In this kind of culture, new ideas are fronted forward into an atmosphere of enthusiastic support and a desire to contribute to them, even though it is known that a bigger number of these ideas will not make it to the market. Phillips *et al.* (2008) states that social innovations involve the creation of new business models that can meet the needs of underserved populations more efficiently, effectively, and if not profitably, at least sustainably. This is driven by the organization leadership. High quality co-worker interactions create a sense of belonging, a strong sense of social identity and meaning. Loss of social identity can lead to meaninglessness. When an employee feels support from the supervisor and the co-workers he is likely to experience psychological meaningfulness at work as support engenders feelings of being worthy, useful, and valued, that the person is making a unique contribution and is not taken for granted (Khan, 1990).

2.3.9 The Mediating Effect of Psychological Empowerment and Innovation

Psychological empowerment is the motivational concept of self-efficacy. It is an intrinsic task motivation exemplified by four cognitive elements. These include meaning, impact competence and self-determination. Meaning describes the value of a work goal or purpose, judged in regard to an employee's own ideals or standards (Thomas & Velthouse, 1990). Meaning is the fit between the work requirements, roles, beliefs, values, and behaviors (Brief & Nord, 1990; Hackman & Oldham, 1980) as cited in Spreitzer (1995). Competence refers to employee's self-efficacy in regard to belief and capability to perform activities with skill he/she has (Gist, 1987). It is the personal mastery or effort-performance expectancy (Bandura, 1989). Self-determination on its part is the individual's sense of having choice in initiating and regulating actions (Deci, Connell, & Ryan, 1989). Self-determination reflects freedom in the initiation and continuation of work behaviors and processes about work methods, pace, and effort (Bell & Staw. 1989; Spector, 1986) as cited Spreitzer (1995). Impact is the degree to which an employee can influence strategic, administrative, or operating outcomes at workplace (Ashforth, 1989). The four dimensions are argued to combine additively to create an overall construct of psychological empowerment which further enhance creativity and innovation. If one

of the variables is missing, less empowerment is felt, though not completely eliminated. Empowerment is not an enduring personality trait generalizable across situations, but rather, a set of cognitions shaped by a work environment (Thomas & Velthouse, 1990). Empowerment reflects people's perceptions about themselves in relation to their work environments (Bandura, 1989). Empowerment is a continuous variable; people can be viewed as more or less empowered, rather than empowered or not empowered. Finally, empowerment is not a global construct generalizable across different life situations and roles but rather specific to the work specific meaning and is unique across organizations.

When employees enjoy support of their organizational members, they develop a sense of positive psychological conditions ideal for innovation. Employee empowerment has been found to have a positive effect on trust, innovation and organizational performance (Berraies & Chaher, 2014). Researchers have pointed out that employee empowerment is a critical factor for innovation (Brunetto & Farr-Wharton, 2007; Ertürk, 2012; Fernandez & Moldogaziev, 2013). Such empowerment motivates employees to share their innovative ideas and use their skills in order for the success of the organization. Some researchers reported positive link between empowerment and innovation (Çakar & Ertürk, 2010; Ertürk, 2012; Helms, 2006; Muindi, 2011) while others found a negative relationship or no significant link between these variables. Kmieciak *et al.* (2012), in his study concluded that empowerment did not affect the company's ability to innovate.

A study by Jung *et al.* (2003) revealed that this managerial practice has a negative effect on organizational innovation. In the light of such contradictory results, it was interesting to identify organizational variables that could strengthen employee psychological empowerment to mediate the relationship between organizational climate and innovation. Brunetto and Farr-Wharton (2007) argued that empowerment strengthens organizational trust which emanate from leadership and very critical for promoting innovation.

2.3.10 Critique of Literature Relevant to the Study

The conditions under which a firm's innovativeness and activities are most and least beneficial is not understood (Boso, *et al*, 2013). This study tried to uncover on the effects of organization climate on creativity and innovation measured through society support, market value and employee satisfaction. The above authors used contingency perspective, social capital theory to understand how internal channel networking capability, structural factors and external environment affect innovativeness. They have concentrated more on innovation outcomes and overlooked creativity and innovation as an outcome itself. These researchers dwelt more on organizational climate, leadership and internal systems to establish their impact on innovativeness for high performance business. This study will look at both leaders and employees in an industry wide environment.

Another study by Mathisen, Einersen, Jorstada and Bronnic (2004) found that climate measures can predict creativity and innovations in a real world setting, where they asserted that good climate not only keeps people comfortable, but it is also strategically advantageous to the organization for winning out the best of its stakeholders because they will believe they are in a motivating climate. Their study attempted to highlight the conditions for innovation but did not fully address the issue of most or least ideal condition that results to the most or least innovation. These researchers, however, only generalized the conditions for predictability. This study therefore aimed at coming up with the combination of climate dimension ratios and their relevant moderators which if present or absent will increase or decrease innovation in emerging markets condition thereby making creativity and innovation predictable.

While it is essential to innovate, it is not always beneficial to the firm and there in, a firm must match its innovativeness levels to external conditions and internal capabilities and structure. The researcher wanted to harmonize the two perspectives of beneficial and non-beneficial innovations by understanding the climate ideal for beneficial creativity and innovation and to what extent the climate variables influence beneficial innovation or reduce the non-beneficial innovation. Although early scholars

concluded that climate perceptions can predict creativity and innovations (Tesluk, Faar & Klein, 1997). Recent researchers like Hunter *et al.* (2007) who analyzed 42 previous quantitative studies on climate, focusing on size, organization and environment, concluded that the question of predictability of innovation through climate was still answered. This was echoed by Hassan & Rohrbaugh (2011) who similarly called for a need for more literature on the effects of organization climate on creativity and innovation in organizations. This study therefore investigated the effects organization climate variables on creativity and innovation in MRFs in Kenya as the units of study to document how organization climate can predict creativity and innovation and the extent of prediction in an organization. This therefore may answer some questions on predictability of creativity and innovation and aim also to identify the ideal climate for creativity and innovation in a diverse workforce and in a turbulent climate.

A study by Stephenson and Papadopoulos (2006) and Karra & Papadopoulos (2005) found that adoption of new technology and cost reduction is not all that matters for the survival of the business lately. This calls for the need to understand the psychological and organizational climate side of the business which may supplement technology and cost reduction for business survival. Organization climate was found to be a product of social psychological process (Kozlowski & Doherty, 1989). The existing literature does not have meaningful results on effects of climate on innovation based on specific constructs like organization climate (Schneider & Reichers, 1983). This study therefore offers insights on how organization climate may supplement other factors ideal for business survival other than cost reduction and adoption of new technology. Panuwatwarich *et al.* (2008) studied climate for innovation in enhancing business performance in design firms in Australia. They conceptualized the construct leadership, teams and organization cultures along with innovation diffusion and business performance. Prior researchers have overlooked the role of organizational climate in enhancing innovativeness in the service sector especially on research firms who play a critical advisory role on market dynamics for competitive advantages and growth. The role of organizational climate literature in innovation has been overlooked. There is a need to understand whether it limits or

promotes innovation in the service sector. Lindzen & Choi's (2011) studied the ethical climate on innovation in South Korea which is a more developed country than Kenya. Choi's study left out other elements of organization climate (perceptions of workers) among them diverse workforce recognition, supervisor support, training support moderated by leadership to measure the level of creativity and innovation which this study wished to focus on. Most of the previous researches on innovation have been conducted in the developed world, emerging market has been overlooked if not ignored altogether. This is one gap that the researcher wished to bridge in this study in Kenya, which is a developing country. Most of the studies on innovation have applied intrinsic motivation, contingency and team theory and will additionally use resource based value and learning organization theories.

The above study measured creativity and innovation by novelty and usefulness of ideas or improved solutions to exhibiting problems. This study focused on organizational climate moderated by leadership to find out whether the two variables can predict creativity and innovation measured by employee satisfaction, societal support, market share and return on assets (ROA) to bridge the existing gap on predictability of creativity and innovation to the body of knowledge. Additionally, training and diversity recognition at the workplace will be considered as new climate dimensions. Training and diversity recognition variables were overlooked in the list of critical climate dimensions by Mumford *et al.* (2012) in the past literature. He had listed trust and openness, challenge and involvement, support and space for ideas, conflict and debate, risk taking and freedom as the key climate dimensions in their book. With more studies demonstrating innovation as very key to business success and growth than those reporting negative or no relation, there is a need then for business leaders to understand the ideal climate for high creativity and innovation to thrive in a firm, both internally and externally. A number of scholars have focused their studies on relationship between creativity, innovation and new product/service development, determinants of creativity and innovations and managing innovation (Bessant & Tidd, 2007 and Tidd, 2014); climate for creativity, measuring climate for innovation (Mumford, 2007), leadership and innovation (Denti, 2011), teams and innovation (Hülshager, Anderson, & Salgado, 2009), role of team composition and

climate for innovation and implementation (Somech & Drach-Zahavy, 2013) and support for innovation (Choi *et al.*, 2011).

This study aimed at bridging these gaps by coming up with the single most important dimension(s) of organization climate and the optimal combination that can accurately predict the most or the least creativity and innovations. Such findings will be very useful to business leaders on resources allocation decisions. Researchers can further validate their findings using other parameters while human resource practitioners would use the findings to form the basis of recruitment, selection and work environment improvement in organizations. This then supports the researcher's conceptualization of measuring C&I with societal support programs depending on climate dimensions which include diversity, moderated by leadership justifiable. This organization climate is shaped and enhanced by size of the firm (Dunphy, Herbig & Howes, 1996). Here again the conceptualizing size of the firm as control variable in the study is justifiable.

2.4 Research Gaps

There have been some inconsistent conclusions and perspectives on the relationship between organizational climate and innovation with some researchers concluding positive, negative and unrelated relationship between climate and innovation (Bessant & Tidd, 2007; Imran *et al.*, 2010). Although organizational climate is postulated as an important element of creativity and innovation achievement, a lot remains to be understood especially the extent of its ability to predict creativity and innovation (Matheisen & Einarson, 2004; Mumford & Hunter, 2005). The inconsistency above has resulted in the inability to determine with certainty the effect of organizational climate on creativity and innovation (Hellriegel & Slocum (1974) as cited by Eustace & Martins, 2014). An attempt by Hunter *et al.*, (2007) to predict creativity through analysis of 42 previous quantitative studies on climate and innovation focusing on size, organization and environment, concluded that the question on predictability of innovation through organizational climate was still unanswered. Hausan (2011) similarly called for a need for more literature on the effects of organizational climate on creativity and innovation in organizations.

Hunter *et al.* (2004) argued that the inconsistency of results could have been caused by use of different models and number of questions used by different researchers. However, Mathsen and Einasen (2004) opine that this could be because of something else not the models as the models have been found to have internal consistency. They further opined that this ‘something else’ has not been found and could be the omission of important variables like diversity, training, leadership and societal support in the equation. This study therefore proposed transformational leadership as a moderating variable between organizational climate and creativity and innovation to address the research gap.

Furthermore, most of the previous studies have measured creativity and innovation on financial outcomes which has been termed insufficient and secondary compared to societal problem solving which has been termed as a primary aspect (Eustace & Martins, 2014). Studies on organizational climate and innovation have focused on organization or team level leaving out individual level innovation (Axtell *et al.*, 2006; De Jong & Den Hartog, 2005 and De Jong & Den Hartog, 2010). Industry wide study has not been focused on. As a result, this study bridged the gap using Marketing Social Research Association (MSRA) firms as an industry wide perspective.

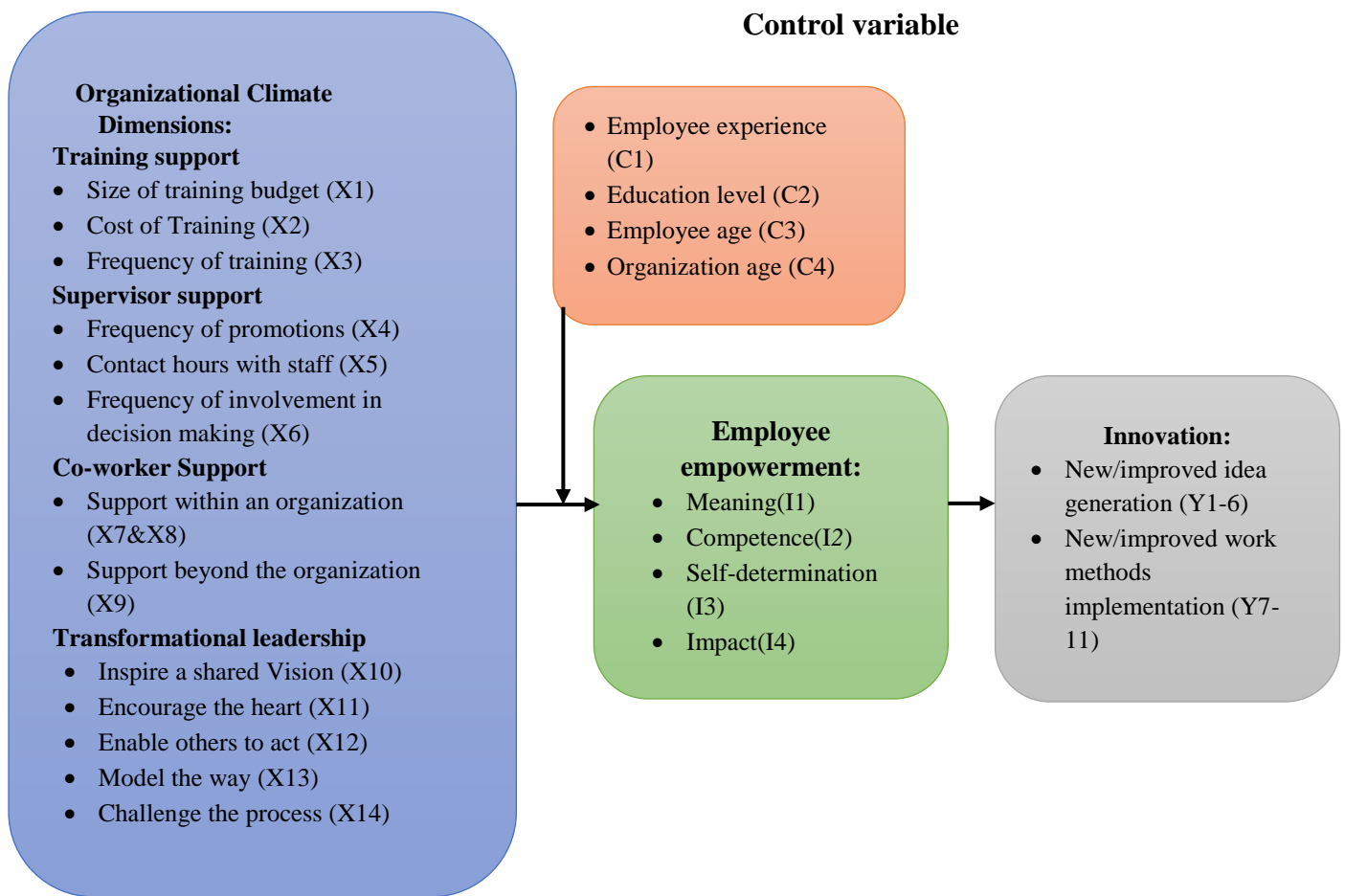
Product innovation has been reported to have a positive effect on a firm’s sales but no connection with the firm’s profitability (Berrends *et al.*, 2014). The future of innovation demands that talented leaders and researchers engage in a fundamental area of social challenges to make a world a better place to live in. Scholars who based their studies on contingency, motivation and social capital theories did not clearly determine the effect of organizational climate and creativity and innovation (IILS, 2012 report). This study therefore used other theories to add to the existing body of knowledge, the relationship between organizational climate, employee psychological empowerment and innovation.

