

**AKENTEN APPIAH -MENKA UNIVERSITY OF SKILLS TRAINING AND  
ENTREPRENEURIAL DEVELOPMENT**

**TEAM EFFECTIVENESS AND TEAM INNOVATION PERFORMANCE: THE  
MEDIATING ROLE OF INNOVATION CAPABILITY AND MODERATING ROLE OF  
TEAM RECOGNITION**

**ABIGAIL ANSAAH AKROFI**

**OCTOBER 2023**

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**A THESIS SUBMITTED TO THE DEPARTMENT OF MANAGEMENT STUDIES  
EDUCATION, AKENTEN APPIAH – MENKA UNIVERSITY OF SKILLS TRAINING  
AND ENTREPRENEURIAL DEVELOPMENT, IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF A MASTER OF PHILOSOPHY DEGREE IN  
BUSINESS MANAGEMENT**

**BY**

**ABIGAIL ANSAAH AKROFI**

**(8211380002)**

**OCTOBER 2023**

## DECLARATIONS

### **Candidate's Declaration**

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree at this university or elsewhere.

**Abigail Ansaah Akrofi**

Signature: ..... Date: .....

### **Supervisors' Declaration**

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development.

**Principal Supervisor: Prof. Faisal Iddris**

Signature: ..... Date: .....

**Co-Supervisor: Dr. Courage Simon Kofi Dogbe**

Signature: ..... Date: .....

## ACKNOWLEDGMENT

The author extends profound appreciation to the Almighty God for His unwavering support and guidance throughout the research period. Gratitude is expressed to Prof. Faisal Iddris, my dedicated supervisor, for investing time in reviewing the entire work, offering corrections, and providing valuable suggestions. May the blessings of the Almighty rest upon you. Recognition is also extended to the authors whose works have been referenced, either directly or indirectly, in support of this research.

Special thanks are due to my husband, Mr. Joseph Bansah, and my children – Ewurabena Ageyemang Bansah, Wonder Efua Bansah, and David Ayisi Bansah. To my parents, Mr. and Mrs. Akrofi, and my siblings, Manasseh Ampem Darko Akrofi and Deborah Amoabea Akrofi, your encouragement, love, unwavering support, and belief in my God given abilities have been instrumental. Gratitude is expressed to friends and fellow students who provided a network of support, offering both academic and personal assistance. Your camaraderie added enjoyment to this journey.

Appreciation goes to my selfless lecturer, Dr. Courage Simon Kofi Dogbe, for steadfast support over the years. Lastly, heartfelt thanks to all the participants who generously shared their time and insights, contributing to the realization of this research. May blessings abound for each one of you. To all those who played a part in this thesis, your invaluable support has not gone unnoticed, and I am genuinely thankful.

## **DEDICATION**

I dedicate this research to the Divine Creator, whose exceeding grace, divine strength, and wisdom enabled me to undertake this study. To my cherished husband, Mr. Joseph Bansah, and my children, Ewurabena Agyemang Bansah, Wonder Efua Bansah, and David Ayisi Bansah, your unwavering support and belief in my abilities have been the driving force behind my academic achievements.

I also dedicate this work to my loving parents, Mr. and Mrs. Akrofi, and my siblings, Manasseh Ampem Darko Akrofi and Deborah Amoabea Akofi, for their prayers, unwavering support, motivation, and encouragement that have accompanied me throughout this journey.

I want to convey my dedication of this research to my devoted Supervisor, Prof. Faisal Iddris, and the diligent course representative, Emmanuel Kparl Mensah. Their invaluable support and motivation have significantly enriched this undertaking. This thesis is dedicated to all those who share in the belief in the transformative power of knowledge and the relentless pursuit of excellence. May our collective efforts contribute to a brighter and more enlightened future.

## ABSTRACT

The study investigated the implications of team effectiveness and team innovation performance, considering the mediating influence of innovation capability and the moderating role of team recognition. The study was a survey, with data collected using a structured questionnaire and the research approach employed was quantitative. The research was centered on the manufacturing sector within Ghana, specifically within the Asokore Mampong Municipal area in the Ashanti Region. The study selected three manufacturing companies: Salom Pharmaceuticals, CBS Supreme Industry, and Royal Foam Company Limited. The sample comprised 250 permanent employees from these three manufacturing firms. The data gathered in this study underwent analysis using SPSS version 23 and Amos version 23, with a specific emphasis on Structural Equation Modeling (SEM) within AMOS. The study revealed that the levels of team effectiveness, innovation capability, and team innovation performance were notably high in these organizations. The findings indicated a significant positive correlation between team effectiveness and team innovation performance. Furthermore, innovation capability was identified as a partial mediator in the relationship between team effectiveness and team innovation performance. Lastly, team recognition was found not to moderate the relationship team effectiveness and team innovation performance. It was recommended that, organizations ought to prioritize endeavors that bolster team effectiveness, encompassing activities like team-building, educational programs, and skill development initiatives. Also, organizations should make substantial investments in nurturing innovation capabilities within their teams. Again, organizational leaders must lead by example, placing a premium on innovation and demonstrating their unwavering dedication to cultivating an innovation-centric culture.

**TABLE OF CONTENT**

<b>CONTENTS</b>	<b>PAGES</b>
DECLARATIONS .....	ii
ACKNOWLEDGMENT.....	iii
DEDICATION .....	iv
ABSTRACT.....	v
TABLE OF CONTENT .....	vi
LIST OF TABLES .....	xi
LIST OF FIGURES .....	xii
CHAPTER ONE.....	1
INTRODUCTION .....	1
1.0 Introduction.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	4
1.3 Purpose of the Study .....	5
1.4 Research Questions.....	5
1.5 Research Hypothesis.....	6
1.6 Significance of The Study.....	6
1.7 Scope of the Study .....	7
1.8 Limitations of the Study.....	8

1.9 Overview of Methodology .....	8
1.10 Organization of the Study .....	10
CHAPTER TWO .....	11
LITERATURE REVIEW .....	11
2.0 Introduction.....	11
2.1 Theoretical Review .....	11
2.1.1 Richard Hackman’s Input-Process-Output (IPO) Model.....	11
2.1.2 Dynamic Capability Theory.....	14
2.2 Empirical Review.....	17
2.3 Concept Review .....	21
2.3.1 Team Effectiveness .....	21
2.3.2 Innovation Capability.....	23
2.3.3 Team Recognition .....	26
2.3.4 Team Innovation Performance .....	28
2.3.5 Team Effectiveness and Team Innovation Performance .....	31
2.3.6 Mediating Role of Innovation Capability .....	33
2.3.7 Moderating role of Team Recognition .....	35
2.4 Conceptual Framework.....	39
2.5 Chapter Summary .....	40
CHAPTER THREE .....	41

METHODOLOGY .....	41
3.0 Introduction.....	41
3.1 Research Design.....	41
3.2 Research Approach .....	42
3.3 Population of the Study.....	42
3.4 Sample Size.....	43
3.5 Sampling Technique.....	44
3.6 Source of Data.....	45
3.7 Data Collection Instrument.....	45
3.8 Pilot Study.....	46
3.9 Data Collection Procedure .....	46
3.10 Data Validity and Reliability.....	47
3.10.1 Exploratory Factor Analysis (EFA) .....	48
3.10.2 Confirmatory Factor Analysis (CFA).....	49
3.12 Discriminant Validity .....	52
3.13 Data Analysis Technique.....	53
3.5 Chapter Summary .....	54
CHAPTER FOUR.....	55
DATA ANALYSIS AND PRESENTATION OF RESULTS.....	55
4.0 Introduction.....	55

4.1 Respondents Characteristics .....	55
4.2 Descriptive Analysis .....	57
4.2.1 <i>Team Effectiveness</i> .....	57
4.2.2 <i>Team Innovation Performance</i> .....	58
4.2.3 <i>Innovation Capability</i> .....	59
4.2.4 <i>Team Recognition</i> .....	60
4.3 Path Analysis.....	61
4.4 Discussion of Findings.....	65
4.5.1 The Extent of Relationship between Team Effectiveness and team Innovative Performance. .....	65
4.5.2 The mediating effect of innovation capability on the relationship between team effectiveness and team innovative performance? .....	66
Table 11 The Mediating Effect.....	67
4.6 Conclusion of the Chapter Four .....	70
CHAPTER FIVE .....	71
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION .....	71
5.0 Introduction.....	71
5.1 Summary of Findings.....	71
5.2 Conclusion .....	72
5.3 Recommendations.....	73

5.3 Suggestion for Further Studies.....	74
REFERENCES .....	75
APPENDIX.....	106

## LIST OF TABLES

Table 1: Population and Sample Size.....	44
Table 2: Reliability Analysis .....	48
Table 3. Exploratory Factor Analysis (EFA).....	49
Table 4. Confirmatory Factor Analysis .....	51
Table 5: Discriminant Validity .....	53
Table 6 Respondents' Demographics .....	56
Table 7 Team Effectiveness .....	58
Table 8 Team Innovation Performance .....	59
Table 9 Innovation Capability.....	60
Table 10 Team Recognition .....	61
Table 11 Path Coefficients .....	62
Table 12 The Mediating Effect .....	62

## LIST OF FIGURES

Figure 1 Conceptual Framework .....	39
Figure 2: Diagrammatic Presentation of Confirmatory Factor Analysis .....	52
Figure 3 Structural Equation Model .....	63
Figure 4: Two-way interaction.....	64

# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

The introductory chapter of this study covers the study background, problem statement, research question, study objectives, significance, scope, limitation, overview of methodology and organization.

### 1.1 Background to the Study

In the dynamic environment of today's businesses, innovation stands as the pivotal element for maintaining competitiveness and long-term viability (Lee & Trimi, 2018). The capacity to generate fresh concepts, embrace transformation (Jiang & Chen, 2018), and respond to shifting market needs is now a fundamental requirement for organizations aiming to flourish amidst the continuously changing business landscape (Kozlowski, 2018). A key driver in this quest is the effectiveness of collaborative teams, which play a crucial role in propelling the innovation process (Costa et al., 2018). Teams come in diverse configurations, each tailored to specific functions and objectives (Kim, 2018). They serve as reservoirs of knowledge, skill sets, and expertise (Patrcio & Franco 2022), allowing them to deliver prompt feedback and inventive problem-solving approaches (Jiang & Chen, 2018). Additionally, teams bolster the efficiency of task completion and elevate the overall satisfaction of their members (Hornsby, 2018). Considerable research attention has been devoted to exploring the connection between the effectiveness of teams and their contribution to innovation performance (Bianco & Venezia, 2019), highlighting the profound impact this relationship has on achieving organizational excellence.