Market research firms in Kenya operate under a national umbrella body known as Marketing and Social Research Association (MSRA). The MSRA firms are also

linked to their global association called European Society for Opinion and Market Research (ESOMR). Their mission statement is to encourage, advance, and elevate marketing research worldwide. Most of the marketing research firms in Kenya were established around 1990s. These firms offer market research services in agricultural, cosmetics, telecommunication and automotive industries, financial sectors, ICT, social health organizations, government parastatals, media (print media and others). These firms offer marketing research services majorly in Africa. Globally, in 2016, MSRA firms commanded less than 1% and 5% of the global (4.3 \$Billion) and African (3.3 \$ Million) market and social research revenue and only Ksh. 2.5 billion in the Kenyan market (Delorie, 2007). Face to face interviews (pen and paper) constitutes 92%, telephonic data collection 4% and online data collection at 2% of the applied data collection methodologies. In particular, the marketing and social research firms (MSRFs) are offering marketing research services entirely in Africa. Why are these firms not growing as fast beyond Africa? Does this have something to do with their organizational climate, transformational leadership, creativity and innovation? This study therefore aimed at answering this question.

2.4.1 Conceptual Framework

The conceptual framework in this paper was demonstrated by Figure 2.1 below which showed the relationship between climate variables (independent variable), the leadership (moderating variable), employee psychological empowerment as the intervening variable and the innovation (dependent variable) with some control variables. In this study, innovation was measured by Idea generation, communication of the idea, implementation and society support, employee satisfaction, market share, and society support. Climate dimensions were represented by training support, supervisor support, co-worker support, diversity recognition and resource adequacy. Leadership was added to organizational climate variables and innovation to show its causal effect on innovation.



**Independent variable
Variable**

Mediating variable

**Dependent
Variable**

Figure 2.1: Conceptual Frameworks

2.5 Summary

The 21st century global business environment is bedeviled with many challenges like fast changing technology, growing volatility, global competition, organization change, social conflicts, environmental degradation and high rate of unemployment among others. These challenges facing organizations need to have a pool of creative and innovative employees. Innovation has been found to be one of the most critical tools in today's fast changing environment that can enable organizations, change managers, and employees to overcome the many challenges. ESOMAR has reported that delay to respond to the growing need of innovation has resulted in less innovative African organizations stagnating and meagerly contributing only 5% of the global market

research revenue leaving firms from more creative economies of USA, Europe and Asia to dominate the sector's revenue at 95%. African organizations, therefore, must pursue innovation by all means for without it, they cannot be competitive and national economy can hardly be competitive too.

This growing need to solve the many emerging problems has resulted in organizations considering innovation majorly from a financial perspective and at a strategic level, neglecting other factors at the macro level which too have an impact on innovation. This innovational strategy myopia has left organizations challenged to cultivate high level of employee innovations as assets they hold. Among the factors identified that can stimulate employee innovativeness is the perception or feeling employees form about the working environment and characteristics of certain employees.

An attempt to use different data collection methods such as analytical methods and research instruments with different styles of questions has left the scholars divided. Such outcomes caused some scholars to unanimously agree that the inconsistency is due to something else yet unknown, given that the models used have been found to have internal consistency. This motivated the researcher, with reference to some findings, to ascertain that certain organizational climate factors combined with other macro factors can resolve this inconsistency. Some scholars had proposed that focusing on employee psychological empowerment may stimulate innovation.

Recently documented results on the effect of organizational climate on innovation have equally reported inverted U-shape relationship, significant positive relationship and negative influence. Some of the differing results have also been reported on the link between empowerment and innovation with some scholars reporting positive relations, others found a negative relationship, while others found no significant link between the two variables. There seems to be non-congruence between the theories of organizational climate, employee psychological empowerment and innovation. The findings were useful to business leaders for resources allocation decisions, policy formulations and innovation assessment. Researchers may further validate the

findings using other parameters while Human Resource practitioners may use the findings to form the basis of Human Resources management.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study was conducted in the Marketing and Social Research Association (MSRA) firms in Kenya. The first reason was that to find out a way to increase innovations of MSRFs through minimizing the existing challenges. The second reason was to test the relationship between OC, EPE, and innovation which has not yet been tested in research firms, particularly in Kenya. The study therefore focused on the role of organizational climate on innovation because innovation of the individual employees might be one of the avenues to minimize these challenges and to improve innovation which further leads to higher performance.

3.2 Research Philosophy

A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analyzed and used. Levin (1991) posit that positivists believe that reality is stable and can be observed and described from an objective viewpoint without interfering with the phenomena being studied. The study of organizational climate is widely studied and therefore reference was made to those previous studies as positivism advocates. The methodology applied in this study was scientific as it was organized and measurable as previous studies denoted which aligned with positivism approach. The researcher wished to discover the patterns and trends of influence of organizational climate to creativity and innovation when moderated by leadership. Reference was made to other researches done in the past and therefore any missing or peculiar outcome was recorded within that scope.

The study aimed at generalizing the organizational climate of single industry to other industries as positivist approach call for. The explanation of outcome was based on limited dimensions and their correlations which was in line with a positivism approach. The organizational climate being an external factor was used to explain the behavior of employee's creativity which is internal. Since the study referred to both theoretical and empirical reference, positivism is the ideal philosophy to guide this

research. The use of societal inclusion in the measurement of creativity and innovation was in tandem with the positivist approach where the researcher believed society to shape organizational or individual behavior.

3.3 Research Design

Research design is the organization of collecting and analysis apparatus with the objective of collecting relevant data to the research purpose. It is the roadmap for collection, measurement and analysis of data. Other literature defines research designs as procedures for collecting, analysing, interpreting and reporting information in a research study (Mugenda & Mugenda, 2003). Creswell (2007) argues that research designs are important because they guide methods decisions that researchers must make during their studies and set logic by which they make interpretations at the end of the studies. This study adopted a cross-sectional survey design because it facilitated the collection of data from the employees of many different firms in one industry at one point in time (Kerlinger & Lee, 2000). The population of the study consisted of all the employees in the marketing research firms in Nairobi because most of these MSRA firms are domiciled in Nairobi.

3.4 Population

Stringer (2008) defined population as the group of people in which a researcher wishes to generalize the result or the group to which the finding of the research applies. In other words, population is a group of individuals or items that share one or more characteristics from which data can be gathered and analyzed. Gall *et al.* (2003) argues that a target population provides a solid foundation and the basic step on which to build population validity of the study. The population for this study was all the employees, supervisors and the top managers of the MSRA firms. Therefore, the target population for this study was all the employees, supervisors and the top managers of all the fifteen MSRA firms.

Target population provides a solid foundation to build population validity (Gall *et al.*, 2003). The study targeted MSRAFs with the unit of analysis being entire workforce and management. The accessible population was comparable to the target population

in the characteristics that appeared most relevant to the study. The target firms were TNS, SBO, IPSOS, Nielsen, Infinite, Strategic Research, Research Solutions, Millennium, Consumer Insight, Promin, Consumer Options, Apex, Vas, Infotrack and GFK. These firms have a total population of over 4,000 employees. The unit of analysis was organizational workforce of the fifteen market research firms who are registered members this industry association.

3.5 Sampling Frame

A sample is a representation of the population. Stringer (2008) defines it as a subset of the population under study. Stringer (2008) further argues that study of the samples rather than the population helps to be economical both in terms of money and time. In this study the sample was selected to represent the employees while a census was applied for all the top managers of the selected firms.

According to *Gall et al.* (2003), the general rule in research is to use the largest sample possible in order to generalize the whole population of your target. However, the sample size depends on the homogeneity and heterogeneity of the population under study. That is, if the variance of the population is small or if the population is normally distributed, it is possible to use less than 30 sample size. Nevertheless, if the population is not normally distributed the sample size should be greater than 30 to have valid representation to the population.

Further, according to Gay and Diehl (1992), sufficient sample size for a study depends on the type of research to carry out; descriptive, correlational or experimental. For descriptive research, 10% of the population is sufficient but if the population is small then 20% may be required. In correlational research, at least 30 units are required to establish a relationship. Hill (1998) suggests 30 units per group as the minimum sample size for experimental research. Furthermore, Mugenda and Mugenda (2003) argue that a sample of 10% of the population is valid to represent the population under study. Isaac and Michael (1995) provide conditions where research with small sample sizes is justifiable as the case of small sample economy and computer monitoring.

A useful rule of thumb concerning the relationship between sample size and model parameters (N:q) developed by Jackson (2003) was used to determine the sample size for this study. This rule is applicable when the estimation method is maximum likelihood. In maximum likelihood estimation, Jackson (2003) suggested that researchers think about minimum sample size in terms of the ratio of sample size (N) to the number of model parameters that require statistical estimates (q). An ideal sample size-to-parameters ratio would be 20:1. For example, if a total of $q = 10$ model parameters require statistical estimates, then an ideal minimum sample size would be 20×10 , or $N = 200$. Less ideal would be an N:q ratio of 10:1. As the N:q ratio decreases below 10:1, so does the trustworthiness of the results.

However, Kline (2011) stated that smaller sample sizes are required when the distributions of continuous outcome variables are normal in shape and their association with one another is linear. In our case, sample size for the SEM was 387 cases and the model parameters statistical estimation was 77. This implied that the ratio of sample size-to-parameters was 5.2:1. Therefore, the sample size for the path analysis was adequate. Moreover, the sample size for the SEM was adequate because the variables were normally distributed and had linear relationship between them.

3.6 Sample and Sampling Technique

The sample size is determined by the unit of analysis, types of analysis, types of data, margin of error, size of population and variance of the population. The sample size for this study was estimated using two statistical formula developed by Bartlett, Kotrlik and Higgins (2001) and Jackson (2003) respectively as presented below.

Bartlett *et al.* (2001) provided a statistical table to determine the minimum acceptable sample size for a given population size for continuous and categorical data as depicted in Table 3.1. The nature of data for this study was continuous (because of five-point scale as the primary variable of measure) and the population size was 4,000. Therefore, the minimum sample size for multiple regression and factor analysis based

on this statistical tool was 198 at $\alpha = 0.01$, $t = 2.58$ and margin of error = 0.03. Is this sample size adequate for structural equation modelling?

Table 3.1: Table for determining minimum acceptable sample size for a given population size for continuous and categorical data

Population size	Continuous data (margin of error=.03)			Categorical data (margin of error=.05)		
	$\alpha = .10$, $t=1.65$	$\alpha = .05$, $t=1.96$	$\alpha = .01$, $t=2.58$	$\alpha = .50$, $t=1.65$	$\alpha = .50$, $t=1.96$	$\alpha = .50$, $t=2.58$
100	46	55	68	74	80	87
200	59	75	102	116	132	154
300	65	85	123	143	169	207
400	69	92	137	162	196	250
500	72	96	147	176	218	286
600	73	100	155	187	235	316
700	75	102	161	196	249	341
800	76	104	166	203	260	363
900	76	105	170	209	270	382
1,000	77	106	173	213	278	399
1,500	79	110	183	230	306	461
2,000	83	112	189	239	322	499
4,000	83	119	198	254	351	570
6,000	83	119	209	259	362	598
8,000	83	119	209	262	367	613
10,000	83	119	209	264	370	623

Source: Bartlett, Kotrlik, and Higgins (2001)

The sample size for structural equation modelling was developed by Jackson (2003). His sample size formula is applicable when the estimation method is maximum likelihood. In maximum likelihood estimation, Jackson (2003) suggested that researchers think about minimum sample size in terms of the ratio of cases (N) to the number of model parameters that require statistical estimates (q). According to

Jackson (2003), an ideal sample size-to-parameters ratio would be 20:1. Less ideal would be an N:q ratio of 10:1. As the N:q ratio decreases below 10:1 so does the trustworthiness of the results.

The model parameters that require statistical estimation for this study were 83 parameters, which is calculated from the formula $q = \Theta + \Lambda + \Phi + \Psi + \Gamma + B = 29 + 29 + 6 + 6 + 11 + 2 = 83$. However, there was no covariance that took place between the structural disturbances in this study. Hence, the model parameters that were estimated in this study were 77. Therefore, the sample size for this study was 770 (77×10). Nevertheless, the sample size collected was 387 and the ratio of sample size to model parameters that require statistical estimation was 5:1 ($387:77$). Hence, this sample size was adequate for structural equation modelling analysis to address the research objectives.

The sampling procedure used to select 770 respondents from the target population of this study was probability sampling. A probability sampling method is one method of sampling that utilizes some form of random selection. In this study, stratified sampling was applied. This assured that each category of employees and leaders in the population had a probability of being chosen as a respondent.

3.7 Data Collection Tool

The research instrument was semi-structured questionnaire that was face to face administered to respondents. It contained the demographic elements and a five-point likert scale questions. The employees were to select their preferred answer out of an array of choices.

3.8 Instrument pilot test, Reliability and Validity

Before the rollout, the instrument was first piloted to check the flow and any other omissions. Since the research instrument of this study was a five-point scale, Cronbach-Alpha was applied to test the reliability of the research instrument. The Cronbach-Alpha coefficients of greater than 70% indicated that the research

instrument used was reliable. The results in Table 4.3 shows that the research instrument had significant reliability (internal consistency).