Nevertheless, the intricacies of this connection extend well beyond mere collaboration (Brown & Power, 2019), delving into a complex interplay of factors often obscured by the overarching objectives of both teams and the organizations they serve (Jaravel et al., 2018). This research embarks on a comprehensive exploration of these intricacies, with a specific emphasis on the mediating influence of innovation capability and the moderating role of team recognition. The concept of team effectiveness transcends the confines of conventional workgroups, representing a harmonious amalgamation of diverse skills, competencies (Mathieu et al., 2019), and perspectives aimed at achieving collective objectives (Van & Lippényi, 2020). Effective teams, distinguished by their transparent communication (Kozlowski, 2018), collaborative approach to problem-solving (Buljac et al., 2020), and adaptability, serve as the cornerstone of innovation within organizations (West & Sacramento, 2023). They are not merely geared towards meeting predefined goals but are instrumental in cultivating an innovative culture that propels enterprises to the forefront of their respective industries (Sun et al., 2020). Simultaneously, Innovation in organizations requires building innovation capability (Rajapathirana & Hui 2018). Innovation capability, defined as an organization's prowess in fostering, nurturing, and executing innovative ideas (Saunila, 2020), stands as a dynamic and strategic facet of its operations (Maldonado-Guzmán et. al, 2018). It empowers teams to challenge established norms, envision groundbreaking solutions (Saunila, 2020), and pioneer novel advancements (Rajapathirana & Hui, 2018). The synergy between team effectiveness and innovation capability forms the bedrock for a thriving innovation process, propelling innovation performance and, ultimately, propelling organizational expansion (Andersson et al., 2020).

However, in this intricate web of relationships, the role of team recognition emerges as a pivotal moderating force (Litchfield et al., 2017). The acknowledgment of team endeavors, innovations, and contributions acts as a catalyst, further igniting the innovation engine (Damanpour, 2018). It not only motivates teams to excel but also instills a profound sense of ownership and belonging (Reis & Puente-Palacios, 2019), nurturing an environment where innovative thinking is not merely encouraged but celebrated (Bianco & Venezia, 2019). The overarching question guiding this research endeavor revolves around the extent to which team recognition moderates the interplay between team effectiveness and innovation performance, as well as the mediating function of innovation capability in this relationship.

This research undertakes a profound exploration of the intricate dynamics at play between these variables, shedding light on the mechanisms that transform effective teams into innovators and, subsequently, influence organizational performance. This thesis embarks on a multifaceted research journey, encompassing theoretical review, empirical review, and practical implications. Its primary objective is to unearth the nuanced relationships between team effectiveness, innovation capability, team recognition, and innovation performance within the context of manufacturing companies. Navigating the terrain of innovation theory, team dynamics, and the influential nature of recognition, this research aspires to provide a comprehensive understanding of how these elements converge to give rise to innovative and high-performing teams. By delving into the mediating and moderating roles of innovation capability and team recognition, this thesis aims to furnish invaluable insights for organizations striving to harness the complete potential of their teams in driving innovation.

## **1.2 Statement of the Problem**

In the ever-evolving landscape of manufacturing firms, the quest for innovation capability takes center stage in the pursuit of sustainable competitiveness and growth (Liu et al., 2020). Nevertheless, a multifaceted challenge looms over many manufacturing firms, deeply rooted in their innovation processes: a failure to fully appreciate the indispensable role of teams and their contributions in propelling innovation performance.

Despite the widespread recognition of innovation as a linchpin of success, organizations frequently underestimate the significance of teams in unleashing their innovation capabilities. This discrepancy highlights a gap in comprehending how the presence or absence of team recognition directly influences innovation performance within manufacturing firms. Historically, research has predominantly focused on the straightforward relationships between these variables. Yet, there remains a limited exploration of the intricate mechanisms at play, particularly concerning how innovation capability acts as a mediator between team effectiveness and innovation performance and how team recognition operates as a moderator within this relationship.

Consequently, the research gap underscores the pressing need for a more holistic, context-specific, and pragmatic grasp of how team effectiveness, innovation capability, and team recognition interconnect within the realm of manufacturing firms and potentially in other specific organizational contexts. By addressing this research gap, the thesis endeavors to provide valuable insights for organizations navigating the intricate terrain of innovation and teamwork in the midst of an ever-shifting business environment.

### **1.3 Purpose of the Study**

The primary aim of this research is to delve into the intricate relationships among team effectiveness, team innovation performance, team recognition, and innovation capability within organizational contexts.

The specific objectives are;

1. To assess the relationship between team effectiveness and team innovative performance.
2. To ascertain the how innovation capability mediates the relationship between team effectiveness and team innovative performance.
3. To identify the how team recognition moderates the relationship between team effectiveness and team innovative performance.

### **1.4 Research Questions**

1. What is the extent of the relationship between team effectiveness and team innovative performance?
2. How does innovation capability mediate the relationship between team effectiveness and team innovative performance?
3. To what extent does team recognition moderate the relationship between team effectiveness and team innovative performance?

## **1.5 Research Hypothesis**

The following are the hypothesis used in the research

**H1** – Team effectiveness has a direct and positive relationship on team innovation performance

**H2** – Innovation Capability mediates the relationship between team effectiveness and innovative team performance

**H3** – Team recognition moderates the relationship between team effectiveness and team innovation performance

## **1.6 Significance of the Study**

This study enriches the existing knowledge base by enhancing the intricate relationships involving team effectiveness, team innovation performance, team recognition, and innovation capability. The findings derived from this research hold significant implications for a wide array of stakeholders, including researchers, academics, government bodies, and private enterprises. By unraveling the mechanisms that propel team innovation performance, this study stands to provide invaluable insights that can inform future research endeavors and shape the practices of both public and private sector organizations. The knowledge generated can serve as a compass for identifying specific areas within teams that warrant improvement. Moreover, organizations can leverage the insights gained from this research to implement targeted interventions and specialized training programs. These initiatives can serve as catalysts for cultivating a vibrant culture of innovation, thereby unearthing the untapped creative potential latent within their teams. An additional focal point of this research lies in its examination of the pivotal role of team recognition in motivating and engaging team members.

The comprehensive understanding of the impact of recognition initiatives on team cohesion and motivation can guide organizations in designing and implementing highly effective employee recognition programs. By fostering a sense of belonging and loyalty among team members, such programs can significantly enhance overall team performance. Furthermore, the insights garnered from this study, particularly those relating to team recognition and innovation capability, have the potential to instill a sense of intrapreneurship among employees. By recognizing the value of their contributions and providing avenues for innovative initiatives, organizations can stimulate their workforce to proactively drive innovation. This not only fuels immediate success but also contributes to the long-term prosperity of the organization, solidifying its position in a rapidly evolving business landscape.

### **1.7 Scope of the Study**

While the research was centered on the manufacturing sector in Ghana, it's important to note that not all manufacturing firms in the region were encompassed within the study. The research's specific context and geographical boundaries were confined to a select trio of manufacturing companies situated within the Asokore Mampong Municipal area of the Ashanti Region in Ghana. These companies include the Royal Foam Manufacturing Company, Salom Pharmaceuticals Company, and DBS Roofing Company. Regarding the conceptual framework of the study, the primary focus revolved around the interconnected aspects of team effectiveness, team recognition, innovation capability, and team innovation performance. These elements were at the core of the research inquiry, contributing to a nuanced exploration of their dynamics. As for the respondent scope, the study engaged employees from these various companies, but it was limited to those with

the ability to read and write. This criterion ensured that participants possessed the necessary literacy skills to provide meaningful responses and insights during the research process.

### **1.8 Limitations of the Study**

The study's focus was narrowed to a distinct geographical area and a constrained number of manufacturing enterprises within the Ashanti Region. This narrow scope may limit the applicability of the study's findings to a more extensive context, as these companies' characteristics and practices may not comprehensively represent the diversity of the entire manufacturing sector. Regrettably, due to constraints of time and financial resources, the researcher was compelled to confine the study to a single firm. Additionally, the study drew upon self-reported data from employees within the chosen organizations. This methodology introduces the potential for response bias, as participants may have been inclined to provide answers aligning with social desirability or influenced by factors such as the prevailing organizational culture or their hierarchical positions within the company. Moreover, the research primarily homed in on manufacturing companies, and as such, the outcomes may not be readily translatable to different industries characterized by distinct work processes, organizational structures, and varying innovation requisites. The unique demands and context of the manufacturing sector might not necessarily mirror those encountered in service-based or technology-driven enterprises, for instance.

### **1.9 Overview of Methodology**

This study adhered to a positivist research philosophy, signifying the application of scientific methodologies in both data collection and analysis, as outlined by Park, Konge, and Artino (2020).

The research strategy employed was of a quantitative nature, involving the utilization of a structured questionnaire for data collection, and the subsequent analysis was conducted through quantitative means. Research approaches can generally be categorized into two fundamental types: inductive reasoning and deductive reasoning, as elucidated by Woiceshyn & Daellenbach (2018). Inductive reasoning, a process primarily associated with qualitative research, revolves around theory-building through the observation of specific situations to derive generalizations about the phenomenon under examination (Casula et al., 2021). In contrast, deductive reasoning centers on the formulation of hypotheses based on existing theory and the subsequent design of a research strategy to test these hypotheses (Casula et al., 2021). Given that the present study was grounded in existing literature and established models and theories, it inherently adopted a deductive approach. The research design took the form of a survey, with a specific focus on the employees of the three manufacturing companies within the study's purview.

The study's population encompassed employees from various manufacturing companies situated within the Asokore Mampong Municipal area, amounting to a total of 670 individuals. From this population, a sample of 250 respondents was selected using a convenience sampling method. The selection criteria for participants included the ability to read and write. Primary data was sourced through the utilization of a structured questionnaire, which served as the principal research instrument. Subsequently, the gathered data was subjected to analysis using statistical tools, namely, SPSS (v.23) and Amos (v.23). The analysis techniques encompassed the computation of frequencies, percentages, mean scores, standard deviation, and Structural Equation Modelling (SEM). Prior to the primary estimation of the hypotheses through SEM, the research conducted both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to evaluate the data's reliability and validity.

## **1.10 Organization of the Study**

The study will be structured into five interconnected chapters. Chapter One will commence by providing the study's background, elucidating the research problem, outlining the research objectives aimed at achieving the overarching goal, presenting the research questions, articulating the research hypothesis, discussing the study's significance, delineating the scope of the investigation, elaborating on the methodology employed, acknowledging the study's limitations, and presenting an overview of the thesis organization. In Chapter Two, the study will delve into a comprehensive exploration of pertinent theories and literature concerning team effectiveness, innovation capability, team recognition, and team innovation performance. It will also construct a conceptual framework to underpin the research. Chapter Three will focus on an in-depth examination of the research methodology implemented in the study. This will encompass discussions on the research design, research approach, the study's target population, the determination of the sample size and the sampling technique utilized, sources of data, the instruments employed for data collection, considerations of data validity and reliability, and the strategies for data analysis. Chapter Four will be dedicated to the presentation of the data analysis and the results derived from the study's investigations. Finally, Chapter Five will encapsulate the research journey by summarizing the findings presented in Chapter Four. It will culminate in drawing conclusions based on these findings and offering valuable recommendations for further consideration and application.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The aim of this research is to delve into the intricate relationships among team effectiveness, team innovation performance, team recognition, and innovation capability within organizational contexts. This chapter conducted an extensive examination of the existing body of literature encompassing the diverse variables and their intricate interconnections. Within this exploration, specific sub-headings were addressed, encompassing team recognition, innovation capability, team innovation performance, the mediating function of innovation capability, the moderating function of team recognition, and a comprehensive overview of theoretical concepts and the development of the conceptual framework.

#### **2.1 Theoretical Review**

##### **2.1.1 Richard Hackman's Input-Process-Output (IPO) Model**

The intricate interplay between team effectiveness and team innovation performance stands as a critical determinant of organizational success (O'Neill & Salas, 2018). Effective teams underpin overall productivity and operational efficiency (Krstev et al., 2019), while innovative teams are the propellers of growth and a competitive edge. Researchers, in their pursuit to grasp and optimize this complex relationship, frequently turn to models that furnish a structured framework for analysis. Among these, Richard Hackman's Input-Process-Output (IPO) Model emerges as a guiding beacon, offering profound insights into how the inputs, processes, and outputs of a team collectively wield influence over both team effectiveness and innovation performance (Stone, 2019).

Hackman's IPO Model is a comprehensive conceptual framework that is employed to scrutinize the functioning and performance of work teams (Zhang et al., 2020). The model posits that team performance is contingent upon three fundamental elements: inputs, processes, and outputs (Zang et al., 2020). In the IPO Model, inputs encompass task characteristics, team design factors, and the organizational context, collectively laying the groundwork for a team's operational dynamics (Stone, 2019). Task characteristics, inclusive of factors such as task variety and autonomy, wield a profound impact on the creative potential and innovative prowess of the team. Team design factors, comprising the proficiencies and roles of team members, are pivotal in constructing a team that can seamlessly collaborate and navigate complex problem-solving scenarios (Driskell et al., 2018). The organizational context, an encompassing sphere that encompasses elements like leadership and resource allocation, imparts the overarching conditions in which the team functions (Cavanaugh et al., 2021).

The processes, a dynamic facet within Hackman's model, comprise norms and values, team interactions, leadership, task strategies, and motivation, each functioning as the dynamic engines propelling both team effectiveness and innovation performance. Effective team interactions, underpinned by shared norms and values, serve as linchpins for achieving both effectiveness and innovation (James & Bennett, 2022). Leadership emerges as a critical force that guides and nurtures the team, ensuring its efficacy and fostering an environment conducive to innovation (Mokhber et al., 2018). Task strategies, as informed approaches to the team's work, directly influence both efficiency and innovative capacity. Motivation, whether arising from intrinsic or extrinsic sources, molds the vigor and dedication invested by team members in their work, subsequently impacting overall performance and the team's propensity for innovation (Digirolamo & Tkach, 2019). Team performance and team member satisfaction, the principal outputs in the

IPO Model, stand as critical measures (Stone, 2019). Team effectiveness is often evaluated through performance metrics, such as the fulfillment of objectives and the contentment of team members (Peralta et al., 2018). Within the sphere of innovation, the model correlates these outputs with team innovation performance, which assesses the quality and quantity of innovative ideas and solutions generated by the team (Digirolamo & Tkach, 2019). The relationship between team effectiveness and team innovation performance unfolds intrinsically within Hackman's IPO Model (Stone, 2019). The model elucidates the manner in which inputs and processes collectively contribute to both team effectiveness and innovation performance, unraveling a causal linkage between these pivotal outcomes. Task characteristics, integral elements in this relationship, are pivotal in nurturing innovation (Stewart & Carter, 2018). Teams endowed with high task autonomy, for instance, possess the liberty to explore innovative solutions and engage in experimentation, laying the foundation for pioneering innovations (Stewart & Carter, 2018).

Task variety serves as a catalyst, stimulating diversified modes of thought and varied approaches to problem-solving, thereby fostering innovation (Andriani et al., 2019). The organizational context plays an influential role in steering innovation by endowing leadership and resource support. Effective leadership, in particular, assumes a pivotal role in fostering an environment where innovation is not just encouraged but also celebrated (Kremer et al., 2019). The processes delineated within Hackman's model stand as the driving forces that propel innovation. Effective team interactions, underpinned by shared norms and values, create an atmosphere ripe for the exchange of novel ideas and the development of creative solutions (James & Bennett, 2022). Leadership, when endorsing risk-taking and experimentation, empowers team members to explore innovative avenues. Task strategies, when focused on creative problem-solving, directly impact a team's capability to innovate (Stone, 2019). Furthermore, the IPO Model permits the introduction

of a mediating factor, innovation capability, which resides within the processes. Innovation capability functions as the bridge between the inputs and outputs, elucidating how task characteristics and the organizational context directly mold innovation performance (Kim et al., 2018). Teams equipped with robust innovation capability are better positioned to metamorphose inputs into triumphant innovative outcomes (Mendoza-Silva, 2021). It can be finally said that the nuanced relationship between team effectiveness and team innovation performance, two indispensable facets of organizational triumph, can be comprehensively apprehended and strategically harnessed through the framework of Hackman's IPO Model (Stone, 2019). This model provides a structured and rigorous approach to scrutinize the complex relationship between team effectiveness and innovation performance, unveiling how factors at the input and process stages mold these pivotal outcomes (Stone, 2019).

Moreover, it affords the adaptability to incorporate mediating factors, like innovation capability, thus offering a holistic perspective of the underlying dynamics (Cillo et al., 2019). Organizations that harness this model cultivate an intricate understanding of how to channel their teams' potential for both effectiveness and innovation, positioning themselves for enduring success in a perpetually evolving corporate landscape (Kremer et al., 2019).

### **2.1.2 Dynamic Capability Theory**

The continuous innovation process hinges upon a firm's ability to effectively cultivate and employ innovation capabilities (Djournessi et al., 2019). In this context, teams are instrumental as the primary drivers of innovation within organizations. Understanding the influence of innovation capabilities on team innovation performance is paramount for organizations aiming to sustain their agility and competitiveness (Hsia & Hsu, 2018). Dynamic Capability Theory, a well-established

framework in the realm of strategic management, offers valuable insights into how organizations can adapt, learn, and reconfigure their resources and capabilities to stimulate innovation within teams (Zhou et al., 2019). Dynamic Capability Theory is firmly grounded in the Resource-Based View (RBV) of the firm, which posits that the competitive advantage of a firm stems from its resources and capabilities (Ferreira & Moutinho, 2020). However, Dynamic Capability Theory transcends this by accentuating an organization's ability to adapt, learn, and dynamically modify its resource base (Sabahi & Parast, 2020). It acknowledges that in the swiftly changing and unpredictable contemporary business environment, static resources alone are inadequate. Organizations must possess the ability to dynamically generate, adjust, and exploit resources to respond to the evolving market conditions and foster innovation. (Schoemaker et al., 2018). Innovation capability encompasses a broad spectrum of competencies, knowledge, processes, and resources that empower an organization to consistently generate pioneering ideas, craft inventive solutions, and introduce them to the market (Vu et al., 2020).

Dynamic Capability Theory closely aligns with the concept of innovation capability by highlighting an organization's capacity to adapt, learn, and reconfigure resources in the context of innovation (Čirjevskis, 2019). The dynamic and ever-evolving nature of innovation necessitates an organization's agility in adapting to changing market conditions and evolving customer preferences (Hsia & Hsu, 2018). Dynamic Capability Theory provides a comprehensive framework for understanding how organizations can adjust their processes, structures, and strategies to remain aligned with their innovation objectives (Teece, 2018). Team innovation performance, the culmination of collaborative endeavors within organizations, is profoundly intertwined with innovation capability (Djoumessi et al., 2019). Dynamic Capability Theory provides a valuable perspective through which we can comprehend this relationship. Organizations

with well-established innovation capabilities often have agile teams that can swiftly respond to changes in the external environment (Sabahi & Parast, 2020). Dynamic Capability Theory underscores the pivotal role of these teams in sustaining innovation performance. Such teams demonstrate agility, swiftly identifying emerging opportunities and adeptly realigning their efforts to seize those opportunities (Vu, 2020). Moreover, teams within organizations endowed with strong innovation capabilities are expected to engage in continuous learning and experimentation (AlTaweel & Al-Hawary, 2021). Dynamic Capability Theory reinforces this concept by underscoring the significance of ongoing learning as a conduit for adaptation and excellence (Froehlich & Bitencourt, 2019). Teams committed to continuous learning are more likely to excel in terms of innovation performance. Furthermore, this Theory emphasizes resource mobilization, a concept that holds particular relevance for teams engaged in innovation projects (Zhou et al., 2019). Innovation capability empowers teams to identify and efficiently mobilize the resources essential for their projects.

Teams effectively marshal resources are better positioned to achieve superior innovation performance (Purwanto, 2021). It can be concluded that the Theory offers a valuable theoretical framework for comprehending the influence of innovation capability on team innovation performance (AlTaweel & Al-Hawary, 2021). It accentuates the importance of an organization's adaptability, learning capacity, and resource reconfiguration, all of which are fundamental in fostering innovation within teams (Rajapathirana & Hui 2018). Organizations equipped with well-developed innovation capabilities, firmly rooted in dynamic capabilities, are better poised to harness the full potential of their teams, enabling them to propel innovation and sustain a competitive edge in today's dynamic business milieu (Cillo et al., 2019). The synergy between

innovation capability and dynamic capabilities stands as a critical determinant of long-term success for organizations striving to maintain innovation and responsiveness (Ferraira et al., 2020).

## 2.2 Empirical Review

S/N	Authors & Year	Title	Findings	Methodology	Theory
1	Zou M, Liu P, Wu X, Zhou W, Jin Y, Xu M. (2023)	Cognitive Characteristics of an Innovation Team and Collaborative Innovation Performance: The Mediating Role of Cooperative Behavior and the Moderating Role of Team Innovation Efficacy.	collaborative innovation has a significant positive impact on the collaborative innovation performance;	Survey	social cognitive theory
2	Lau, A. K., & Lo, W. (2019).	Absorptive capacity, technological innovation capability and innovation performance: An empirical study in Hong Kong.	Technological Innovation Capability is positively related to innovation performance.	Survey	theory of dynamic capabilities
3	Nurhayati, B. D., Kusmantini, T., & Wahyuningsih, T. (2021).	Antecedents And Implications Of Innovation Capability	Influence of innovation capability on innovation performance was found to be positive and significant	Survey	Resource Based View
4	Maldonado-Guzmán, G., Garza-Reyes, J. A., Pinzón-Castro, S. Y., & Kumar, V. (2018).	Innovation capabilities and performance: are they truly linked in SMEs?. International Journal of Innovation Science, 11(1), 48-62.	The results signify the idyllic positive effects that innovation capabilities have on the business performance of SMEs.	Survey	Resource Based View Theory