The validity of this study was measured using convergent and discriminant validity. The convergent validity was tested using lambda (factor loading), t-ratio, p-value, square multiple corrections, communalities, average variance extraction, and composite reliability. The results in Tables 4.5 and 4.7 revealed that convergent validity was established. Furthermore, discriminant validity was tested using correlations between the constructs, factor correlation matrix and comparison between correlations square (r^2) and average variance extraction. The results in Table 4.6 indicate that discriminant validity was also well established.

3.9 Data collection procedure – Latent Variables

The latent variables are unobserved variables which are measured by the manifest variables. The latent exogenous variables for this study were training, supervisor support, co-worker support, and leadership while the latent endogenous variables were employee psychological empowerment and innovation. The manifest variables of each latent variable are presented in the Table 3.2

Table 3.2: Operationalization of the Constructs

Latent Variable	Manifest Variable
Training (Latent Exogenous variable)	X1 = Size of training budget X2 = Cost of training per employee X3 = Frequency training
Supervisor Support (Latent Exogenous variable)	X4 = Frequently of supervisor recognition per employee X5 = Supervisor’s contact time per employee X6 = Employee excretion by the supervisor in decision making process
Co-worker Support (Latent Exogenous variable)	X7 = Co-workers willingness to share their expertise X8 = Frequency of co-workers’ assistance in the work X9 = Encouragement of co-workers beyond the organization.
Leadership	X10. Idealized influence

<p>(Latent Exogenous variable)</p>	<p>X10.1 = the leader makes employees feel good to be around him/her.</p> <p>X10.2 = complete faith in leader.</p> <p>X10.3 = the leader makes friendship among the employees.</p> <p>X10.4 = the leader goes beyond self- interest for the good of the group.</p> <p>X10.5 = the leader considers ethical consequences of decisions.</p> <p>X11. Inspirational motivation</p> <p>X11.1 = the leader express with a few simple words that could be done easily</p> <p>X11.2 = the leader provide appealing images about what can be done</p> <p>X11.3 = the leader helps to find meaning in the work</p> <p>X12. Intellectual stimulation</p> <p>X12.1 = the leader enables to think about old problems in new ways</p> <p>X12.2 = the leader provides with new ways of looking at puzzling things</p> <p>X12.3 = the leader gets to rethink ideas that they had never questioned before</p> <p>X13. Individualized consideration</p> <p>X13.1 = the leader helps to develop every employee.</p> <p>X13.2 = the leader alerts each employee how the employees are doing.</p> <p>X13.3 = the leader gives personal attention to the employee during rejection</p> <p>X14. Contingent reward</p> <p>X14.1 = the leader tells what to do to be rewarded.</p> <p>X14.2 = the leader provides recognition/rewards.</p> <p>X14.3 = the leader call attention.</p> <p>X15. Management-by-exception</p>
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	<p>X15.1 = I am satisfied when others meet agreed-upon standards.</p> <p>X15.2 = As long as things are working, I do not try to change anything.</p> <p>X15.3 = I tell others the standards they have to know to carry out their work.</p> <p>X16. Laissez-faire leadership</p> <p>X16.1 = I am content to let others continue working in the same ways always.</p> <p>X16.2 = Whatever others want to do is ok with me.</p> <p>X16.3 = I ask no more of others than what is absolutely essential.</p>
Latent Variable	Manifest Variable
<p>Employee Psychological Empowerment (Latent endogenous variable)</p>	<p>Meaning</p> <p>I1 = The work I do is very important to me</p> <p>I2 = My job activities are personally meaningful to me</p> <p>I3 = The work I do is meaningful to me</p> <p>Competence</p> <p>I4 = I have mastered the skills necessary for my job</p> <p>I5 = I am confident about my ability to do my job</p> <p>I6 = I am self-assured about my capabilities to perform my work activities</p> <p>Self-Determination</p> <p>I7 = I have significant autonomy in determining how I do my job</p> <p>I8 = I can decide on my own how to go about doing my work</p> <p>I9 = I have considerable opportunity for independence in my job.</p> <p>Impact</p> <p>I10 = My impact on what happens in my department is large.</p> <p>I11 = I have a great deal of control over what happens in my department.</p>

	I12 = I have significant influence over what happens in my department.
Innovation (Latent endogenous variable)	Y1 = development of new ways or idea/s to achieve objectives Y2 = generation of new idea Y3 = generate original solutions for problems Y4 = new working methods, techniques or instruments? Y5 = new approached to execute task Y6 = individual contribute to the implementation of your new ideas Y7 = co-worker contribute to the implementation of your new ideas Y8 = manager contribute to the implementation of your new ideas Y9 = increase quality in the organization

3.10 Data Analysis and Presentation

Bryman and Bell (2007) defined data analysis as the process of inspecting, cleaning, transforming, modeling data with the goal of discovering useful information, suggesting conclusion, and supporting decision-making. They further explained that data analysis involves three sub-processes; data reduction, data display and conclusion drawing from interpretation of the findings. All the questionnaires received were recorded and edited before being analyzed.

In this study qualitative data (gender, education level and leadership) was first converted into quantitative data for ease of analysis using homogeneity index formula. In addition, quantitative data was further analyzed and the results of both qualitative and quantitative were merged for further analysis and interpretation.

Normality test of the sample was then followed to test the distribution of the sample applying Shapiro-Wilk test (1965). If the Shapiro Wilk test is greater than 0.05, the data are normality distributed. However, if the P-value is less than 0.05, the data is not

normally distributed. In such a case, transformation (using logarithms or box-cox) was conducted to make the data normally distributed.

The subsequent step was the confirmatory factor analysis to confirm how well the measurement model fit the data. This model was tested using the model fit indices, coefficient of determination, lambda, and critical ratio.

Thereafter, Structural Equation Model was applied (SEM) and used to find out the causal relationship among the organizational climate, employee psychological empowerment, leadership and creativity and innovation. The second SEM was used to identify the causal relationship between control variables and creativity and innovations. To do the SEM analysis, the indicators of the four latent variables were calculated as discussed below.

3.11 Structural Equation Models

Structural Equation Models (SEMs) are multivariate regression models. Unlike other multivariate linear models, the response variables in one regression equation in SEM may appear as a predictor in another equation. Variables in SEM may influence one-another either directly or through other variables as intermediaries. Lei and Wu (2007) opine that SEM is commonly used due to its generality and flexibility. Hooper *et al.* (2008) further opine that SEM has become one of the techniques of choice of data analysis for researchers across disciplines and increasingly is a must for researchers in social sciences. SEM, as a general term, has been used to evaluate the validity of substantive theories with empirical data. Statistically, it represents an extension of General Linear Modeling (GLM) procedures, such as the ANOVA and multiple regression analysis (Greene, 2002). It is also used to evaluate the relationship among the latent constructs and indicators. The constructs or latent variables of this study are $\epsilon_{,1}$ for organizational climate, $\epsilon_{,2}$ Leadership, $\epsilon_{,3}$ Employee psychological empowerment variable and $\epsilon_{,4}$ for innovation.

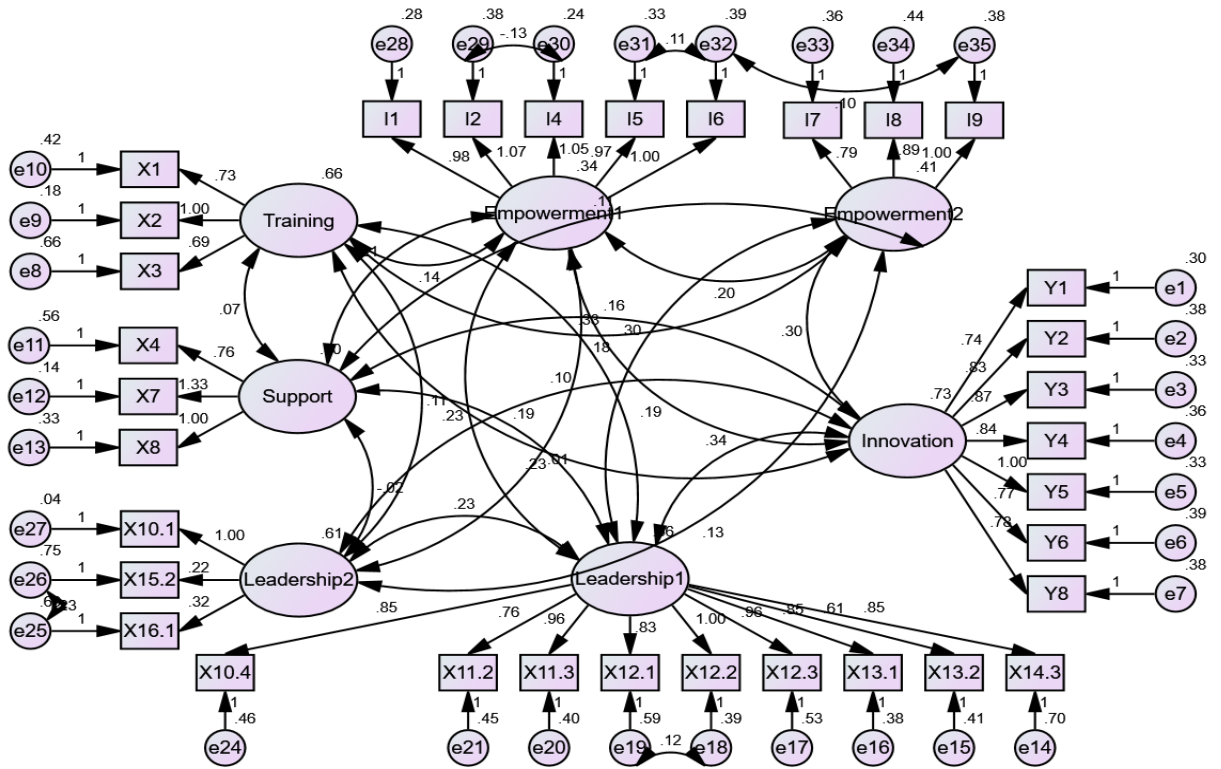


Figure 3.1.Measurement model

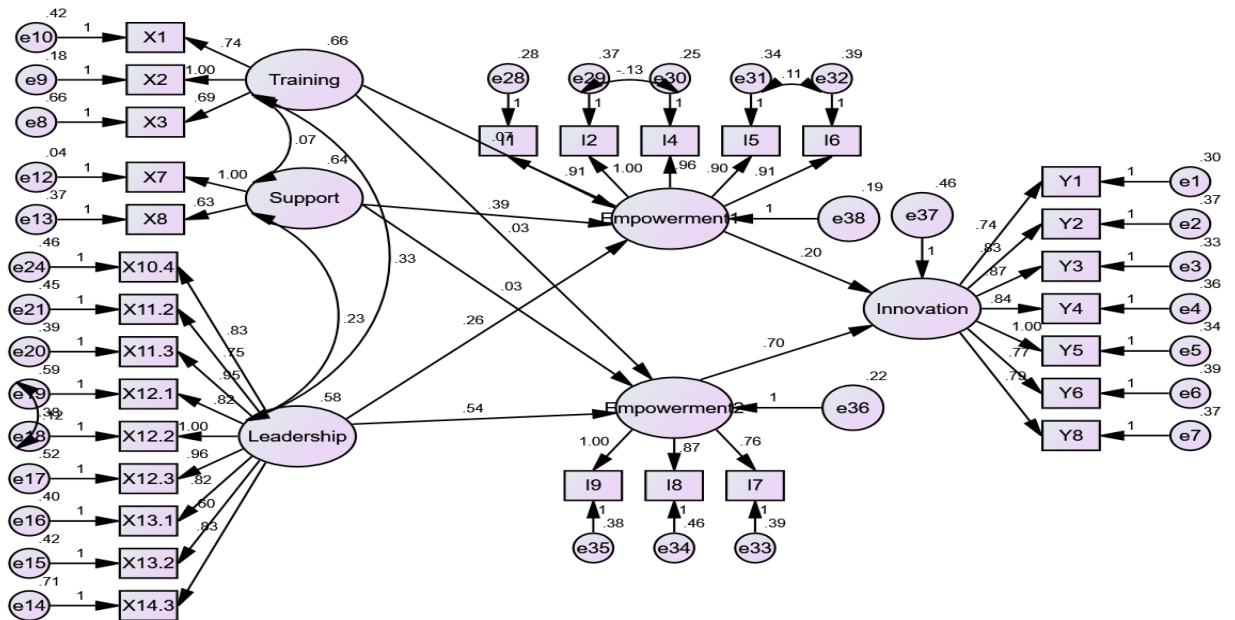


Fig. 3.2 Structural Equation Model (SEM)

3.12 Data Analysis Procedure

As depicted in Table 3.2, the factors were measured by more than one manifest variables. Hence, the best model specification (data analysis model) that could help to address the research objectives was structural equation modelling. Prior to the application of structural equation modelling, the data was analyzed using exploratory and confirmatory factor analyses. Exploratory Factor Analysis (EFA) was used to extract factors that represent the conceptual model's construct and Confirmatory Factor Analysis (CFA) was applied to test the appropriateness of the measurement model.

Subsequently, data analysis was done using structural equation modelling. Therefore, the equations that help to address the research objective were:

$$\begin{aligned}
 X_{(q \times 1)} &= \Lambda_{x(q \times n)} \epsilon_{j(n \times 1)} + \delta_{i(q \times 1)} \dots\dots\dots 1 \\
 Y_{i(p \times 1)} &= \Lambda_{y(p \times m)} \eta_{i(m \times 1)} + \epsilon_{i(p \times 1)} \dots\dots\dots 2 \\
 \eta_{i(m \times 1)} &= \Gamma_{(m \times n)} \epsilon_{j(n \times 1)} + \zeta \dots\dots\dots 3
 \end{aligned}$$

3.13 Research Ethics

The respondents participated voluntarily and were assured that any information they gave was to held confidential and would only be used for the purposes of this academic thesis. We assured the respondents of anonymity as no questionnaire was to have their names and were free to withdraw from the interview at will without giving any explanation.

CHAPTER FOUR

RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

4.1 Introduction

The objectives of this study were to examine the relationship between organizational climate, employee empowerment and innovation in MSRFs in Kenya. To estimate such objectives, the data collected was analyzed using multivariate methods and covariance based Structural Equation Modelling (SEM). Prior to SEM analysis, Exploratory Factor Analysis (EFA) was used to extract factor that represent the conceptual model's construct and Confirmatory Factor Analysis (CFA) applied to test the appropriateness of the measurement model.