<b>5</b>	Yeşil, S., & Doğan, I. F. (2019).	Exploring the relationship between social capital, innovation capability and innovation.	Innovation capability had a significant positive influence on innovation.	Survey	Organisational capability theory.
<b>6</b>	Iddris, F. (2019).	Innovation capability and product innovation performance: The case of low-tech manufacturing firms.	Innovation capability positive effect on product innovation performance of small low-tech herbal manufacturing companies.	Case study Method. semi-structured interviews	Resource Based View Theory
<b>7</b>	Joris van der Voet & Bram Steijn (2021)	Team innovation through collaboration: how visionary leadership spurs innovation via team cohesion, Public Management Review, 23:9, 1275-1294, DOI: 10.1080/14719037.2020.1743344	The positive relationship between visionary leadership and team innovation is mediated by team cohesion.	Quantitative survey	social cognitive theory
<b>8</b>	Masri, N. E., & Abubakr, S. U. L. I. M. A. N. (2019).	Talent management, employee recognition and performance in the research institutions. Studies in Business & Economics, 14(1).	there is a strong positive yet a statistically significant relationship between Employee Recognition and Employee Performance.	A survey questionnaire	Social exchange theory
<b>9</b>	YuSheng, K., & Ibrahim, M. (2020) Kong YuSheng1 and Masud Ibrahim (2020)	Innovation capabilities, innovation types, and firm performance: evidence from the banking sector of Ghana.	Innovation capability has a positive and direct effect on the dimensions organizational innovation.	Survey	Innovation capability theory
<b>10</b>	Khojastehpour, M., &	The relationship between team effectiveness and	A positive relationship	Survey	Input process output model

	Nematollahi, O. (2019)	team innovation performance in technology companies	exists between team effectiveness and team innovation performance in the context of technology companies.		
<b>11</b>	Nurhamizah Ishak , Farah Nadzirah Khairuddin , Nur Shaziella Aziz, (2019)	Level of Team Effectiveness Among MARA Employees	High overall team effectiveness level leads High innovation performance level	Quantitative research desig	Input process output model
<b>13</b>	Wang, L., Wang, L., Hirst, G., Chen, J., & Lv, S. (2021).	Building a bridge to creativity: The impact of leadership on employee creativity. Management Decision.	team effectiveness positively correlated with team learning, which, in turn, predicted innovative performance	quantitative	Input - process - output model
<b>14</b>	Van Wart & Suino, 2019	Team effectiveness and leadership. In Public Leadership	In an effective team, knowledge flows seamlessly among members, allowing them to build on each other's ideas and experiences	quantitative	Input - process - output model
<b>15</b>	Kang, D. S., & Park, C. (2018).	Antecedents of open innovation and its effect on innovation performance.	effective teams are more likely to exhibit advanced knowledge creation and sharing capabilities,	quantitative	Input - process - output model

			which serve as the bedrock for innovation.		
<b>17</b>	Rajapathirana, R. J., & Hui, Y. (2018).	Relationship between innovation capability, innovation type, and firm performance	The findings of the research supported to claim that innovation capability in insurance companies have a positive and strong impact on innovation efforts and firm performance	Quantitative and qualitative (firm Performance)	Innovation capability theory
<b>18</b>	El Masri, N., & Suliman, A. (2019).	Talent management, employee recognition and performance in the research institutions.	This indicates that there is a strong positive yet a statistically significant relationship between Employee Recognition and Employee Performance	Survey	Expectancy theory
<b>19</b>	Presslee, A., Richins, G., Saiy, S., & Webb, A. (2023).	Small sample field study: The effects of team-based recognition on employee engagement and effort.	Team-based recognition has a direct effect on employee effort	Survey	Social identification theory
<b>20</b>	Thomas, W. E., Brown, R., Easterbrook, M. J., Vignoles, V. L., Manzi, C., D'Angelo, C., & Holt, J. J. (2019).	Team-level identification predicts perceived and actual team performance: Longitudinal multilevel analyses with sports teams.	Team-level identification predicted perceived and actual team performance	Survey	Social Identification theory

21	Litchfield, R., Karakitapolu Aygün, M., Gumusluoglu, L., Carter, J. R., & Hirst, G. (2018).	Team recognition and its impact on innovation performance.	team recognition has a positive and direct impact on team innovation performance	survey	Social exchange theory
22	Kreidler, M., & Tilebein, B. (2018).	The psychology of team recognition: Motivation, creativity, and innovation.	psychological attachment to a team can enhance creativity and innovation.	survey	Self – determination theory

## 2.3 Concept Review

### 2.3.1 Team Effectiveness

In the contemporary and rapidly shifting business environment, the concept of teamwork has progressed from being mere clichés to an essential catalyst for achieving success (West & Sacramento, 2023). For organizations worldwide, the ability to leverage effective teams is not a luxury but a strategic necessity (Hughes et al., 2018). Team effectiveness within firms is not a one-size-fits-all remedy; rather, it constitutes a dynamic process that entails orchestrating diverse talents, navigating challenges, and achieving shared objectives (Hecht et al., 2023). As described by certain researchers, team effectiveness is fundamentally measured by a team's ability to accomplish its predefined goals and objectives (Reis & Puente, 2019). Within the context of firms, team effectiveness denotes a group of individuals working collaboratively to realize common objectives and deliver desired outcomes (Li, 2020). It transcends mere assembly, involving the creation of a cohesive and harmonious unit that operates efficiently and innovatively (James & Bennett, 2022). Effective teams exhibit heightened productivity, accomplishing tasks more swiftly and with fewer errors in comparison to individual efforts (Li, 2020). The amalgamation of diverse

skills and perspectives within these teams generates new ideas and solutions, offering firms a competitive advantage and fostering a fertile ground for innovation and creativity (Wolfson, 2023). Working within an effective team has the added benefit of enhancing employee satisfaction (Hughes et al., 2018). When individuals witness the impact of their contributions and feel supported by their team, their engagement and contentment with their work naturally increase (Potnuru et al., 2018). Key characteristics that define effective teams encompass clear objectives, a balanced blend of skills, open channels of communication, mutual trust, and collective accountability (Li, 2020). The measurement of team effectiveness often revolves around evaluating a team's performance against predetermined benchmarks and assessing its adaptability to changing circumstances and challenges (Reilly, 2023).

In the context of organizational psychology and management, the concept of team effectiveness is pivotal, as successful teams play a decisive role in steering organizational achievements and fulfilling strategic objectives (Xia et al., 2021). A psychologically safe environment is instrumental in achieving team effectiveness, fostering open communication, risk-taking, and a culture where mistakes are viewed as opportunities for learning and growth. Research underscores the role of trust in forging cohesion-effectiveness relationships among team members (Costa et al., 2018). Trust creates cognitive team interaction, instilling a sense of reliance on one another to execute tasks and thereby increasing employee involvement (Sifaki-Pistolla et al., 2020). Additionally, a robust cognitive structure, specifying roles, plans, and responsibilities, is integral to achieving team goals (Xia et al., 2021). To enhance team effectiveness, it is imperative for team members to perceive the impact of their contributions (Croy & Eva, 2018), witnessing the significance of their work for their colleagues and the overall team success motivates and engages them in a profound way. Agile leadership development has a consistent role within highly effective teams (Rosenman

et al., 2018). Companies need to nurture the proficiency and knowledge of team members, encouraging their professional growth to remain aligned with contemporary standards and trends (Potnuru et al., 2018). A shared understanding of the company's strategies, goals, and team members' responsibilities further contributes to heightened team effectiveness (Kozlowski, 2018). Clear and transparent organization structure explanations can benefit teams and enhance overall organizational effectiveness (Costa et al., 2018). A collective sense of purpose within a team nurtures trust, transparency, and a feeling of support during task execution (Dinsmore et al., 2022).

In the realm of firms, team effectiveness emerges as a formidable driving force capable of propelling organizations to new heights of success. Effective teams transcend mere collaboration; they are well-led, diverse (Rusticus & Justus, 2019), and empowered entities that foster innovation, adaptability, and productivity. Realizing the full potential of team effectiveness necessitates investment in leadership, the promotion of open communication, and the cultivation of a corporate culture that champions diversity and creativity (Al-Safi, 2018). In an ever-changing world, effective teams serve as the reliable anchor that keeps firms on a steady course of progress and advancement (O'Neill & Salas, 2018).

### **2.3.2 Innovation Capability**

The origins of the term "innovation" can be traced back to the writings of Schumpeter (Ferreira & Lisboa, 2019). Schumpeter described innovation as the initial introduction of a new good, service, or system. Innovation is often referred to as both a result and a method. The innovation process encompasses the creation and application of fresh management strategies that help a business achieve its objectives (Blok, 2021). Innovation as a result pertains to the initial application of a technique (a new process) or the introduction of an innovation to the market (a new product) (Efrata et al., 2020). As explained by Colakoglu et al., (2019), innovation refers to the use of new

or significantly enhanced items (goods or services), processes, a new marketing strategy, or an innovative organizational technique in commercial operations, workplace management, or public relations. In organizations, innovation necessitates the development of innovation capability (Rajapathirana & Hui, 2018). Innovation capability within firms encompasses their intrinsic ability to generate, nurture, and effectively implement novel concepts, processes, products, or services (Kim et al., 2018). It entails creating an environment that promotes innovation, adapting to dynamic market conditions, and continuously enhancing various aspects to remain competitive and achieve long-term success (Gloet & Samson 2020). The foundation of innovation capability lies in the generation of creative and unconventional ideas (Djoumessi et al., 2019). Firms encourage employees to break free from conventional thinking, explore non-traditional solutions, and question established norms.

This can be facilitated through brainstorming sessions, platforms for sharing ideas, and innovation challenges. Central to innovation capability is a dedicated focus on research and development (R&D) (Hsiao & Hsu, 2018). Firms allocate resources to R&D departments to explore new technologies, products, or services. This includes conducting experiments, testing prototypes, and exploring cutting-edge solutions (Vu, 2020). In addition to product innovation, organizations with robust innovation capability constantly seek to enhance their internal processes (Mendoza-Silva, 2021). This involves streamlining workflows, minimizing inefficiencies, and optimizing operations. Process innovation can lead to cost savings and heightened efficiency (Najafi-Tavani, Najafi-Tavani, Naudé, Oghazi & Zeynaloo, 2018). Firms must possess the ability to identify and explore new markets or market segments. This may involve expanding into international markets, targeting diverse customer demographics, or identifying unmet needs within existing markets (Dziallas & Blind, 2019). The capacity to reevaluate and adapt business models sets innovative

firms apart (Ibarra et al., 2018). This can encompass changes in how they create, deliver, or capture value. For instance, transitioning from a product-based model to a subscription-based one (Ibarra et al., 2018). Effective leadership plays a pivotal role in nurturing innovation capability (Novitasari et al., 2021). Visionary leaders set the tone by emphasizing the significance of innovation, allocating resources, and promoting risk-taking (Purwanto, 2021). They create an environment where employees feel safe to experiment and innovate (Purwanto, 2021). Nurturing a culture of innovation is essential. Firms should foster creativity, curiosity, and a willingness to experiment. Employees should feel encouraged to share their ideas, learn from failures, and celebrate successes (Ferreira et al., 2020). Such a culture supports continuous learning and adaptation. Adequate resources, both human and financial, are vital for innovation capability (Mendoza-Silva, 2021).

Firms must allocate budgets for R&D, provide training and development opportunities for employees, and invest in the necessary tools and technologies. According to Behnam et al., (2018), Collaboration with external partners, such as suppliers, customers, or research institutions, can enhance innovation capability. These partnerships provide fresh perspectives, expertise, and resources for innovative projects. Measurement of innovation capability is critical. This can involve the use of innovation indexes, internal metrics (such as the number of patents filed or new products launched), and customer feedback (Lianto et al., 2022). Innovation capability can face obstacles such as risk aversion, resistance to change, or resource constraints (Kim et al., 2018). Firms require strategies to overcome these challenges, such as implementing training programs to encourage employees to embrace change and risk or seeking external funding. Firms with strong innovation capability maintain a long-term focus (Cillo et al., 2019). They understand that innovation is not a one-time effort but a continuous process. It demands commitment and a

dedication to adapting to evolving market conditions (Cillo et al., 2019). Innovation capability serves as the lifeblood of firms in today's fast-paced business world (Mendoza – Silva, 2021). It's more than just generating groundbreaking ideas; it involves creating an environment that encourages innovation (Rajapathirana & Hui, 2018), investing in research and development, and adapting to change. Firms with robust innovation capability are not only more competitive but are also better positioned to ensure their sustainability and long-term growth (Pei et al., 2021).

### **2.3.3 Team Recognition**

Team recognition stands as a pivotal and indispensable concept in the realm of organizational management (Yu et al., 2021). In a world where collaboration and teamwork reign supreme in the pursuit of productivity and triumph, the act of acknowledging and valuing the individual contributions within a team is nothing short of essential (Schmutz et al., 2019). The essence of team recognition is a multi-faceted construct that envelops the art of recognizing and rewarding the endeavors, accomplishments, and inputs of individuals functioning within the collective milieu of a team (Litchfield et al., 2018). This transcends mere acknowledgment, delving deeply into the realms of appreciation and reinforcement. The avenues for recognizing team members vary, encompassing verbal acclamation, bestowal of awards, incentives, or even the grandeur of formal ceremonies (Barth et al., 2018). The central aim is to underscore the value vested in each individual's role within the grand tapestry of collective effort, thereby accentuating the principle that achievement is a fruit borne of collaborative endeavor (Kreidler & Tilebein, 2018).

At its heart, team recognition emerges as a potent catalyst for motivation. When individuals sense that their diligent toil is not just observed but also genuinely appreciated, it serves as a compelling impetus for them to invest greater zeal and commitment into their tasks (Cotton, 2022). This

heightened motivation frequently translates into elevated performance and a willingness to go the extra mile (Malek & Haon, 2020). Team members who receive recognition often find themselves basking in elevated levels of job satisfaction. As employees revel in contentment and fulfillment in their roles, they are more likely to remain loyal to the organization, thereby mitigating turnover rates and the accompanying costs of recruitment (Montani et al., 2020). Those who feel valued are more predisposed to becoming actively engaged in their work (Presslee et al., 2023), consequently sowing the seeds of heightened productivity and efficiency. A profound sense of pride and ownership in one's labor yields higher-quality outcomes (Litchfield et al., 2018). Equally significant is the sense of unity and belonging that team recognition fosters within the team. When team members become cognizant of their collective achievements, it reinforces the bonds between them and augments the cohesion of the team (Black et al., 2018). A closely-knit team emerges as better equipped to confront challenges and collaboratively solve problems (Presslee et al., 2023). Moreover, recognized teams are poised for innovation. When individuals feel secure and valued, they are more inclined to express their creative ideas and venture calculated risks (Montani et al., 2020). A culture steeped in recognition offers a fertile ground for the free flow of ideas, giving birth to innovation and continuous refinement. The overarching impact extends to employee retention and bolstered loyalty. Employees who feel acknowledged and valued are more likely to remain committed to the organization, eventually metamorphosing into ardent advocates for the company (Hussain et al., 2019). An organization that actively champions team recognition often cultivates a culture that is not only positive but also supportive. This culture extols the virtues of collaborative labor, celebrates each other's victories, and collectively strives for excellence (Abubakar et al., 2019). Effectively implementing team recognition is not a haphazard endeavor but a systematic and strategic one. Organizations can establish structured recognition programs

that align with their core values and strategic objectives (Gartner, 2019). These programs may encompass regular feedback sessions, performance-based awards, peer-to-peer recognition, or even avenues for personal and professional development (Reese, 2020).

In summation, team recognition serves as the cornerstone of thriving teamwork and organizational accomplishments. It acknowledges the efforts and contributions of individuals within a team, ultimately giving rise to motivation, job satisfaction, heightened productivity, and innovation (Sanyal & Hisam, 2018). Effective recognition programs are not just instruments of appreciation; they are essential tools for building a positive organizational culture, retaining talent, and nurturing loyalty (ErajavariePillay, 2018). In an era where collaboration and team-based work are central to success, the practice of team recognition is not a mere token of appreciation; it stands as a strategic imperative for organizational excellence (Abubakar et al., 2019).

#### **2.3.4 Team Innovation Performance**

In today's rapidly evolving business environment, innovation has emerged as a central driver of success (Bianco & Venezia, 2019). Companies that prioritize innovation tend to maintain a competitive edge and capture new markets (Damanpour, 2018). Researchers, including Rahmah et al. (2020), define innovation as "the intentional introduction and application within a role, group, or organization of ideas, processes, products, or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization, or wider society." Innovation, once seen as an individual pursuit, has also become a hallmark of teamwork (Helkkula et al., 2018). This collaboration-induced innovation, often termed "team innovation performance," is a multifaceted concept transforming how organizations approach creative problem-solving and product development (Wang & Hu, 2020). At its essence, team innovation performance reflects a

group of individuals working collaboratively to generate and implement novel ideas, processes, products, or services (Ali et al., 2020). Thayer et al. (2018) elucidate that team innovation performance refers to the level of effort by which team members perform work efficiently to achieve goals and practice innovative actions. This emphasizes an organization's capacity to cultivate an innovative culture, adapt to dynamic market conditions, and continually enhance various aspects for a competitive advantage (Jiang & Chen, 2018). It extends beyond brainstorming sessions, demanding organized innovation within a team setting (Liu et al., 2021). Zouaghi et al. (2020) stated that team innovation performance initiates with the generation of imaginative and fresh ideas. Teams encourage members to think outside the box, explore unconventional solutions, and challenge the status quo (Noordin & Mohtar, 2019). This often involves brainstorming sessions, idea-sharing platforms, or innovation challenges that create an environment conducive to creativity (Lee & Trimi, 2018).

Research and development (R&D), as highlighted by Zouaghi et al. (2020), forms the cornerstone of innovation capability. Organizations allocate resources to R&D departments, fostering experimentation, prototype testing, and exploration of cutting-edge solutions (Hurtado-Torres et al., 2018). Team innovation performance extends beyond product innovation to include the optimization of internal processes (Bustinza et al., 2019). The goal is to reduce inefficiencies, streamline operations, and enhance overall workflow, often resulting in cost savings and increased efficiency (Mardani et al., 2018). Innovative teams explore new markets or market segments (Muller & Peres, 2019). This may involve expanding into international markets, targeting diverse customer demographics, or identifying unmet needs within existing markets (Genc et al., 2019). Recognizing new opportunities is a vital aspect of team innovation performance (Muller & Peres, 2019).

Innovative firms display flexibility in their business models (Turulja & Bajgoric, 2019). They are open to changes in how they create, deliver, or capture value (Ramadani et al., 2019). This adaptability allows organizations to remain relevant in dynamic business environments (Gao et al., 2018). As noted by Mascareño et al. (2020), leadership plays a vital role in fostering team innovation performance. Visionary leaders emphasize the importance of innovation, provide resources, and encourage a culture that embraces risk-taking (Mascareño et al., 2020). To excel in team innovation performance, organizations must cultivate a culture that champions creativity, curiosity, and an unwavering willingness to experiment (Ahmetoglu et al., 2018). The allocation of resources, both human and financial, is a critical component of team innovation performance (Kahn, 2018).

Organizations must allocate budgets for research and development, provide training and development opportunities for employees, and invest in the tools and technologies necessary to drive innovation (Papa et al., 2020). Collaborations with external partners, such as suppliers, customers, or research institutions, can significantly enhance team innovation performance (Bustinza et al., 2019). These partnerships provide fresh perspectives, expertise, and resources for innovative projects. To gauge the effectiveness of innovation efforts, organizations must develop methods for measuring their team innovation performance (Gault, 2018). Various obstacles can hinder team innovation performance, including risk aversion, resistance to change, or resource constraints (Adegbite & Govender, 2022). Successful teams strategize to overcome these hurdles, offering training programs to encourage a more adaptable and risk-friendly environment or seeking external funding for innovation projects (Gupta et al., 2020).

### **2.3.5 Team Effectiveness and Team Innovation Performance**

The relationship between team effectiveness and team innovation performance is a multifaceted and pivotal aspect of organizational performance, shaping the dynamics of modern businesses (O'Neill & Salas, 2018). The ability of teams to operate effectively and generate innovative ideas is instrumental in navigating today's dynamic business landscape (Bulińska-Stangrecka & Bagieńska, 2019). Understanding the intricate connection between these two critical factors is essential for enhancing overall productivity and competitiveness (Mathieu et al., 2019). Team effectiveness, a fundamental component, is characterized by a team's capacity to efficiently achieve its goals while maintaining member satisfaction (Mathieu et al., 2019). It encompasses various dimensions, including clear communication, well-defined roles, a shared vision, and conflict management skills (Li, 2020). These attributes create a conducive environment for the free exchange of ideas, which is essential for innovation (Kozłowski, 2018). Effective teams often exhibit mutual trust among members, fostering a shared sense of purpose (Latif & Manaf, 2019).

These factors facilitate the utilization of the diverse skills and perspectives of team members, resulting in more innovative solutions. On the other hand, team innovation performance refers to a team's ability to generate creative ideas, develop novel solutions, and implement innovative processes or products within the organization (Ali et al., 2020). Both team effectiveness and team innovation performance are crucial for an organization's growth and competitiveness (Nurhamizah et al., 2019). Empirical studies have consistently demonstrated a positive relationship between team effectiveness and team innovation performance. Effective teams tend to have superior communication, collaboration, and problem-solving skills, which are essential for generating and implementing innovative ideas (Grossman et al., 2022). This conducive environment encourages

members to express their ideas without fear, fostering open dialogue and psychological safety (Edmondson, 2018). Trust and open communication are essential conditions for innovation. Team effectiveness also positively influences knowledge sharing. In an effective team, knowledge flows seamlessly among members, allowing them to build on each other's ideas and experiences (Van et al., 2019). This cumulative knowledge enhances innovation. Effective teams are more likely to exhibit advanced knowledge creation and sharing capabilities, serving as the foundation for innovation (Kang and Park, 2018). Wang et al. (2021) found that team effectiveness was positively related to team learning, which, in turn, predicted innovative performance and further explained that teams characterized by high levels of cooperation and coordination are more likely to engage in innovative behaviors. This cooperative environment fosters creativity and encourages employees to take risks and suggest creative solutions. Also, Nurhamizah et al. (2019) stated that high overall team effectiveness level leads high innovation performance level. Khojastehpour and Nematollahi (2019) found a positive relationship between team effectiveness and team innovation performance, particularly in technology companies, where effective teamwork significantly predicted innovation success. In turbulent and uncertain business environments, teams that operate efficiently and collaboratively are more resilient and adaptable to changes, crucial for innovation efforts (Bulińska-Stangrecka et al., 2019).