This chapter was organized into seven sub-topics. The first sub-topic presented descriptive analysis while the second one discussed preliminary analysis. Preliminary analysis provided the foundation for the SEM analysis. The third section examined structural model fit test while the fourth section presented the influence of training on empowerment and innovation. The fifth one examined the impact of workplace support on empowerment and innovation of MSRA firms. The sixth and seventh section discussed the influence of leadership on empowerment and innovation and empowerment on innovation respectively.

4.1.1 Response Rate

The data was collected from the lower level employees of each marketing research firms. The questionnaire was administered to each of the 770 employees in all the sixteen MSRA firms situated within Nairobi. Out of these, 387 questionnaires were returned which make up to 50.3% response rate. According to Jackson (2003), SEM's sample size is determined by rule of the thumb ratio of $N:q$, where n =sample size and number of variables in the study; in this this ratio is $(387/77 = 5:1)$, which according to Jackson (2003) is acceptable for further analysis.

4.1.2 Demographic Characteristics of the Respondents

The section represents the respondent's characteristics to include demographics, highest level of education, age, gender and work experience.

Of the 387 questionnaires administered, 221(57%) of the respondents were male while 166(43%) were female. Most of the employees who responded (45%) were between 25-31 years of age with 72% falling between 18-31 years. This denotes that most of these MSRFs have a very youthful workforce. On Education background, most of the employees (84%) hold either a diploma, bachelors or master's degree with a significant proportion (41%) having a bachelor's degree. Less than 1 % reported to hold a PhD degree. Above the workforce in MSRFs being youthful, most of these employees (87%) have a work experience ranging from 1-6 years with 64% of them having worked for 1-3 years. Very few employees less than 5%, have a work experience of over 10 years. Majority of the respondents work for the multinationals with the big four (IPSOS (15%), TNS (10%), AC Nielsen (10%) and Millward (9%) Brown) taking a lion share of about 44% of the workforce. Indigenous companies that responded well included Strategic Research (7.2%) and SBO Research (7%) of respondents respectively. This is presented in the table below.

Table 4.2:Demographic Statistics

		Frequency	Percent
Gender	Male	221	57.1
	Female	166	42.9
	Total	387	100.0
Age	18-24 years	106	27.4
	25-31 years	175	45.2
	32-38 years	74	19.1
	39-45 years	25	6.5
	45+ years	7	1.8
	Total	387	100.0
Education	Secondary	19	4.9
	Certificate	41	10.6
	Diploma	145	37.5
	Undergraduate	160	41.3
	Masters	20	5.2
	PhD	2	.5
	Total	387	100.0
Experience	Below 1 year	1	.3
	1-3 years	249	64.3
	4-6 years	89	23.0
	7-9 years	30	7.8
	10 years and above	18	4.7
	Total	387	100.0

4.2 Descriptive Analysis

Survey data was obtained from Kenyan companies who are members of MSRA in Market and social research sector of the economy. To find answers to our problems and test our conceptual model, we adopted a quantitative technique conducted through

the administration of a questionnaire in paper form. We sent out 770 questionnaires. The final sample satisfactorily filled up contained 387 employees.

4.2.2 Exploratory factor Analysis (EFA)

Prior to application of SEM analysis, the data was subjected the study first performed Exploratory Factor Analysis (EFA) in order to extract hypothesized study constructs from the measurement items. Data analysis thus progressed as follows; in the subsection that follows, EFA results were presented and an explanation of the reliability and construct validity as indicated by the results provided. Thereafter, Confirmatory Factor Analysis results were provided for further validation of the EFA results and testing of the appropriateness of the measurement model.

The Exploratory Factor Analysis (EFA) was performed in order to extract hypothesized study constructs from the measurement items. The first step in EFA involved test the adequacy of the date for factor analysis. This was done using the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's measure of sphericity. The Kaiser-Meyer-Olkin measure of sampling adequacy was found to be 0.911, indicating that the data was suitable for factor analysis since the value exceeds 0.50 and Bartlett's test of sphericity is significant ($\chi^2 = 6665, p < 0.001$)

To extract the factors, the principal axis factoring and promax oblique rotation methods were used. The choice of the rotation method was deemed apt since the underlying factors are suspected to be non-orthogonal and the factors are to be used in subsequent analysis of structural relationships. The unconstrained initial solution resulted in ten factors explaining 53.5% of the item variance. The items were found to have good communalities (> 0.310) as the Table 4.2 below denotes. However, three items were found to cross-load and were trimmed. The factor model was re-specified by iteratively trimming off the problematic items. The re-specified model extracted seven factors explaining 52.0% of the item variance and the items loaded cleanly onto their prior factors as shown in Table 4.3 below.

Table 4.3: Pattern Matrix test

Variable	Factor							Variable	Initial	Extraction
	Leadership 1	Innovation	Empowerment 1	Training	Empowerment 2	Support	Leadership 2	X1	0.46	0.528
X1				0.711				X2	0.55	0.755
X2				0.867				X3	0.37	0.362
X3				0.557				X4	0.5	0.453
X4						0.43		X5	0.4	0.364
X7			0.33			0.65		X7	0.59	0.634
X8						0.72		X8	0.47	0.532
X10.4	0.49							X10.1	0.35	0.409
X10.5	0.498							X10.4	0.52	0.48
X11.1	0.584							X10.5	0.51	0.497
X11.2	0.491							X11.1	0.48	0.485
X11.3	0.768							X11.2	0.49	0.43
X12.1	0.654							X11.3	0.57	0.582

X12. 2	0.82							X12 .1	0.5 2	0.539
X12. 3	0.883							X12 .2	0.6 3	0.636
X13. 1	0.51							X12 .3	0.5 3	0.606
X13. 2	0.456							X13 .1	0.5 5	0.543
X14. 3	0.53							X13 .2	0.4 3	0.368
X15. 2							0.583	X14 .3	0.3 9	0.367
X16. 1							0.662	X15 .2	0.2 6	0.31
X10. 1							0.439	X16 .1	0.3 1	0.399
I1			0.487					I1	0.5 4	0.498
I2			0.523					I2	0.5 1	0.452
I4			0.619					I4	0.5 6	0.55
I5			0.744					I5	0.5 7	0.614
I6			0.799					I6	0.5 9	0.646
I7					0.64			I7	0.4 1	0.45
I8					0.73			I8	0.4 2	0.46
I9					0.61			I9	0.4 6	0.485

Y1		0.78						Y1	0.6	0.603
Y2		0.799						Y2	0.6 1	0.61
Y3		0.841						Y3	0.6 3	0.642
Y4		0.797						Y4	0.6	0.599
Y5		0.708						Y5	0.7	0.727
Y6		0.641						Y6	0.5 5	0.532
Y8		0.718						Y8	0.5 7	0.561

Extraction Method: Principal axis factoring.

Rotation Method: Promax with Kaiser Normalization.-Principal axis factoring

a. Rotation converged in 8 iterations.

To assess the degree of internal consistency of the manifest variables, Cronbach's alpha coefficient was used. As seen in Table 4.4, the alpha coefficients exceeded 0.70 except leadership 2. Leadership 2 was excluded from the further Structural Equation Modeling Analysis. Hence, the reliability of these findings indicated that there was good internal consistency. Therefore, the research instrument was reliable.

Table 4.4: Reliability Test

Variables	Cronbach's Test Results
Training	0.742
Support	0.727
Leadership 1	0.897
Leadership 2	0.536
Empowerment 1	0.840
Empowerment 2	0.707
Innovation	0.908

Once the above data screening tests were satisfactorily carried out, data was subjected to measurement model test using Confirmatory Factor Analysis. The results were presented and scientifically discussed below.

4.2.3 Confirmatory Factor Analysis

Confirmatory Factor Analysis being theory driven assess whether the measurement items appropriately measure the constructs intended. CFA enables constructs to be subjected to substantive meaningful constraints on the factor model. The factors were specified based on EFA extraction to include training support, supervisor support, co-worker support and transformational leadership as unobserved variables to test their effects on the observed factors, employee psychological empowerment and further the effect of employee psychological empowerment on innovations as the observed factors. Subsequently, the manifest variables which were identified should be retained and those ones that are not to be removed from further SEM analysis using unidimensionality test. Thereafter, the measurement model fit was tested and the results based on adjusted chi-square, CFI and RMSEA confirmed that the data fitted the measurement model. This was revealed by CMIN/DF which was 2.071 while the ideal result should be between 2 and 5. Likewise, the values of comparative fit index (CFI) were greater than threshold, 0.90. The value of Root Mean Square Error of Approximation (RMSEA) was 0.055 which was less than the threshold, 0.060 while the P-value was also significant(P=000). Therefore, the data found to a good fit.

As depicted by Table 4.4, the Confirmatory Factor Analysis results of the seven factors indicated all factor loadings by standardized estimate were statistically significant, and all except two exceeded 0.60, indicated satisfactorily acceptable loadings which above the 0.50 threshold. All factors' P-Values were statistically significant (P=000). Nevertheless, the study required further investigation for discriminant validity and convergent validity before proceeding to structural model fit test in order to address the research objectives correctly as table 4.5 elaborate.

Table 4.5 Regression Weights for the Measurement Model

			Unstandardized Regression				SR
			Estimate	S.E.	C.R.	P	Estimate
Y1	<---	Innovation	.737	.044	16.698	***	.754
Y2	<---	Innovation	.828	.050	16.736	***	.756
Y3	<---	Innovation	.865	.049	17.812	***	.790
Y4	<---	Innovation	.836	.049	16.983	***	.764
Y5	<---	Innovation	1.000				.827
Y6	<---	Innovation	.765	.048	15.793	***	.724
Y8	<---	Innovation	.783	.048	16.160	***	.736
X3	<---	Training	.689	.069	9.937	***	.569
X2	<---	Training	1.000				.888
X1	<---	Training	.730	.064	11.326	***	.676
X14.3	<---	Leadership1	.848	.072	11.820	***	.605
X13.2	<---	Leadership1	.614	.054	11.328	***	.582
X13.1	<---	Leadership1	.846	.059	14.224	***	.715
X12.3	<---	Leadership1	.961	.069	13.979	***	.704
X12.2	<---	Leadership1	1.000				.767
X12.1	<---	Leadership1	.833	.059	14.162	***	.631
X11.3	<---	Leadership1	.959	.064	15.046	***	.751
X11.2	<---	Leadership1	.758	.060	12.678	***	.645
X10.4	<---	Leadership1	.848	.063	13.551	***	.685
I1	<---	Empowerment1	.979	.077	12.785	***	.730
I2	<---	Empowerment1	.979	.091	11.775	***	.712
I4	<---	Empowerment1	.812	.082	12.847	***	.784
I5	<---	Empowerment1	.884	.065	15.026	***	.702
I6	<---	Empowerment1	1.000				.680
I7	<---	Empowerment2	.795	.077	10.302	***	.647
I8	<---	Empowerment2	.892	.086	10.352	***	.651
I9	<---	Empowerment2	1.000				.719
X8	<---	Support	1.000				.692
X7	<---	Support	0.898	.106	12.519	***	.887

SR = Standardized Regression

To determine model reliability, convergent and discriminant validity of the measurement items, CFA results were used to compute the average variance extracted (AVE), the composite reliability (CR) and shared variance (SV) indices. The results are shown in Table 4.6 below. The reliability, convergent and discriminant validity of the measurement items were established as depicted in the table below. The reliability was depicted by Composite Reliability (CR) which was greater than 0.70($CR > 0.70$), the convergence validity was denoted by AVE being greater than 0.50($AVE > 0.50$) while the discriminant validity was denoted by AVE > than ASV and AVE greater than MSV which was satisfactorily acceptable. This implies that the four constructs of this study were measuring different things.

Table 4.6 CFA Correlations

Correlations		CFA	r²	AVE_i	Discriminant
		Estimate			Validity
		(r)			
Innovation	<--> Training	.337	.1136	.651	Established
Innovation	<--> Leadership	.538	.2894	.651	Established
Innovation	<--> Empowerment	.384	.1475	.651	Established
	1				
Innovation	<--> Empowerment	.546	.2981	.651	Established
	2				
Training	<--> Leadership	.537	.2884	.599	Established
Training	<--> Empowerment	.301	.0906	.599	Established
	1				
Training	<--> Empowerment	.351	.1232	.599	Established
	2				
Leadership	<--> Empowerment	.524	.2746	.692	Established
	1				
Leadership	<--> Empowerment	.620	.3844	.692	Established
	2				
Empowerment	<--> Empowerment	.548	.3003	.762	Established
1	2				
Training	<--> Support	.162	.0262	.599	Established
Leadership	<--> Support	.461	.2125	.692	Established
Innovation	<--> Support	.332	.1102	.651	Established
Empowerment	<--> Support	.668	.4462	.762	Established
1					
Empowerment	<--> Support	.312	.0973	.648	Established
2					

The results established the model was reliable. Convergent and discriminant validity in that composite reliability (CR) was greater than 0.60 AVE. The factors loaded in Table 4.5 and average variance extraction in Table 4.6 were greater than 0.50. This

implies that convergent validity was established. Besides, the composite reliability was greater than the threshold, which is 0.70 and this again confirmed that the convergent validity of this study was also established.

Table 4.7: Reliability and validity measures for the measurement model

	CR	AVE	MSV	ASV
Training	0.885	0.599	0.537	0.288
Support	0.969	0.893	0.668	0.446
Leadership	0.972	0.692	0.461	0.212
Empowerment 1	0.965	0.762	0.668	0.448
Empowerment 2	0.907	0.648	0.312	0.097
Innovation	0.959	0.651	0.546	0.298

CR = composite reliability, MSV = maximum shared variance, ASV = average shared variance, AVE = average variance extracted

Having established the goodness of fit of the CFA model, the study progressed to fit a structural equation model to the data to test the stated hypothesis. The next section presented the SEM result. The threshold required is Chi square (2-5), RMSEA (0.05) and CFI (0.90).

4.2.4 Normality Test

We conducted normality test and this result showed the data was normally distributed as the table below shows.