It is important to note that the relationship between team effectiveness and team innovation performance is not unidirectional. Innovative performance can also influence team effectiveness, enhancing motivation, reputation, and a sense of achievement among team members (Khojastehpour & Nematollahi, 2019). The relationship between team effectiveness and team innovation performance is intertwined and reciprocal. Effective teams provide the foundation for innovation by creating an environment conducive to creativity and knowledge sharing. The

symbiotic connection between these two concepts is supported by empirical evidence and is central to organizational success in today's competitive landscape. Through a concerted effort to nurture and maintain highly effective teams, companies can unlock their workforce's capacity to fuel innovation (Ali et al., 2020). This dynamic undertaking not only enhances an organization's offerings but also empowers it to maintain a competitive edge in today's fiercely contested market (Hecht et al, 2023). To sum up, businesses should prioritize team effectiveness as a pivotal component of their strategies to maximize team innovation performance (Hughes et al., 2018). In the light of this it is hypothesize that;

*H1 – Team Effectiveness is directly related to Team Innovation Performance*

### **2.3.6 Mediating Role of Innovation Capability**

Innovation capability refers to an organization's capacity to effectively manage and execute innovation processes (Kang & Park, 2018). This encompasses various elements, such as resource accessibility, knowledge creation and sharing, technological infrastructure, and the support of leadership (Najafi-Tavani et al., 2018). Innovation capability acts as a mediator in the relationship between team effectiveness and team innovative performance (Saunila, 2020). When teams function effectively, they contribute to the organization's innovation capability by facilitating knowledge exchange, fostering creativity, and promoting experimentation and this in turn has a positive impact on team innovative performance (Gloet & Samson 2020). Innovation capability serves as an organizational mechanism that translates the effectiveness of teams into tangible outcomes in terms of innovative solutions and products (Rajapathirana & Hui, 2018).

The research model explores the mediating role of innovation capability. According to the resource-based (Barney et al., 2021) and dynamic capabilities-based views of firms (Pitelis &

Wang, 2019), organizations must develop a range of resources and capabilities to innovate successfully in response to the changing business environment. To innovate, a business must acquire a variety of organization-wide capabilities (Yeşil & Doan, 2019). Innovation capabilities should encompass different organizational and functional level attributes that support organizational innovation (Yeşil & Doan, 2019). Some researchers argue that organizations with the potential for innovation can effectively combine their company's essential resources and competencies (Jøranli & Strønen, 2021). The various facets of innovation capability each represent competencies related to a specific organizational component, contributing to the overall organizational innovation capability (Jøranli & Strønen, 2021). According to Iddris (2019), one of the most crucial aspects of innovation capabilities is learning, which facilitates the adoption of processes, ideas, and products.

Kahn (2018) suggests that since innovation heavily depends on interaction, innovative actions play a role in the learning process. An organization's capability is built on practices that enable businesses to refine, expand, and capitalize on their existing abilities (Mendoza-Silva, 2021), promoting innovation within the organization. To creatively utilize limited resources, a strategic capacity should manage highly ambitious organizational goals and identify mismatches between those goals and available resources (Raghuvanshi & Garg, 2018). Empirical research provides evidence for the relationship between innovation capability and innovation, supporting the theoretical foundation of this relationship. Nurhayati et al. (2021) discovered a positive correlation between innovative capability and innovation performance. Similar findings were reported by Lau and Lo (2019), who found that skill sets in resource allocation, learning, and strategic planning significantly enhance innovation. Innovation performance was found to be predicted by innovation capability, as per research by Yeşil & Doğan (2019). A study by Maldonado-Guzmán et al. (2018)

indicates a positive and significant relationship between innovation capabilities and business performance. Innovation capability is a fundamental factor in firm success, and without the development of innovation capability, it is challenging to anticipate ongoing, organization-wide innovation and effective business performance (Kim et al., 2018).

The theoretical argument and empirical findings collectively emphasize the critical role of innovation capability, as conceptualized in this work, in determining innovation performance within organizations. Based on this, the hypothesis is formulated that;

*H2: Innovation capability is positively related to team innovation performance in organizations.*

### **2.3.7 Moderating role of Team Recognition**

Team recognition plays a pivotal role in the realm of organizational management, as it occupies a central and irreplaceable position as emphasized by Yu et al. (2021). In today's contemporary landscape, where collaboration and teamwork are undeniably crucial for productivity and success, acknowledging and valuing the individual contributions within a team is imperative (Schmutz et al., 2019). The concept of team recognition is a multifaceted idea encompassing the practice of identifying and rewarding the efforts, accomplishments, and input of individuals working within a team (Litchfield et al., 2018). Recognizing and rewarding teams for their innovative contributions acts as a potent catalyst, boosting their motivation and engagement (Kuczarski & Kuczarski, 2019). Team recognition is a valuable workplace tool that involves appreciating and acknowledging the efforts, contributions, and achievements of team members in various forms, such as verbal praise, awards, or other tangible rewards (Yu, 2022). Simple expressions of gratitude, such as saying "thank you," go a long way in acknowledging team efforts (Kuczarski & Kuczarski, 2019). It forms a critical aspect of organizational culture, often revolving around

the appreciation and celebration of both collective and individual contributions of team members. Recognizing teams with tangible rewards like awards, bonuses, or plaques can serve as powerful motivators, symbolizing their achievements (Sidhu & Nizam, 2020). Public recognition of teams during meetings, events, or through company-wide communications can be highly motivating, conveying that the organization highly values its teams (Phina et al., 2018). In this context, team recognition fosters a culture that not only values but also celebrates creativity, motivating teams to dedicate their time and effort to conceive and implement novel ideas (Phina et al., 2018). The absence of team recognition carries the potential to strain the relationship between team effectiveness and team innovative performance, as teams might feel discouraged and undervalued, leading to a decrease in their innovative output (Kuczmarski & Kuczmarski, 2019). Existing research indicates that the psychological attachment individuals develop toward their teams can generally enhance innovation (Kreidler & Tilebein, 2018).

Team recognition, serving as a powerful form of attachment, where individuals draw part of their self-identity from the group, has a dual effect on behaviors associated with creativity (Yuan et al., 2022). Understanding the various factors driving innovative behavior, both within and outside the team framework, is crucial from the perspective of strategic innovation, as large-scale innovation rarely depends solely on a single team's efforts (Varadarajan, 2018). Offering team members opportunities for skill development or career advancement is a form of recognition that demonstrates the organization's commitment to their growth (Reese, 2020). Team recognition contributes to higher team morale. When individuals feel appreciated and acknowledged for their contributions, they are more likely to be motivated, engaged, and satisfied in their roles (Abubakar et al., 2019). Recognizing teams for their efforts cultivates a culture of appreciation within the organization, valuing and encouraging collaboration, teamwork, and innovation. It sets a precedent

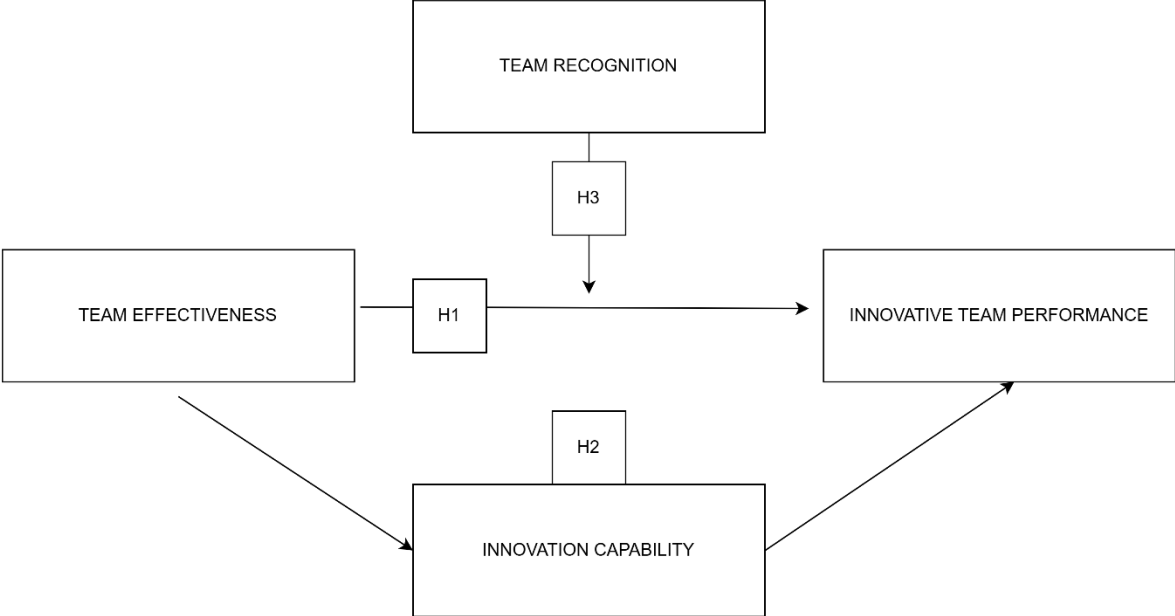
that hard work is seen, valued, and rewarded. While recognizing the collective achievements of a team is crucial, acknowledging the individual contributions of team members is equally important (Montami et al., 2020). Recognizing individuals can motivate them to continue making valuable contributions to the team (Hussain et al. 2019). When teams are recognized for their achievements and innovative ideas, they are more likely to continue seeking creative solutions to challenges (Black, 2018). Recognition creates a positive feedback loop, inspiring teams to push their boundaries, take risks, and think outside the box. El Masri and Suliman (2019) found that talent management and employee recognition significantly impact employee performance, contributing to organizational success and positioning. They indicated a strong, positive, and statistically significant relationship between Employee Recognition and Employee Performance, thereby impacting the organization's performance. Similarly, Presslee et al. (2023) concluded in their research that Team-based recognition directly affects employee effort, while Thomas et al. (2019) argued that Team-level identification predicted perceived and actual team performance. Litchfield et al. (2018) argue that team recognition is a psychological attachment where individuals derive a sense of self-worth from their group membership, encouraging team members to give their best.

On the other hand, Kreidler and Tilebein (2018) contend that some level of psychological attachment to a team can enhance creativity and innovation. Team recognition can either inspire individuals to act in the best interests of the team or motivate them to perform creatively (Black et al., 2018). The relationship between team effectiveness and team innovation performance is well-established, but the role of team recognition as a moderator in this relationship is often underestimated. Team recognition enhances the positive impact of team effectiveness on innovation by motivating and inspiring team members. Organizations should recognize the

potential of team recognition as a powerful driver of innovation and integrate it into their team-building and innovation strategies (Malek & Haon, 2020). In light of these observations, it is hypothesized that:

*H3: Team recognition positively moderates the relationship between team effectiveness and team innovation performance.*

**2.4 Conceptual Framework**



*Figure 1 Conceptual Framework*

## **2.5 Chapter Summary**

This chapter delves into the intricate correlation between team effectiveness and team innovation performance within modern organizations. It defines team effectiveness, highlighting its multifaceted nature, while acknowledging that its interpretation can vary among different organizations. The narrative then transitions to team innovation performance, accentuating its significance for an organization's competitiveness and growth. The central theme of the chapter revolves around the affirmative influence of team effectiveness on team innovation performance, substantiated by empirical evidence and theoretical frameworks. Effective teams are associated with improved communication, collaboration, problem-solving, and trust, fostering an environment conducive to innovation. Moreover, team effectiveness facilitates knowledge sharing, enhancing teams' adaptability to changes. In conclusion, the chapter underscores that by prioritizing effective teams, organizations can propel innovation, gain a competitive edge, and stimulate growth.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

The primary aim of this research is to delve into the intricate relationships among team effectiveness, team innovation performance, team recognition, and innovation capability within organizational contexts. In this chapter, the methodological strategies employed for the study are detailed. This encompasses the research design, research approach, the study's target population, sample size and selection method, data sources, the tools used for data collection, procedures for ensuring data validity and reliability, as well as the techniques employed for data analysis.

#### **3.1 Research Design**

Selecting an appropriate research design is a critical decision in any study. Kassu-Jilcha (2019) underscores the significance of this choice in determining how relevant information is collected for a study. However, other crucial decisions also factor into the research design process. In the present study, the chosen research design is descriptive. A descriptive study serves the purpose of providing insights into current phenomena by drawing specific and relevant general conclusions (Doyle et al., 2020). The primary aim of a research design is to outline a systematic approach for gathering empirical evidence to address the research questions (Sovacool et al., 2018). The research design employed in this study is a descriptive survey. A research design is considered descriptive when a sample of individuals is administered a questionnaire at a specific point in time to characterize their attitudes, opinions, behaviors, perceptions, or attributes (Doyle et al., 2020). As noted by Creswell and Hirose (2019), survey researchers employ questionnaires to collect measurable, numerical data, which are subsequently subjected to statistical analysis for identifying

trends in response to questions and assessing research questions or hypotheses. The survey design was deemed suitable for this study due to its capacity to efficiently gather data from a large group of respondents within a relatively short timeframe, aligning with the study's nature and objectives.

### **3.2 Research Approach**

The research approach employed in this study is quantitative. Quantitative studies are focused on examining variations in phenomena and understanding the reasons behind these variations (Jamieson et al., 2023). These studies leverage mathematical models and statistical techniques to analyze data, yielding objective numerical results. The quantitative research approach borrows methodologies from the natural sciences to ensure generalizability, reliability, and objectivity, all of which were applied in the current study (Mehrad & Zangeneh, 2019).

Bauer et al. (2021) also argue that quantitative research designs prioritize objectivity when it comes to measuring and explaining a phenomenon. Consequently, the research design emphasizes objectivity through the use of numbers, statistics, structured methodologies, and control, making it a fitting choice for this study.

### **3.3 Population of the Study**

A population, as defined by Satishprakash (2020), constitutes a substantial group of individuals or objects under investigation for research purposes. Satishprakash (2020) elaborates that a study population typically encompasses a well-defined collection of interrelated characteristics, often representing a common trait or quality among individuals or items. In the context of this research, the study's population consisted of 670 employees drawn from three distinct companies situated in Asokore Mampong, Ashanti Region. These companies are Salon Pharmaceuticals, CBS

Supreme Industry, and Royal Foam Limited Company. The enumeration of this population was carried out during the researcher's site visits to the respective companies.

### 3.4 Sample Size

The sample size in a research study should possess sufficient statistical power and significance, ensuring that the research findings are not merely a result of random fluctuations within the target population, as outlined by Nanjundeswaraswamy and Divakar (2021). To ensure this, the researcher employed the mathematical formula proposed by Miller and Brewer in 2003 for sample size determination, which can be expressed as follows:

$$n = \frac{N}{1 + N(a)^2}$$

In this context, where N represents the population frame, n signifies the sample size, and a denotes the margin of error (held constant at 5%), the sample size for this study amounted to 250 employees drawn from Salom Pharmaceuticals, CBS Supreme Industry, and Royal Foam Company Limited with their population standing at 215, 210, and 250 respectively. This determination was reached through the following calculation:

$$n = \frac{670}{1 + 670(0.05)^2}$$

$$n = 250$$

**Table 1: Population and Sample Size**

<b>Name of Company</b>	<b>Population</b>	<b>Sample Size</b>
Salom Pharmaceuticals	215	75
CBS Supreme industry	210	50
Royal Foam Manufacturing Company Limited	250	125
<b>Total</b>	<b>670</b>	<b>250</b>

*Source: Field Survey (2023)*

### **3.5 Sampling Technique**

Oribhabor and Anyanwu (2019) have elucidated that sampling is a specific component of the data collection process that concentrates on a subset of the entire population. For this study, a combined approach of stratified sampling and simple random sampling techniques was employed. This entailed the classification of the three companies into distinct division, and within each group, employees were selected disproportionately using a simple random sampling method. Selection of employees was not done proportionately in the three companies as a result of the shift system that the company run. The researcher had access to employees who only run morning and afternoon shift in these companies. As delineated by Bhardwaj (2019), simple random sampling is a technique that facilitates the collection of data where every member of the target group has an equal likelihood of being selected, regardless of whether the researcher possesses prior knowledge about them. Consequently, this approach was to ensure that all chosen respondents participating in the research are provided with an equitable opportunity for inclusion.

### **3.6 Source of Data**

Data, as described by Kalu et al. (2019), pertains to any information acquired during the course of a study or research investigation. Data can take the form of primary or secondary information. Primary data, as delineated by Sileyew (2019), encompasses materials that can be obtained through sources such as systematic observation, archival records, responses to questionnaires, interviews, and case studies that were compiled. On the other hand, secondary data comprises a synthesis of published and unpublished documents related to the research, forming the conceptual framework for the study (Kalu et al., 2019).

In the context of this study, primary data served as the information source. The study employed primary data collection, utilizing a questionnaire as the research instrument. Primary data was preferred due to its status as unpublished and its perceived higher reliability, authenticity, and objectivity.

### **3.7 Data Collection Instrument**

Data collection is the systematic process of obtaining information from the designated respondents, as explained by Barbour (2018). For this study, a structured questionnaire was utilized as the primary data collection tool. The predominant use of questionnaires in business and management research was noted by Barbour (2018). A questionnaire is defined as a data collection technique in which each participant is presented with the same set of questions in a predetermined order, as elaborated by Taherdoost (2019). Employing a questionnaire offers several advantages. First, it allows for more valid data collection since there is minimal potential for researcher bias. Additionally, it provides a higher level of respondent anonymity, is easy to administer, can cover a broader geographic range, and, notably, yields rapid results, as observed by Cheung (2021). In

this study, printed questionnaires were distributed for data collection purposes. The questionnaire encompassed five sections. Section A focused on collecting demographic information from the respondents. Sections B and C addressed questions related to team effectiveness and team innovation performance, respectively. Section D delved into innovation capability, and finally, Section E contained queries concerning team recognition. Respondents were required to provide their responses for Sections B, C, D, and E on a Likert scale, ranging from 1, indicating "Strongly Disagree," to 5, indicating "Strongly Agree."

### **3.8 Pilot Study**

The questionnaire instrument was subjected to a pilot test at Kasapreko Company Limited in the Kwadaso Municipal. This choice was deliberate because Kasapreko Company Limited shares similar characteristics with the study's area in the Asokore Mampong Municipal. To ensure the questionnaire's effectiveness and relevance, a pre-test was at Kasapreko conducted Company Limited in the Kwadaso Municipal, involving a sample of fifty employees.

### **3.9 Data Collection Procedure**

The researcher initiated the data collection process by obtaining an introductory letter from the department for conducting the research. Subsequently, the researcher arranged visitations to the selected companies on pre-scheduled dates, in coordination with the employees who participated in the study. The primary data was collected using questionnaires that included sections on employee demographics and questions related to the study variables, encompassing team effectiveness, innovation capability, employee commitment, and innovative team performance. Before conducting the data collection process, the researcher sought formal permission from the

Human Resource Managers of the respective companies to carry out the study within their organizations. Participants were provided with clear instructions and were assured of the confidentiality of their responses. Adequate time was allocated to the respondents for the completion of the questionnaires, with an allocated time of an hour to maximize the response rate. Upon the completion of data collection, the researcher collected all questionnaires and proceeded to input the data into the SPSS software. The collected data was meticulously prepared for subsequent data analysis.

### **3.10 Data Validity and Reliability**

Validity, as a concept, can be elucidated as the extent to which an instrument accurately assesses the attributes it is intended to measure (Yin, 2018). The reliability of instruments in consistently eliciting information from multiple respondents is denoted as reliability (Sürücü & Maslakci, 2020). To ensure the adherence of the study's variables to the established validity and reliability criteria, Cronbach's Alpha coefficients were calculated for all the utilized variables, as demonstrated in Table 1. The results of these calculations revealed that all variables comfortably surpassed the requisite threshold of  $>0.70$ , thereby substantiating their suitability for subsequent analysis. As part of the SEM analysis, a comprehensive evaluation process will include exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and assessments of discriminant validity. These critical steps are indispensable for meticulously scrutinizing the measurement properties of the variables in terms of their validity and reliability.

**Table 2: Reliability Analysis**

<b>Latent Variable</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
Team Effectiveness	6	0.879	0.886	0.566
Innovative Performance	Team 5	0.925	0.930	0.728
Innovation Capability	4	0.915	0.917	0.734
Team Recognition	3	0.941	0.817	0.602

*Source: Field Survey (2023)*

### **3.10.1 Exploratory Factor Analysis (EFA)**

The utilization of Exploratory Factor Analysis (EFA) serves the purpose of evaluating the suitability of measurement items in relation to their respective latent variables. The analysis was performed using SPSS (version 23). We considered four latent variables: team effectiveness, team innovation performance, innovation capability, and team recognition. Initially, the questionnaire (see Appendix I) contained 7 measurement items for team effectiveness, 8 for team innovation performance, 7 for innovation capability, and 6 for team recognition. During the EFA process, items with factor loadings below 0.5 and those loading onto multiple or different constructs were excluded from the analysis. Table 2 presents the remaining items after eliminating those with factor loadings below 0.5 or displaying cross-loadings across multiple constructs. The results revealed a Total Variance Extracted (TVE) of 73.137%, exceeding the minimum threshold of 50%. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, which is ideally recommended to be at least 0.6, attained a score of 0.854 in this study, indicating a high level of sample adequacy. Furthermore, Bartlett's Test of Sphericity, which needs to yield statistically significant results to demonstrate the strength of correlations among variables for a valid EFA, yielded significant outcomes ( $X^2 = 3002.782$ ; Sig. 0.000). This suggests that there were adequate correlations among

the variables. The determinant of correlation should not be zero, indicating positive definiteness in the data used for estimation. In this EFA, the determinant obtained was 4.120E-6, confirming that it was not equal to zero.