Table 4.8: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
X1	.230	387	.000	.879	387	.000
X2	.205	387	.000	.891	387	.000
X3	.204	387	.000	.902	387	.000
X4	.224	387	.000	.879	387	.000
X5	.252	387	.000	.862	387	.000
X6	.247	387	.000	.889	387	.000
X7	.222	387	.000	.832	387	.000
X8	.230	387	.000	.827	387	.000
X9	.283	387	.000	.837	387	.000
X10. 1	.249	387	.000	.854	387	.000
X10. 2	.232	387	.000	.884	387	.000
X10. 3	.256	387	.000	.863	387	.000
X10. 4	.237	387	.000	.889	387	.000
X10. 5	.271	387	.000	.864	387	.000
X11. 1	.283	387	.000	.847	387	.000
X11. 2	.269	387	.000	.865	387	.000
X11. 3	.252	387	.000	.884	387	.000
X12. 1	.197	387	.000	.897	387	.000

X12.	.245	387	.000	.890	387	.000
2						
X12.	.240	387	.000	.892	387	.000
3						
X13.	.232	387	.000	.882	387	.000
1						
X13.	.294	387	.000	.845	387	.000
2						
X13.	.196	387	.000	.898	387	.000
3						
X14.	.230	387	.000	.882	387	.000
1						
X14.	.239	387	.000	.876	387	.000
2						
X14.	.271	387	.000	.864	387	.000
3						
X15.	.253	387	.000	.874	387	.000
1						
X15.	.275	387	.000	.866	387	.000
2						
X15.	.269	387	.000	.868	387	.000
3						
X16.	.222	387	.000	.882	387	.000
1						
X16.	.199	387	.000	.900	387	.000
2						
X16.	.262	387	.000	.869	387	.000
3						
I1	.224	387	.000	.826	387	.000
I2	.271	387	.000	.842	387	.000
I3	.262	387	.000	.790	387	.000
I4	.242	387	.000	.826	387	.000

I5	.247	387	.000	.817	387	.000
I6	.251	387	.000	.775	387	.000
I7	.264	387	.000	.859	387	.000
I8	.258	387	.000	.873	387	.000
I9	.267	387	.000	.872	387	.000
I10	.233	387	.000	.880	387	.000
I11	.197	387	.000	.904	387	.000
I12	.218	387	.000	.903	387	.000
Y1	.232	387	.000	.871	387	.000
Y2	.271	387	.000	.864	387	.000
Y3	.236	387	.000	.887	387	.000
Y4	.253	387	.000	.877	387	.000
Y5	.194	387	.000	.902	387	.000
Y6	.242	387	.000	.884	387	.000
Y7	.242	387	.000	.875	387	.000
Y8	.218	387	.000	.883	387	.000
Y9	.234	387	.000	.881	387	.000

a. Lilliefors Significance Correction

4.3. Structural Equation Modeling and Hypothesis

In order to test the study hypotheses as presented by the conceptual model (see p.21), SEM analysis was applied to the data. The structural model fit was tested by adjusted chi-square comparative factor index (CFI) and Root Mean Square Error of Approximation (RMSEA). The results met the threshold as stated above in that CMIN/DF (2.071), RMSEA (0.053) and CFI (0.925). The results in Table 4.8 indicated that the data fitted with the structural equation modelling and that, training, support and leadership account 51.3% variance of empowerment one, Training, support and leadership explained 46.6% variance of empowerment two and empowerment one and empowerment two account 35.6% variance of innovation. Furthermore, Table 4.9 revealed that leadership had a positive and statistically significant effect to both employee psychological empowerments 1 and empowerment 2 respectively, (0.306, P=000 & 0.607, P=000) and 0.266, P< 003 on innovations.

Table 4.9 depicts that transformational leadership was similarly found to have significant effect on employee innovations ($P < 0.003$). Employees felt that the leader influence their creative abilities to generate new ideas. These leaders support the employees' efforts in the development of new ways or ideas to achieve objectives of the organization. Employees are able to generate original solutions for problems in the organization which include searching for new working methods, techniques or instruments. The leader's help employees track any new ideas they generate and encourage co-worker participation in the implementation of the new ideas fronted. Such leadership support concurs with the transformational leadership theory which holds that this leadership is measurable in terms of the leader's influence to the followers and can be used to predict follower's behavior and performance outcomes (Bass, 1985). Transformational leadership behaviors, characterized by individualized consideration and motivation, anchored on the leader's vision and values contribute to a culture that facilitates employee innovation (Elenkov & Manev, 2005; Nutt, 2002). The findings also concurred with the findings of Damanpour and Schneider (2006). Phills *et al.* (2008) also stated that leaders influence social innovations involving the creation of new business models that can meet the needs of underserved populations more efficiently, effectively, and if not profitably, at least sustainably. Yukl (2002) asserted that specific leadership behaviors may influence innovation through compliance as part of the organizational culture. Leaders who increase in centralization hindered innovations.

Supervisor support and co-worker support revealed to measure the same thing, a finding that previous scholars have treated separately, which adopted a name, workplace support. The results in Table 4.8 shows that workplace support had a positive significant effect on empowerment 1 ($P = 0.000$) but insignificant effect on empowerment 2 ($P = 0.504$). This implies that the workplace support, which generates from the managers and co-workers, enhanced the meaning to employees' work and it improves employees' competence. Hence, it is directly proportional to the employees' psychological empowerment. A workplace climate where employees feel that their job is important and valued by the organization makes the employees feel

empowered. This means that employee job competence and meaning significantly empowers them. However, workplace support did not enhance employees' self-determination. This may be because when the employees of MSRFs feel a workplace climate that does not support their freedom and autonomy on their job, or does not support co-workers to help them, may result to a feeling of powerlessness, which can reduce their self-determination to innovate.

The results in Table 4.8 shows that workplace support had a positive significant effect on empowerment 1 ($P = 0.000$) but insignificant effect on empowerment 2 ($P = 0.504$). This partially accepted the null hypothesis earlier stated *HO2 and HO3* "That supervisor and co-worker support had insignificant effect on employee psychological empowerment and innovation". Table 4.10 describes that workplace support had insignificant effect on innovation ($P=0.247$). The workplace supports that make the employees to be innovative in generating new ideas and implementing them is not yet effective. Consequently, the organizational climate based on workplace support in MSRFs did not have significant effect to innovation may be because the workplace support could not be conducive to the employees. The findings did not support a previous study that found co-worker support was found to be positively related to individual innovative behavior at work (Arora & Kamalanabhan, 2013). In particular, this could have resulted out of managers' inability to teach their workers self-management and the interpersonal skills as they are very ideal for innovation success as proposed by Bacon and Blyton (2006). Such skills enhance communication or promotion of innovative ideas and interpersonal relationship for co-worker support. This may also be out of omission of other factors like communication and interpersonal skills assessment other than co-workers' willingness to share their expertise, frequency of co-workers' assistance in the work and encouragement of co-workers beyond the organization setup that influence innovation through co-workers.

Table 4.8 shows that training support had insignificant effect on employee psychological empowerments ($P > 0.05$) which agreed with the hypothesis (*HO1*) "That training had insignificant effect on psychological empowerment and innovation in MSRFs in Kenya". The findings imply that adequacy of training budget,

the cost of training per employee and frequency of trainings in MSRFs showed insignificant influence on employee feeling that training makes their job meaningful and important to the organization they work for. Besides, the training offered to the employees does not make them feel self-determined to generate new ideas or technique in work methods. This might be the quality and quantity of training offered to the employees of MSRFs which could be of low standard. Moreover, the training might not match the requirements or expectations of the employees. On the other hand, the training offered might not be able to help them to have adequate knowledge, skills, abilities and interest to develop new ideas, methods and approaches to make their work easy. Employees in this industry feel that they do not have autonomy and independence to set their own work schedules or have their co-workers support them to execute new ideas. The absence this could cause low empowerment of employees to innovate as earlier researches reported. This has left them disinterested with departmental activities and achievements which could further affect innovations at MSRFs negatively.

Consequently, Table 4.9 presented that training had insignificant impact on innovation ($P = 0.255$). The findings were inconsistent with the componential theory that postulate that creativity and innovation is dependent on the level of expertise (skills, training and knowledge), environment he/she is operating, particularly social environment (personality) and the intrinsic motivation (Bass, 1985). The training offered in these firms may not be complimentary training or experiential learning which have been found to encourage creativity and innovation (Indian National Council of Colleges of Education, N.C.C.E (2005). The findings also differed with that of Sieczka (2011) who found that offering training opportunities to workers reduces misunderstandings which may stifle creativity and innovation. The findings did not equally harmonize with that of Patterson *et al.* (2005) who found that employees' willingness to train and acquire knowledge enable companies to improve innovation capabilities. Furthermore, the insignificant result in this study could be due to inadequate manifest variables of training, or lack of autonomy and independence at MSRFs which according to a previous study by Jafari and Iranzadeh (2013) found critical for training support to result to innovation.

The result could also be due to inability to differentiate between training and education which has been reported to be a barrier that confines individuals to a single way of thinking and limits creativity and innovation. The finding could concur with the opinion that training is believed to reinforce on the likelihood of innovating, and it may even increase likelihood of some firms to become innovative but not to actually innovate. It is also opined that the impact of training varies according to firm size and industry and that complementarity is more applicable in large firms in the high-tech sector (González, Miles & Pazó, 2012). Most of MSRFs are small and may be failing to focus on critical skills to inculcate to workers including investigative, analytical and practical skills if innovation is to be realized. The leaders of these firms could be overlooking leadership training, management coaching and networking which have been found to immediately impact on economic growth through innovation and job creation (González, Miles & Pazó, 2012).

Based on the indirect effect in Table 4.9, both employee psychological empowerments have significant effect on innovation ($P < 0.05$). However, using both direct and indirect effect in Table 4.9, empowerment 1 had insignificant effect on innovation ($p=.761$) but empowerment 2 has significant effect on innovation ($P=0.000$). This implies that employee psychological empowerment had partial mediating effect between organizational climate and innovation. The results of empowerment 2 were consistent with the recommendation by researchers who pointed out that employee empowerment is a critical factor for innovation (Brunetto & Farr-Wharton, 2007; Ertürk, 2012; Fernandez & Moldogaziev, 2013). Similarly, Berraies and Chaher (2014) found that employee empowerment has a positive effect on trust, innovation and organizational performance. However, the results based on empowerment 1 were consistent with Kmiecik *et al.* (2012) who in their study concluded that empowerment did not affect the company's ability to innovate. Besides, another study by Jung *et al.* (2003) to some extent contrasted this study by revealing that this managerial practice has a negative effect on organizational innovation.

Table 4.9: Regression Weights for the Indirect Effect

			Unstandardized Regression				SR	SM
			Estimate	S.E	C.R.	P	Estimate	C
			e	.			e	
Empowermen	<--	Training	.069	.04	1.52	.12	.089	
t 1	-			5	1	8		.513
Empowermen	<--	Support	.395	.05	6.95	***	.501	
t 1	-			7	4			
Empowermen	<--	Leadership	.258	.05	4.60	***	.311	
t 1	-			6	6			
Empowermen	<--	Training	.031	.05	.574	.56	.040	.466
t 2	-			4		6		
Empowermen	<--	Support	.031	.04	.669	.50	.039	
t 2	-			6		4		
Empowermen	<--	Leadership	.539	.07	7.64	***	.645	
t 2	-			1	2			
Innovation	<--	Empowermen	.198	.07	2.56	.01	.147	.356
	-	t 1		7	7	0		
Innovation	<--	Empowermen	.698	.09	7.35	***	.524	
	-	t 2		5	5			

Table 4.9 depicts for both direct, indirect and total effect. Moreover, it helps to assess the effects of the mediating effect (employee psychological empowerment) on the relationship between organizational climates on innovation. The employee psychological empowerment has mediating effect as Table 4.10 below shows.

To test the mediation hypotheses, we constructed confidence intervals for indirect effects using the bias-corrected percentile method via Monte Carlo parametric bootstrap in AMOS. The estimates for the indirect effects, their bootstrapped confidence intervals and the p-values are presented in Table 7 below.

Table 4.10: Mediation Effect of Employee Psychological Empowerment

Mediation Effect of Employee Psychological Empowerment.	Z- Calculate	Z-Critical	Significance of indirect effect
Training – empowerment 1 - innovation	0.264	±1.96	Insignificant
Training – empowerment 2 - innovation	0.316	±1.96	Insignificant
Support – empowerment 1- innovation	0.304	±1.96	Insignificant
Support – empowerment 2- innovation	0.318	±1.96	Insignificant
Leadership – empowerment 1- innovation	0.306	±1.96	Insignificant
Leadership – empowerment 2 – innovation	3.351	±1.96	Significant

From the table 4.10 above, we deduce that all the organizational climate variables positively but insignificantly mediated by employee psychological empowerment except leadership which is significantly mediated by employee psychological empowerment denoting how critical leadership in organizations is to empower employees to innovate. This finding support the theoretical perspectives that psychological empowerment has a mediating effect with organization’s environmental factors and innovative behavior (Thomas & Velthouse,1990).

Table 4.11: Regression Weights for both Direct and Indirect Effect

			Unstandardized Regression				SR	SM C
			Estimate	S.E	C.R.	P	Estimate	
			e	.			e	
Empowermen	<--	Training	.068	.04	1.50	.13	.088	
t 1	-			5	2	3		.509
Empowermen	<--	Support	.399	.05	6.99	***	.502	
t 1	-			7	3			
Empowermen	<--	Leadership	.254	.05	4.54	***	.306	
t 1	-			6	4			
Empowermen	<--	Training	.019	.05	.333	.73	.024	
t 2	-			8		9		.402
Empowermen	<--	Support	.029	.04	.590	.55	.035	
t 2	-			9		5		
Empowermen	<--	Leadership	.523	.07	7.16	***	.607	
t 2	-			3	0			
Innovation	<--	Empowermen	.031	.10	.304	.76	.023	
	-	t 1			1	1		
Innovation	<--	Empowermen	.402	.10	3.83	***	.309	.362
	-	t 2			5	9		
Innovation	<--	Training	.075	.06	1.13	.25	.072	
	-				6	9	5	
Innovation	<--	Support	.081	.07	1.15	.24	.076	
	-				0	7	7	
Innovation	<--	Leadership	.298	.10	2.96	.00	.266	
	-				0	8	3	

Based on the result in Table 4.8, all the assessed manifest variables had a positive significant effect on their construct. This table further elaborates that the manifest variables of the employee psychological empowerment was divided into two constructs namely; empowerment 1 and empowerment 2. Empowerment 1 entails

about employees' psychological empowerment based on the meaning they put on their work and their competence. However, empowerment 2 elaborates the employee psychological empowerment based on their self-determination.

4.3.1 Effect of Training on Empowerment and Innovation

Determining the relationship between training support, employee psychological empowerment and the innovation of employees of MSRFs in Kenya was the first objective. Training support fitted very well to measure organizational climate in MSRFs in Kenya.

The finding implies that adequacy of training budget, the cost of training per employee and frequency of trainings in MSRFs had no significant influence on employee's feeling that training makes their job meaningful and important to the organization they work for. Besides, the training offered to the employees did not make them feel self-determined to generate new ideas or technique in work methods. This support a study by Pörzse *et al.*, (2012) that found training to be an occasional driver of other organizational climate variables like debate. Our finding also concurred with the findings by Hsiang *et al.* (2014) that negative effect of training is stronger with low employee psychological empowerment. We can interpret managers need to enhance empowerment of employees through involvement them in the identification of their training needs first before training them if at all they discern to see innovative behavior from employees. The findings support the argument that there is a possibility that training may affect employee empowerment to innovate indirectly through other factors like team building (Asfar CIC ,2014).

This finding was inconsistent with the componential theory that postulate that creativity and innovation is dependent on the level of expertise (skills, training and knowledge), environment he/she is operating, particularly social environment (personality) and the intrinsic motivation (Bass, 1985). Our findings also differed with that of Siczka (2011) who found that offering training opportunities to workers reduces misunderstandings which may stifle creativity and innovation. The finding did not harmonize with that of Patterson *et al.* (2005) who found that employees' willingness to train and acquire knowledge enable companies to improve innovation

capabilities. The results were also contrary to a call for managers to train their employees on how to respond to novel thinking (Isaksen & Akerman, 2007). We suspect the insignificant result in this study could be due to inadequate manifest variables of training, or lack of employee autonomy and independence to decide on training to undertake at MSRFs which according to a previous study by Jafari and Iranzadeh (2013) found critical while at MSRF employee indicated it was scarce. Our findings on training support concurs with González, Miles and Pazó (2012) that firms that invest in research and development (R&D) and workers' skills (on-the-job training) are hoped to be successful in innovation but it is less evident the extent to which of these investments enhance innovation. Other studies found training to be an occasional driver of other organizational climate variables like debate (Pörzse *et al*, 2012). This concurred with the findings by Hsiang *et al*. (2014) that negative effect of training was stronger with low employee psychological empowerment. The findings can support the argument that there is a possibility that training may affect employee empowerment to innovate indirectly through other factors like team building (Asfar CIC ,2014).

4.3.2 Effect of Workplace Support on Empowerment and Innovation

The findings implied that the workplace support, which generates from the supervisors and co-workers, enhanced the meaning to employees' work and it improves employees' competence. Hence, it is directly proportional to the employees' psychological empowerment. A workplace climate where employees feel that their job is important and valued by the organization may enhance their feelings of empowerment. This means that employee job competence and meaning significantly empowers them. However, workplace support did not enhance employees' self-determination. This is because when the employees feel a workplace climate that does not support their freedom and autonomy on their job, or does not support co-workers to help them, may result to a feeling of powerlessness, which can reduce their self-determination to innovate.

Table 4.9 describes that workplace support had insignificant effect on innovation (P=0.247). The workplace supports that make the employees to be innovative in

generating new ideas and implementing them is not yet effective. Consequently, the organizational climate based on workplace support in MSRFs did not fully indicate significant effect on innovation may be because the workplace support is not yet conducive to the employees. The findings partially supported a previous study that found employees' innovative behavior depends greatly on their interaction with others in the workplace (Anderson *et al.*, 2004; Zhou & Shalley, 2003). This differed with findings by Oldham and Cummings (1996) cited by Zhang and Begley (2011) who found supportive supervision with concern for employee needs to facilitate innovative behavior of the employees encouraging empowerment through autonomy as a condition, if at all innovation is expected to emerge as was found by Zhang and Begley (2011). Theoretically, Amabile (1996); Martins and Terblanche (2003) and Pieterse *et al.* (2010) asserted that empowerment, support, resources and co-worker support influence innovation. The result did not support this theoretical evidence. The results were also inconsistent with the findings by Jorem (2007) who found that support, consultation, recognition and autonomy are key triggers of innovation. High level idea support by leaders which significantly elicited innovation was found to be enhanced by training (Isaksen & Akerman, 2011).

4.3.3 Effect of Transformational Leadership on Empowerment and Innovation

Furthermore, Table 4.8 revealed that leadership had a positive statistically significant effect to both employee psychological empowerments ($P = 000$). *This did not support our study hypothesis H04. Transformational leadership has insignificant effect on employee psychological empowerment and innovation in MSRFs in Kenya.* For employees to feel empowered, they need to feel their job is important and meaningful not only to them but also to the organization. Employees feel competent to perform their job owing to the skills mastery and confidence which further give them self-assurance. Such a climate is created by the leaders. From the several leadership qualities tested in the instrument, it was found that transformational leadership influence the outcome of employee empowerment in MSRFs with exception of reward consideration which described reward contingent. Majorly, we found that the leaders idealized quality of going beyond self-interest for the good of the group and expressing issues with a few simple words of what staff could and should do

empowers the staff at MSRFs. MSRFs leaders also inspire staff with appealing images about what staff can do and helps them to find meaning in their work. The ability of these leaders to stimulate the staff intellectually to think about old problems in new ways as the leaders provide them with new ways of looking at puzzling things is empowering. These leaders inspire staff to rethink ideas that they had never questioned before. The leaders help the employees to develop themselves and they individually consider employees and let them know how they are working. They reward employees by paying attention to their achievements. Our findings concurred with the findings of Berraies and Chaher (2014), Çakar and Ertürk (2010), Ertürk (2012), Helms (2006) and Muindi (2011) who found that leadership influence employees to feel empowered which further build their trust on the leadership and this motivation impact positively on their innovative behavior. The finding of this study is also in line with the theory of transformational leadership where such leaders empower staff to try new things (Burns,1978; Bass 1985).

Table 4.9 depicts that transformational leadership was similarly found to have significant effect on employee innovations ($P = 0.003$). This agreed with the finding by Zhang and Begley (2011) who found empowerment to relate strongly with innovation when autonomy is encouraged by the leader. Employees felt that the leader influences their creative abilities to generate new ideas. These leaders support the employees' efforts in the development of new ways or ideas to achieve objectives of the organization. Employees are able to generate original solutions for problems in the organization which include searching new working methods, techniques or instruments. The leaders help employees track any new ideas, they generate and encourage co-worker participation to the implementation of the new ideas fronted. Such leadership support concurs with the transformational leadership theory which holds that this leadership is measurable in terms of the leader influence to the followers and can be used to predict followers' behavior and performance outcomes (Bass, 1985). Transformational leadership behaviors, characterized by individualized consideration and motivation, anchored on the leader's vision and values contribute to a culture that facilitates employee innovation (Elenkov & Manev, 2005; Nutt, 2002). The finding also concurred with the findings of Damanpour and Schneider (2006).

Phills *et al.* (2008) also stated that leaders influence social innovations involving the creation of new business models that can meet the needs of underserved populations more efficiently, effectively, and if not profitably, at least sustainably. Yukl (2002) asserted that specific leadership behaviors may influence innovation through compliance as part of the organizational culture. Leaders who increase in centralization hindered innovations (Sividaa & Swyer, 2000).

4.3.4 Effect of Employee Psychological Empowerment on Innovation

Based on the indirect effect in Table 4.9, both employee psychological empowerments have significant effect on innovation ($P < 0.05$). However, using both direct and indirect effect in Table 4.9, empowerment 1 had insignificant effect on innovation ($p = .761$) but empowerment 2 has significant effect on innovation ($P = 0.000$). This implies that employee psychological empowerment had partial mediating effect between organizational climate and innovation. This partially agreed with the hypothesis; *H05 Employee psychological empowerment has insignificant mediating effect on organizational climate and innovations on MSRFs in Kenya.*

The results were consistent with the recommendation by researchers who pointed out that employee empowerment is a critical factor for innovation (Brunetto & Farr-Wharton, 2007; Ertürk, 2012; Fernandez & Moldogaziev, 2013). Similarly, Berraies and Chaher (2014) found employee empowerment had a positive effect on trust, innovation and organizational performance. However, the results were inconsistent with Kmiecziak *et al.* (2012) who in their study concluded that empowerment did not affect the company's ability to innovate. Besides, another study by Jung *et al.* (2003) contrasted the results of this study by revealing that this managerial practice has a negative effect on organizational innovation.

4.4. Chapter summary

The chapter has presented the data analysis and results. It started with the respondents' profile summary and the relevant indicators of the variables as depicted by the figure below.

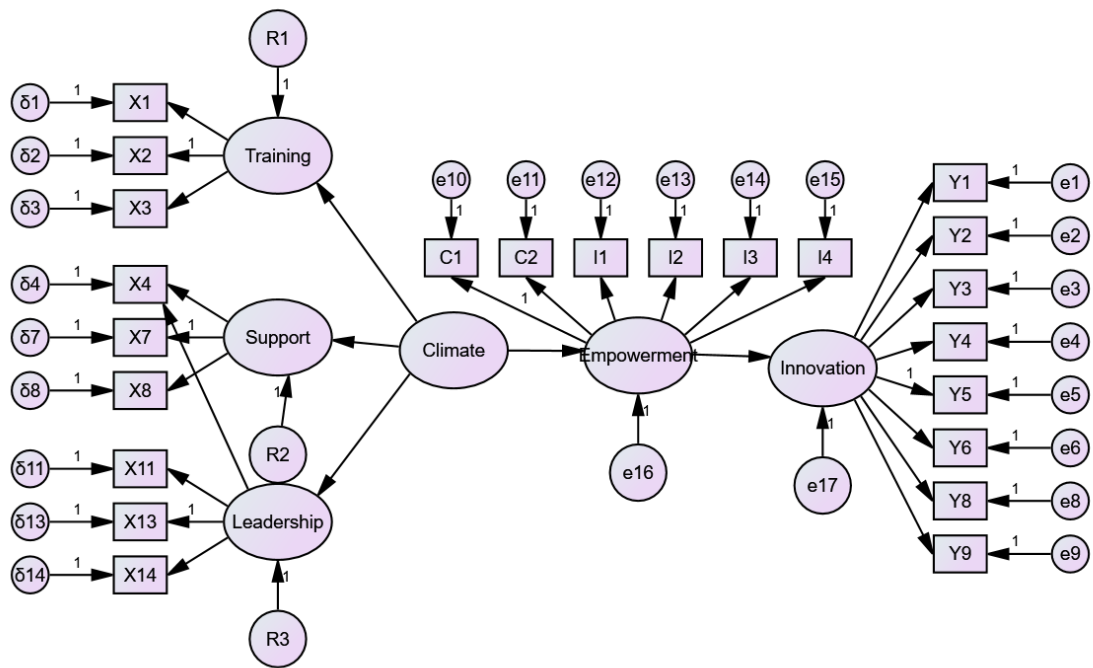


Figure 4.1 Structural model

The first objective of the study was to determine the effect of training support on employee psychological empowerment and innovation in MSRFs in Kenya.

The result showed that training has a statistical significant effect on innovation ($P = 0.035$) but it has insignificant effect on psychological empowerment ($p = 0.105$). However, under the direct effect, training has significant effect on innovation ($p = 0.027$). the finding agrees with the previous findings by Zhang and Begley (2011) that knowledge transfer predicted innovation. This also agrees with previous findings by Pörzse *et al.* (2012) who found that innovation emerges out of different knowledge and expertise. The result further implied that the mediating variable has a significant effect on the relationship between training and innovation. This can be interpreted as employees do not feel empowered when offered training but the acquired knowledge and its transfer elicit innovation in MSRA firms. If MSRA firms are to think of psychologically empowering employees, then training support climate may not serve as a significant intervention. MSRFs might have to consider climate variables

reported by Isaksen and Akerman (2011) where risk taking, freedom, idea time and debate factors were found to influence empowerment for innovation by 40%.

Supervisor support and co-worker support were found to measure the same thing which then was reported as workplace support. The result showed that workplace support had significant effect on empowerment ($P = 0.000$) but insignificant effect on innovation ($P = 0.247$). This did not concur with findings by Oldham and Cummings (1996) cited by Zhang and Begley (2011) who found supportive supervision with concern for employee needs to facilitate innovative behavior of the employees. This indicated, therefore, that although workplace support empowers employees, this may not necessarily result in innovation unless some conditions are met. MSRFs may therefore consider encouraging empowerment through autonomy as a condition, if at all innovation is expected to emerge as was found by Zhang and Begley (2011).

Transformational leadership (TL) has statistical significant effect on empowerment and innovation with and without the intervening variable ($P = 0.000$). This indicates that leadership is very critical for both employee psychological empowerment and innovation and need not be mediated by psychological empowerment. Leadership effect on innovation is the only variable that significantly affects innovation with or without employee psychological empowerment.

Employee psychological empowerment 2 (EPE) was found to have significant effect on innovation ($P = 0.000$) while empowerment 1 was insignificant on innovation ($P = 0.761$) when there is direct effect but it has significant effect when there is no direct effect ($P = 0.000$) which support the finding by Zhang and Begley (2011) who found empowerment to relate strongly with innovation when autonomy is encouraged. This means that mediating effect of employee empowerment to especially through support and training is critical if innovation at MSRA firms is to be realized.

4.4.1 Structural Equation Mediating Effect Outcome

Five hypothesis were tested based on the study objectives. The result revealed insignificant effect of training on both employee empowerment and innovations.

Workplace support to some extent revealed significant effect on empowerment and insignificant effect on the same. Workplace support resulted to insignificant effect on innovation. Transformational leadership had significant effect on both employee empowerment and innovation at MSRFs in Kenya. Employee psychological empowerment revealed a partial mediating effect of organizational climate and innovation at MSRFs in Kenya. The Chapter also discussed the outcome based on theory and other empirical studies highlighting agreement or deviation from the same.

This section discussed the results based on the set objectives and the conceptual hypothesis of the study. The set hypothesis was based on the literature on organizational climate, empowerment and innovation. These variables were empirically tested.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter summarized the findings of the study based on the objectives and drew conclusions thereafter. Then, it ended with the recommendations for policy implication, limitations of the study and areas for further research.

5.2. Summary of Key Findings

The study sought to build upon and extend the available research on individual innovations by offering a mechanism that can encourage a climate that empowers individuals to innovate. The study examined the influence of organizational climate on innovation using employee empowerment as an intervening variable. There has been an assertion that there is paucity of research linking organizational climate to employee psychological empowerment and innovation (Hennessey & Amabile, 2010) cited by Asfar (2014).

It was found that training support empirically fitted very well as an organizational climate variable indicated by cost, frequency and size of the budget. However, it had insignificant effect on both psychological empowerment and innovation in MSRFs in Kenya just as we hypothesized. The result was consistent with the findings of an earlier study by Van der Linden (2014) which found that training employees does not increase their cognitive perception about power and autonomy (empowerment). However, the findings were inconsistent with the findings by (Luoh, Tsaur & Tang, 2014) that training help employees to innovate while still understanding the meaning of work, enhancing self-efficacy, self-determination and impact of decision making which are the measures validated for measuring employee empowerment. The results also contrasted with componential theory which hold that skills, training and knowledge determine innovativeness of employees. This made us suspect why training support might have been left out as a variable in many studies of organizational climate and innovation. This may therefore call for incorporation of more indicators of training support to verify the true position of the impact of training

support on innovation. The size of the training budget, frequency of training and cost of training may need not work in isolation with other factors like autonomy, task clarity and trust which were found to collectively influence empowerment to yield innovation (Hsian, 2014).

Amid the above finding on training, it was felt that other researches need to be done to explore more on the effect of training in organizational development given that some scholars like Isaksen and Ackerman (2007) fronted that training was found to be a precursor of idea support which is one of the key organizational climate variable. Pörzse *et al.* (2012) also found training to be an occasional driver of other organizational climate variables like debate. MSRAFs therefore may not be required to focus on training in isolation of other variables if they intend to pursue employee empowerment at the work place. Nevertheless, the research concurred with other empirical findings that training facilitates bringing staff together (team building) to innovate through the interdependence self-construal principal (Asfar, 2014) but may not directly empower employees to innovate. This was also in tandem with a call for managers to train their employees on how to respond to novel thinking (innovation) (Isaksen & Akerman, 2007).

In future studies, Human Resources practitioners and researchers may consider incorporating other variables like autonomy task clarity, trust and independence which previous scholars found critical to influence training outcomes. Supervisor and co-worker support were found to measure the same thing and was reported as workplace support. This support had significant effect ($P = 0.000$) on competence and meaningfulness of the job (empowerment 1) but insignificant effect ($P = 0.504$) on empowerment 2 (self-determination) and innovation ($P = 0.247$) respectively. The results further revealed that, workplace support at MSRFs has insignificant effect on innovation even when the mediating variable is omitted ($P = 0.247$). The findings did not support a previous study that had found employees' innovative behavior depends greatly on their interaction with others in the workplace (Anderson *et al.*, 2004; Zhou & Shalley, 2003). The findings to some extent also contrasted with Amabile (1996); Martins and Terblanche (2003) and Pieterse *et al.* (2010) who asserted that

empowerment, support, resources and co-worker support influence innovation. Workplace support to include task support, social support, and economic support by the leader was also reported by (Tusluk, Farr & Klein, 1997) to influence innovation which was inconsistent with the results. The contrasting result could have been caused by the parameters applied and the structural equation modeling method of analysis which ably to assess relationships of variables more accurately and at the same unlike most of the previous studies which applied correlation and regression methods of analysis of workplace support (Alice *et. al.*, 2011). Our factors included supervisor contact hours with the employee, recognition, involvement in decision making and co-worker encouragement which the study found insignificantly fit to represent work place support. Among them, the factors that statistically and sufficiently fitted the statistical thresholds were co-worker frequency of help and willingness to share as the tested and fitted to represented workplace support. The same factors significantly influenced employee psychological empowerment anchored on competence and meaningfulness of their job. This employee psychological empowerment had earlier been found to be an ideal situation for effective employee training to take place. This has been verified by Hsiang (2014) who found that negative effect of training was stronger with low employee psychological empowerment. Workplace support did not influence employee's self-determination (empowerment 2) which was found to significantly mediate employees' innovations at MSRFs in Kenya.

Transformational leadership indicated significant influences to both employee empowerment and innovations. This was consistent with findings by Hsiang (2014) who found encouragement from leaders to enhance employee psychological empowerment. This leadership influences employee innovations both when mediated by employee empowerment and when not mediated by employee psychological empowerment in MSRAFs. Previous studies had equally found that leaders who increase both formal and informal interactions with employees improves employee empowerment for innovations. The result was also consistent with previous findings by Park *et al.* (2013) who asserted that employee's creativity and innovation rely majorly on transformational leadership support and motivational actions for dynamic organization to permeate. In particular, our research concurred with the findings that transformational leadership mediated by psychological empowerment influenced

innovations (Pierterse, 2010). This therefore expand the knowledge that MSRA firms by recruiting and inculcating transformational leadership skills may experience more employee innovation than those that will not have transformational leaders in their teams. Transformational leadership dimensions are also excluded in the nine organizational climate dimensions developed by Ekvall (1996). The study supports the call for its consideration as made earlier by Ekvall (1996) owing to its high correlation with change development (innovations) and employee relations while displaying a significant negative correlation with conflicts and controls in organizations which impede innovations (McClean, 2005).

Transformational leadership was found to be very critical in fostering innovations at MSRFs in Kenya. Majorly, such leaders were found to have idealized influence that goes beyond self-interest for the good of the group and expressing instructions in simple words which employees felt empowers them to perform. Such leaders inspire staff with appealing images, stimulate them intellectually and help them to think about old problems in new ways and to find meaning in their work. Such leaders develop employees, give timely feedback and reward achievements. Although those who criticize transformational leadership say it is self-promoting and hard to train, business owners and managers should embrace it, encourage it and train all employees to have it because it is so critical for the functioning and growth of organizations. Its merits outweigh its demerits and theoretically has been found it can reside at any level in the organization.

Employee empowerment 2 had significant effect on innovation ($P = 0.000$) when there is direct and indirect effect but empowerment 1 had insignificant effect when there is no direct ($P=.010$) and there is both direct and indirect effect ($P = 0.761$). This result supports the theoretical view that empowerment is an intrinsic motivation. An explicit and compelling link between conditions for greater innovation and organizational climate is missing. The result indicates that focusing on empowerment and transformational leadership is likely to offer a link between organizational climate and innovation. Increasing empowerment building on self-determination and transformational leadership through training is likely to improve empowerment which

further increases idea generation and implementation. Training with less controls may increase innovations among employees. This is likely to increase innovative behavior of employees at MSRFs.

For employees to feel empowered, they need to feel their job is important and meaningful not only to them but also to the organization. Employees feel competent to perform their job owing to the skills mastery and confidence which further give them self-assurance. Such a climate is created by the leaders. From the several leadership qualities tested in the instrument, it was found that most of the qualities earlier validated to describe transformational leadership filtered randomly to influence the outcome of employee empowerment in MSRFs with the exception of reward consideration which described reward contingent. Majorly, it was found that the leaders idealized quality of going beyond self-interest for the good of the group and expressing issues with a few simple words of what staff could and should do to empower the staff at MSRFs. MSRFs leaders also inspire staff with appealing images about what staff can do and helps them to find meaning in their work. The ability of these leaders to stimulate the staff intellectually to think about old problems in new ways as the leaders provide them with new ways of looking at puzzling things is empowering. These leaders inspire staff to rethink ideas that they had never questioned before. The leaders help the employees to develop themselves and they individually consider employees and let them know how they are working. They reward employees by paying attention to their achievements. These findings harmonized with the findings of Berraies and Chafer (2014), Çakar and Ertürk (2010), Ertürk (2012), Helms (2006) and Muindi (2011). The findings of this study is also in line with the theory of transformational leadership.

The study found that organizational climate based on transformational leadership, training support and workplace support is partially mediated by the employee psychological empowerment to influence generation of new ideas and implementation of the same. At MSRFs employees' self-determination factor of employee psychological empowerment had a mediating effect while work meaning and competence may not mediate employee innovations. This is a finding that has not

been fronted by other scholars in the past. At MSRFs employees' indicated that transformational leadership, self-determination were the most salient factors of organizational climate and employee psychological empowerment while idea generation and co-worker assistance to implement the ideas represented the innovation side. It was evident from the study that other factors of employee empowerment like meaningfulness of the job and competence of the employee did not significantly influence innovation. This could be because of the absence of relatedness and autonomy constructs which theorists of intrinsic motivation hold need to be present to influence self-determination which further influences self-desire to seek out new things and new challenges (innovation). The result compliments the theory that employees are individuals, and therefore a variety of approaches may be needed to motivate different employees to seek new things. It is often important to know what interests one's employee in order to connect these interests with the subject matter. This requires getting to know employees individually and collectively. Employees are likely to be intrinsically motivated if they attribute their productivity outcome to factors under their own control, also known as autonomy or locus of control, believe they have the skills to be effective agents in reaching their desired goals, also known as self-efficacy beliefs and are interested in mastering a job, not just in achieving high performance. This was supported by the results of this study where their impact on the department was not a major concern to them which may be because they believed they have no control over that. Future studies may need to incorporate other factors to explore the role of other mediating and moderating variables such as work engagement, commitment, gender, education level, work experience and Human Resources policies to organizational climate and innovation given that scholars have concurred that organizations can sustainably remain afloat if only employees are innovative.

This study has yielded a moderate empirical validity for its theoretical models that was to establish the relationship between organizational climate, employee psychological empowerment and innovations. In tandem with transformational leadership theory it was found that transformational leadership is the most salient factor that influence both employee empowerment and innovation. This certainly

sheds some light to many scholars who have been avoiding inclusion of transformational leadership in their studies of relationship between organizational climate and innovations citing that it is hard to measure, self-promotional and hard to train. The findings concurred with the transformational theory in that MSRFs operate in unstable business environments that previous scholars found to favor transformational leadership to thrive. From this result it is therefore suspect to exclude transformational leadership in the previous studies of organizational climate and innovation relationship could have caused the inconsistent results. We strongly support the theory of transformational leadership and call for scholars to consider this very important variable as a climate factor and test its influence in other industries or sectors to verify the findings and accord its generalization.

The study indicated that there is a positive relationship between organizational climate, employees' psychological empowerment and innovation. It was found that organizational climate based on transformational leadership, training support and workplace support is partially mediated by the employee psychological empowerment to influence generation of new ideas and implementation of the same. At MSRFs employees' self-determination factor of employee psychological empowerment had a mediating effect while work meaning and competence may not mediate employee innovations. This is a finding that has not been fronted by other scholars in the past. Future studies may need to incorporate other factors to explore the role of other mediating and moderating variables such as work engagement, commitment, gender, education level, work experience and Human Resources policies to organizational climate and innovation given that scholars have concurred that organizations can sustainably remain afloat if only employees are innovative.

5.3 Conclusion

This study has yielded a moderate empirical validity for its theoretical models that was to establish the relationship between organizational climate, employee psychological empowerment and innovations. The findings supported transformational leadership and intrinsic motivation theories. However, the findings partially supported the componential theory. Therefore, scientific justification of each

theory in relation to the findings of this study are critically discussed below respectively.

In tandem with transformational leadership theory it was found that transformational leadership is the most salient factor that influences both employee empowerment and innovation. This certainly sheds some light to many scholars who have been avoiding inclusion of transformational leadership in their studies of relationship between organizational climate and innovations citing that it is hard to measure, self-promotional and hard to train. The findings concurred with the transformational theory in that MSRFs operate in unstable business environments that previous scholars found to favor transformational leadership to thrive. From this result it is therefore to suspect the exclusion of transformational leadership in the previous studies of organizational climate and innovation relationship could have caused the inconsistent results. We strongly support the theory of transformational leadership and call for scholars to consider this very important variable as a climate factor and test its influence in other industries or sectors to verify the finding and accord its generalization.

It was found that transformational leadership is very critical in fostering innovations at MSRFs in Kenya. Majorly, it was found that such leaders have idealized influence that goes beyond self-interest for the good of the group and expressing instructions in simple words which employees felt empowers them to perform. Such leaders inspire staff with appealing images, stimulate them intellectually and help them to think about old problems in new ways and to find meaning in their work. Such leaders develop employees, give timely feedback and reward achievements. Although those who criticize transformational leadership say it is self-promoting and hard to train, business owners and managers should embrace it, encourage it and train all employees to have it because it is so critical for the functioning and growth of organizations. Its merits outweighs its demerits and theoretically has been found can reside at any level in the organization.

Similarly, intrinsic motivation theory was supported by the findings of this study. The theory states that an individual is intrinsically motivated to behave in a certain way when he/she feels internally rewarded by the behavior chosen. Intrinsic motivation is driven by self-desire to seek out new things and new challenges, to analyze individual's capacity, to observe and acquire knowledge. From the study, employees who felt intrinsically motivated had self-determination which significantly influenced their innovative behavior at MSRFs in Kenya. This theory of intrinsic motivation holds that self-determination is founded on competence, autonomy and relatedness innate empowered employees to optimally function and grow. This concurred with the finding that employees who had self-determination driven by autonomy and independence influenced innovation. It was found that employees who did not have self-determination but had competences and meaningful jobs did not feel empowered to innovate. This means empowerment may have enhanced self-determination for them to innovate. This therefore led to the suspicion that omission of employee empowerment to mediate between innovation and organizational climate could have yielded the inconsistent results. The researcher therefore calls other scholars to test this mediating effect of employee empowerment in different organizations and industries using more factors to verify the findings to generalize to other sectors.

Further, it was also found that workplace support from leaders and supervisors who strengthened their competences and designed meaningful jobs empowered employees but did not affect their determination. This again puts workplace support critical to drive a feeling of competent and their job importance which can reduce with absence of this support. This concurs with the transformational leadership theory where the leader influences employees' behavior and feelings. This verifies why many scholars have considered workplace support in the studies of organizational climate to predict employee feelings and behavior.

Although training support empirically fitted very well as an organizational climate variable measured by cost, frequency and size of the budget, it had insignificant effect on both psychological empowerment and innovation in MSRFs in Kenya just as it has been hypothesized. This contrasted with the componential theory which holds that

skills, training and knowledge determine innovativeness of employees. This led to the suspicion as to why training might have been left out in many studies of organizational climate and innovation. This may call for incorporation of more indicators of training support to verify the true position of the impact of training support on innovation. Scholars and researchers may incorporate other variables like autonomy and independence which other scholars in the past had found critical to influence training outcomes.

The study found that there is a positive relationship between organizational climate, employees' psychological empowerment and innovation. It was found that organizational climate based on transformational leadership, training support and workplace support is partially mediated by the employee psychological empowerment to influence generation of new ideas and implementation of the same. At MSRFs employee's self-determination factor of employee psychological empowerment had a mediating effect while work meaning and competence may not mediate employee innovations. This is a finding that has not been fronted by other scholars in the past.

Future studies may need to incorporate other factors to explore the role of other mediating and moderating variables such as work engagement, commitment, gender, education level, work experience and Human Resources policies to organizational climate and innovation given that scholars have concurred that organizations can sustainably remain afloat if only employees are innovative.

5.4. Implications of the Study for Theory, Policy and Practice

The objective of the research was to assess the relationship between organizational climates, with employee psychological empowerment as the mediating variable to influence innovation. The study provided some insights on this area that organizations can apply to promote innovations.

5.4.1 Theoretical Implications

This study has yielded a moderate empirical validity for its theoretical models that was to establish the relationship between organizational climate, employee

psychological empowerment and innovations. The findings supported transformational leadership and intrinsic motivation theories. However, the findings did not support the componential theory. Therefore, scientific justification of each theory in relation to the findings of this study are critically discussed below respectively.

Leadership theories continue to hold that lack of leadership support stifles innovation (Kanter, 1983). This clearly demonstrates how useful transformational leadership is in creating a climate of innovation and thus is merited to be included as organizational climate variables. The result supported this theoretical evidence because it was found that transformational leadership has a significant effect on innovations with or without employee psychological empowerment as a mediator. This can be interpreted to mean that managers should increase transformational leadership climate if it aims at empowering and increasing employee innovativeness. The transformational leader should provide new ways of looking at puzzling things, help employees find meaning in their work and enable them to think about old problems in new ways. This leader should make them feel good to be around and get them to rethink ideas that they had never questioned before which builds faith in him and fosters a sense of going beyond self-interest for the good of the team. This will offer the organization a competitive edge in an unstable environment with well learned workforce.

5.4.2 Policy Implications

An innovation is an economic game changer. Kenya prides herself in having innovative workforce. The result of the study offers some insights to innovation policy makers on how to promote innovation at workplaces using organizational climate and employees' psychological empowerment. MSRAFs and other policy makers may consider developing a training policy that does not isolate other variables if they want to pursue employee empowerment for innovation at the work place and innovations. The research concurred with earlier findings that training does not directly empower employees to innovate (Asfar, 2014) but facilitate bringing staff together (team building) to innovate through the interdependence self-construal principal. The result contributes to the attempt of answering the 'how to respond to

novel thinking 'which Isaksen and Akerman's, (2007) asked managers to tackle in order to increase creativity at the workplace.

The results support an earlier finding that if MSRAFs focus on employee training by examining the impact of learning and development on organizational and individual performance outcomes, innovation will permeate true value of Human Resources development. The results indicate that focusing on workplace support, training, transformational leadership and employee psychological empowerment is likely to offer a compelling link between organizational climate and innovation which has been missing. Increasing workplace support and transformational leadership through training on high level idea support is likely to improve empowerment which further increases perceptions of possibilities and seeing no obstacles to innovate.

Most of the earlier studies on organizational climate and innovations are from the developed world and therefore the results could be one of the few studies in Africa that will expand a comparative knowledge based on a more diverse perspective from an industry wide perspective.

5.4.3 Managerial implications

Departmental managers who decide training program for the staff, can now focus on employee training not in isolation with other elements like autonomy to apply the training. They should examine the impact of learning and development on organizational and individual performance outcome to accelerate innovation that permeate true value of Human Resources development.

5.5. Recommendations for Further Research

The results indicated partial mediating effect of employee psychological empowerment on innovation and organizational climate. This, therefore, forms a foundation for future studies wishing to test other organizational climate variables' effect on innovation mediated by psychological empowerment of the employees.

Although earlier studies mostly focused on individuals and teams of a single company, this study focused on individuals of a single industry and more so only those who are members of the professional body which is voluntary. This may suffer from common source biasness which now can be expanded to cover a cross-section of industries. This study can in future be replicated on the government parastatals to test any peculiarity.

This study relied on self-rating of the respondent within the industry (MSRFs) at the time which sometimes is reported to be biased. Future studies may consider a longitudinal study and 360 degree rating to observe a trend and consistency for a firmer conclusion on the effects of organizational climate on innovation. This will help to broaden the available literature on the effects of organizational climate on innovations and offer Human Resources practitioners an organizational development toolkit to improve employee innovative performance.

The study applied cross-sectional survey design which is commonly used in social sciences owing to its very nature of cost and time saving. However, this design did not offer a trend on the effects of organizational climate and innovation over a period of time and therefore a longitudinal design may be more ideal in future studies.

The choice of the questions and application of all quantitative approach without a qualitative perspective may have biasedly tilted the outcome. The choice of the questions too may not have offered all the probable alternatives. Future studies may choose to incorporate a qualitative approach together with the quantitative to assess the relationship between organizational climate and innovation of employees.

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APPENDICES

Appendix 1: Cover Letter

My name is James Wangombe, a PhD student at the Jomo Kenyatta University of Agriculture and Technology. This questionnaire has been developed to facilitate a study aimed at establishing the effects of organization climate on creativity and innovation among MSRFs firms in Kenya. You have been selected as a critical player in this field. Your input in this study would be most valuable. The information given will be handled confidentially, and will only be used only for academic intention only.

Appendix 2: Questionnaire

SECTION A

1. Please indicate your gender in the space provided -----
 1. Male 2. Female
2. Please indicate your date of birth -----
3. Please indicate your highest level of education in the space provided –
 a) Primary
 b) Secondary
 c) Certificate
 d) Diploma
 e) Undergraduate
 f) Masters
 g) PhD
4. Please indicate the years you have been in your current job-----
5. Kindly indicate the year when organization started operating -----.

SECTION B

To what extent do you support the following statements using the scale given below?

1–Strongly disagree 2–Disagree 3–Average 4–Agree 5–Strongly agree

	1	2	3	4	5
Training support					
X1. Size of training budget is adequate					
X2. Cost of training per employee is adequate					
X3. Frequency of my training is adequate					
Supervisor support					
X4. My supervisor frequently recognizes me					
X5. My supervisor’s contact time with me is adequate					
X6. My supervisor frequently involves me in decision making					
Co-worker support					

X7. My co-workers often willing to share their expertise with me.					
X8. My Co-workers frequently help me if I fall behind my work.					
X9. My co-workers encourage to each other beyond the organization.					

SECTION C

To what extent do you support the following statements regarding your supervisor's transformational leadership attributes using the scale given below?

Adopted from Northouse (2001)

KEY

1 -Not at all. 2 -Once in a while 3 = Sometimes 4 = Fairly often 5 = Frequently, if not always

Leadership attributes	1	2	3	4	5
X10. Idealized influence					
1. He makes me feel good to be around him.					
2. I have complete faith in him.					
3. He/ She make others feel good to be around me.					
4. He goes beyond self- interest for the good of the group.					
5. He consider the moral and ethical consequences of decisions.					
X11. Inspirational motivation					
1. He/she express with a few simple words what i could and should					
2. He/she provide appealing images about what we can do					
3. He/she helps me find meaning in my work					
X12. Intellectual stimulation					
1. He/she enable me to think about old problems in new ways					
2. He/she provide me with new ways of looking at puzzling things					
3.He/she get me to rethink ideas that they had never questioned					
X13. Individualized consideration					
1. He/she help me develop myself.					
2. He/she let me know how I think they are doing.					
3. He/she give personal attention to me when i seem rejected.					
X14. Contingent reward					
1. He/she tells me what to do if they want to be rewarded for their					
2. He/she provides recognition/rewards when i reach their goals.					
3. He/she call attention to what i can get for what they accomplish.					
X15. Management-by-exception					
1. I am satisfied when others meet agreed-upon standards.					
2. As long as things are working, I do not try to change anything.					
3. I tell others the standards they have to know to carry out their					

X16. Laissez-faire leadership					
1. I am content to let others continue working in the same ways					
2. Whatever others want to do is OK with me.					
3. I ask no more of others than what is absolutely essential.					

SECTION D

To what extent do you support the following statements using the scale given below?

1–Strongly disagree 2–Disagree 3–Average 4–Agree 5–Strongly agree

Employee psychological empowerment	1	2	3	4	5
Meaning					
I1.The work I do is very important to me					
I2.My job activities are personally meaningful to me					
I3.The work I do is meaningful to me					
Competence					
I4.I have mastered the skills necessary for my job					
I5.I am confident about my ability to do my job					
I6.I am self-assured about my capabilities to perform my work activities					
Self-Determination					
I7.I have significant autonomy In determining how I do my job					
I8.I can decide on my own how to go about doing my work					
I9.I have considerable opportunity for independence and freedom in how I do my job.					
Impact					
I10.My impact on what happens in my department is large.					
I11.I have a great deal of control over what happens in my department.					
I12.I have significant influence over what happens in my department.					

SECTION E

Idea generation	1	2	3	4	5
Y1. To what extent did you put efforts in the development of new ways or idea/s to achieve goals or objectives in your organization?					
Y2. To what extent did you generate new idea/s in your organization?					
Y3. To what extent did you generate original solutions for problems in your organization?					
Y4. To what extent did you search new working methods, techniques or instruments?					
Y5. To what extent did you find new approached to execute task?					
Y6. What new ideas did you generate?					
Idea implementation					
Y7. To what extent did you contribute to the implementation of your new idea/s mentioned above?					
Y8. To what extent did your co-worker contribute to the implementation of your new idea/s mentioned above?					
Y9. To what extent did your manager contribute to the implementation of your new idea/s mentioned above?					
Y10. To what extent did you risk to implement new process, technique or service/product					
Y11. To what extent did you increase quality in the organization					

THANK YOU

Appendix 3: Analysis Tables and Figures

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	10.522	29.228	29.228	10.013	27.815	27.815	8.444
2	3.211	8.921	38.148	2.790	7.749	35.564	6.473
3	2.621	7.281	45.429	2.139	5.941	41.505	4.353
4	1.628	4.522	49.951	1.162	3.228	44.732	4.030
5	1.497	4.158	54.109	.996	2.768	47.500	5.588
6	1.363	3.786	57.895	.887	2.464	49.964	4.764
7	1.222	3.394	61.289	.723	2.008	51.972	2.720
8	.986	2.738	64.027				
9	.817	2.270	66.296				
10	.786	2.183	68.479				
11	.738	2.050	70.529				
12	.694	1.929	72.458				
13	.654	1.815	74.273				
14	.636	1.766	76.039				
15	.604	1.677	77.716				
16	.573	1.590	79.307				
17	.564	1.567	80.874				
18	.546	1.516	82.390				
19	.524	1.455	83.846				
20	.502	1.393	85.239				
21	.468	1.299	86.538				
22	.452	1.255	87.793				
23	.421	1.169	88.962				
24	.416	1.154	90.116				

25	.395	1.096	91.212			
26	.373	1.035	92.247			
27	.365	1.014	93.261			
28	.338	.939	94.200			
29	.324	.900	95.100			
30	.309	.858	95.957			
31	.282	.785	96.742			
32	.272	.756	97.498			
33	.253	.704	98.202			
34	.237	.659	98.861			
35	.223	.620	99.480			
36	.187	.520	100.000			

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix^a

	Factor						
	Leadersh ip 1	Innovati on	Empowerme nt 1	Trainin g	Empowerme nt 2	Suppo rt	Leadersh ip 2
X1				.711			
X2				.867			
X3				.557			
X4						.429	
X7			.330			.648	
X8						.716	
X10. 4	.490						
X10. 5	.498						
X11. 1	.584						
X11. 2	.491						
X11. 3	.768						
X12. 1	.654						
X12. 2	.820						
X12. 3	.883						
X13. 1	.510						
X13. 2	.456						
X14. 3	.530						

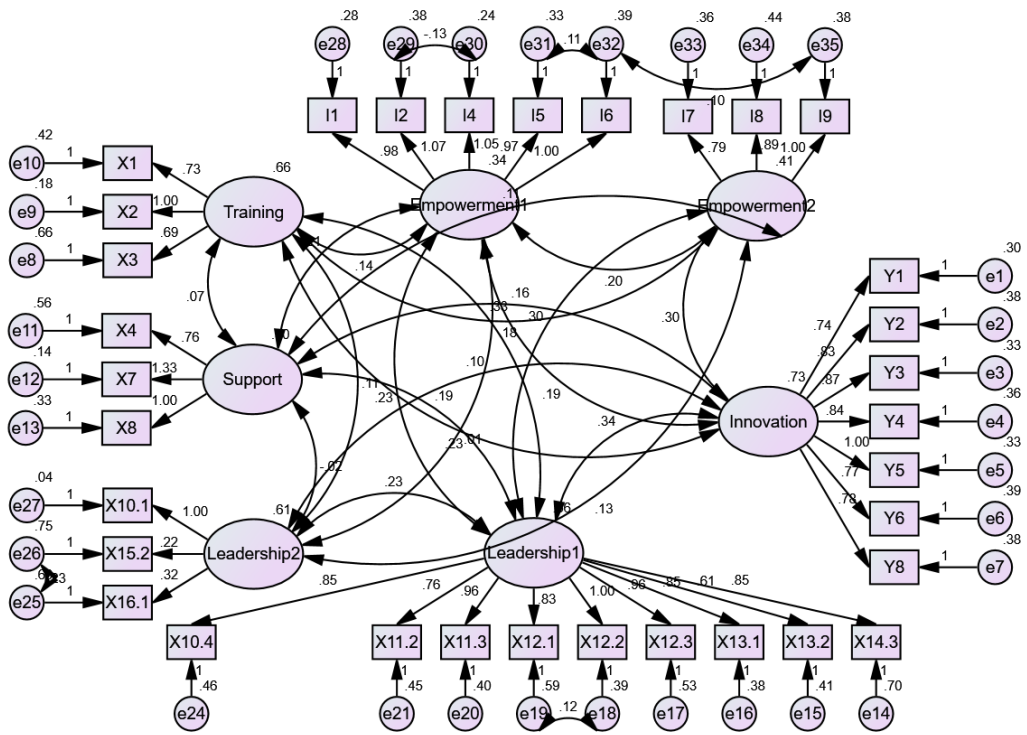
X15.						.583
2						
X16.						.662
1						
X10.						.439
1						
I1			.487			
I2			.523			
I4			.619			
I5			.744			
I6			.799			
I7					.635	
I8					.728	
I9					.605	
Y1	.780					
Y2	.799					
Y3	.841					
Y4	.797					
Y5	.708					
Y6	.641					
Y8	.718					

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Measurement Model



Structural Model