**Table 3. Exploratory Factor Analysis (EFA)**

Measurement Items	Components			
	1	2	3	4
ITP1	.788			
ITP2	.881			
ITP3	.894			
ITP4	.873			
ITP5	.825			
TE1		.690		
TE2		.846		
TE3		.854		
TE4		.785		
TE5		.838		
TE6		.632		
IC1			.870	
IC2			.899	
IC3			.899	
IC4			.768	
TR1				.772
TR2				.834
TR3				.838
Total Variance Explained				73.137%
Kaiser-Meyer-Olkin Measure of Sampling Adequacy				.854
Bartlett's Test of Sphericity	Approx. Chi-Square			3002.782
	Df			153
	Sig.			.000
a. Determinant				4.120E-6

*Extraction Method: Principal Component Analysis.*

*Rotation Method: Varimax with Kaiser Normalization.*

**Source: Field Survey (2023)**

### **3.10.2 Confirmatory Factor Analysis (CFA)**

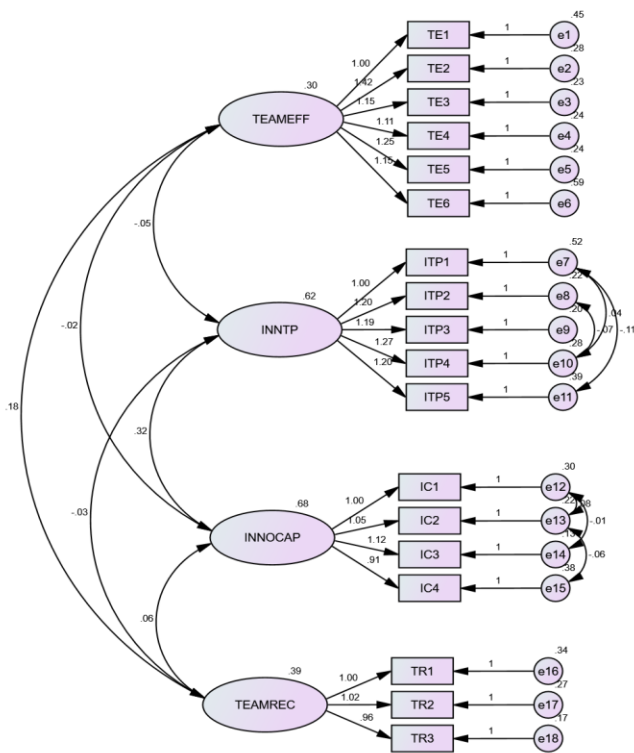
For a comprehensive assessment of the hypotheses, various model fit indices, as recommended by Xia and Yang (2019), were utilized. These indices included the Comparative Fit Index (CFI),

Standardized Root Mean Square Residual (RMR), Root Mean Square Error of Approximation (RMSEA), and Model Chi-Square. The model's fitness was evaluated following the criteria proposed by Hair et al., as referenced in Karakaya and Aksu (2018), which specify the following thresholds for a "close fit":  $CMIN/DF \leq 3$ ,  $GFI \geq 0.8$ ,  $PClose > 0.05$ ,  $TLI \geq 0.9$ ,  $CFI \geq 0.9$ ,  $RMSEA \leq 0.08$ , and  $RMR \leq 0.08$ . Using these criteria, the model displayed the following results: RMR and RMSEA reported values of 0.036 and 0.053, respectively, both less than the 0.08 threshold. CMIN had a value of 208.548 with a Degrees of Freedom (DF) of 123, resulting in a CMIN/DF ratio of 1.696, which was less than 3.0. PClose achieved a value of 0.340, exceeding the 0.05 threshold. TLI and CFI scored 0.964 and 0.971, respectively, both greater than 0.9. These results confirm that the model fit indices meet the defined criteria. Figure 1 illustrates the Confirmatory Factor Analysis (CFA) of the model's fitness, and the specific findings from the confirmatory factor analysis are presented in Table 3.

**Table 4. Confirmatory Factor Analysis**

<b>Model Fit Indices:</b> <i>CMIN = 208.548; DF = 123; CMIN/DF = 1.696; CFI = .971; TLI = .964; RMR = .036; RMSEA = .053; PClose = .0.340</i>		<b>Std. Factor Loading</b>
<b>Team Effectiveness: CR=0.886; AVE=0.566</b>		
I meet my commitments in a timely manner.		0.635
I dedicate my time to pursue new opportunities in my company.		0.827
I am not afraid to fail, and I treat failure as a learning opportunity.		0.797
I treat innovation as a long-term strategy rather than a short-term fix.		0.780
I have the internal talent to succeed in our innovation projects in my company.		0.815
I am a committed employee who is willing to be a champion of innovation.		0.635
<b>Innovative Team Performance: CR=0.930; AVE=0.728</b>		
I have a burning desire to explore opportunities and to create new things with my fellow employees in the company	0.737	
My team members come up with creative solutions to problems	0.897	
Our innovation efforts have led me to better my job performance than others in our industry.	0.901	
My team members exhibit creativity on the job when given the opportunity to do	0.886	
My company are good at leveraging our relationships with customers to pursue innovation.	0.835	
<b>Innovation Capability: CR=0.917; AVE=0.734</b>		
I am capable of supporting innovation experts in solving problems in the company.	0.833	
I deliberately stretch and build my competencies by their participation in new initiatives.	0.881	
I have good collaboration tools to support my innovation efforts.	0.932	
I am able to freely voice my opinions, even about unconventional or controversial ideas in improving the innovative organization.	0.773	
<b>Team Recognition: CR=0.817; AVE=0.602</b>		
I am pleased to be a member of this team	0.730	
I receive enough recognition from my manager and other leaders	0.773	
I feel strong ties with members of my team	0.822	

*Source: Field Survey (2023)*



**Figure 2: Diagrammatic Presentation of Confirmatory Factor Analysis**

**Source: Field Survey (2023)**

### 3.12 Discriminant Validity

Discriminant validity was assessed by comparing the square root of the Average Variance Extracted (AVE) with the corresponding correlation coefficients, following the method described by Lewis, Mettert & Lyon (2021). Discriminant validity is considered to be established if the smallest square root of the AVE exceeds the largest corresponding correlation coefficient. As presented in Table 4, the study's results confirmed the presence of discriminant validity, with the smallest square root of the AVE being 0.752, which exceeded the highest corresponding correlation coefficient of 0.512.

**Table 5: Discriminant Validity**

<b>Variables</b>	<b>TEAMEFF</b>	<b>INNTP</b>	<b>INNOCAP</b>	<b>TEAMREC</b>
<b>TEAMEFF</b>	<b><u>0.752</u></b>			
<b>INNTP</b>	-0.116	<b><u>0.853</u></b>		
<b>INNOCAP</b>	-0.041	0.496	<b><u>0.857</u></b>	
<b>TEAMREC</b>	0.512	-0.056	0.108	<b><u>0.776</u></b>

\*\* ~ *P-value significant at 1% (0.01)*

*√AVE are bold and underlined*

*Source: Field Survey (2023)*

### **3.13 Data Analysis Technique**

Data analysis is a methodical approach employed to process and present the collected data in alignment with the research objectives (Draper, Young, Thomas, & Fenich, 2018). The data gathered in this study underwent analysis using SPSS version 23 and Amos version 23, with a specific emphasis on Structural Equation Modeling (SEM) within AMOS. The analytical process initiated by outlining the characteristics of the respondents, utilizing frequencies and percentages as statistical measures. Subsequently, a descriptive analysis was executed, which involved computing mean scores and standard deviations for all variables under investigation, including team effectiveness, team innovation performance, innovation capability, and team recognition. To assess the study's hypotheses, Structural Equation Modeling (SEM) was carried out. Finally, the study presented the findings regarding the two-way interaction between team recognition and team innovation performance.

### **3.5 Chapter Summary**

Chapter 3 assumed a vital role in delineating the research methodology. It commenced with an introductory section, clearly articulating the chapter's purpose of elucidating the research methodology. The research design was subsequently expounded upon, offering a comprehensive account of the chosen approach, which, in this instance, was quantitative, along with the rationale behind this selection. Subsequent to this, the chapter delved into the strategies employed for data collection, elaborating on the tools utilized, the methodology for sample selection, and the determination of the sample size. A thorough elucidation of the data analysis procedures was provided, shedding light on the techniques applied. Moreover, the chapter addressed the subjects of validity and reliability, disclosing the measures taken to maintain data accuracy.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND PRESENTATION OF RESULTS**

#### **4.0 Introduction**

The main goal of this study is to investigate the intricate connections among team effectiveness, team innovation performance, team recognition, and innovation capability within the context of organizations. This chapter is dedicated to data analysis and discussions, with a focus on the study's three primary objectives. These objectives involve examining the correlation between team effectiveness and team innovation performance, exploring the intermediary role of innovation capability, and evaluating the moderating impact of team recognition on the association between team effectiveness and team innovation performance. The chapter begins by exploring the characteristics of the respondents and providing a descriptive analysis of the study's variables, which include team effectiveness, innovation capability, team recognition, and team innovation performance. The data analysis techniques utilized in this process encompass frequencies, percentages, mean scores, and Structural Equation Modeling (SEM), all of which contribute to the presentation of the study's findings.

#### **4.1 Respondents Characteristics**

In this section of the chapter, we provide an overview of the demographic characteristics of the study's participants. Table 5 furnishes insights into the demographic composition of the respondents. It is apparent that male participants constituted the majority of the study, accounting for 68.8% of the total sample, while female respondents formed a minority at 31.2%. An examination of the age distribution among the participants reveals that 38.0% fell within the 18-25 years age category, 35.6% were situated between the ages of 26-40 years, and 26.4% were

above 40 years of age. This distribution underscores that the largest segment of respondents belonged to the 18-25 years age bracket. Regarding their educational qualifications, the majority of participants held diplomas, making up 36.0% of the sample. Bachelor's degree holders constituted 33.2% of the respondents, followed by those with BECE/WASSCE qualifications at 29.2%. A smaller percentage, 1.6%, possessed Master's degrees or Ph.D. qualifications. The respondents' work experience was also scrutinized to ascertain their years of service within their respective organizations. The results revealed that 14.4% of respondents had 16 years or more of work experience, while 48.0% had between 11-15 years of experience. Additionally, 27.6% of respondents had work experience spanning 5-10 years, and the remaining 10.0% had between 1-4 years of work experience.

**Table 6 Respondents' Demographics**

<b>Variable</b>	<b>Responses</b>	<b>Frequency (N)</b>	<b>Percentages (%)</b>
Gender	Male	172	68.8
	Female	78	31.2
	<b>Totals</b>	<b>250</b>	<b>100.0</b>
Age	18-25 years	95	38.0
	26-40 years	89	35.6
	Above 40 years	66	26.4
	<b>Totals</b>	<b>250</b>	<b>100.0</b>
Level of education	BECE/WASSCE	73	29.2
	Diploma	90	36.0
	Bachelor's Degree	83	33.2
	Master's Degree/Ph.D	4	1.6
	<b>Totals</b>	<b>250</b>	<b>100.0</b>
Work Experience	1-4 years	25	10.0
	5-10 years	69	27.6
	11-15 years	120	48.0
	16 years and above	36	14.4
	<b>Totals</b>	<b>250</b>	<b>100.0</b>

Source: Field Work (2023)

## **4.2 Descriptive Analysis**

Descriptive statistics, including mean and standard deviation, were applied subsequent to the Exploratory Factor Analysis. One of the key assumptions underpinning multivariate statistics pertains to the normality of this examination. As elucidated in the work of Black & Babin (2019), it is imperative that each measurement item exhibits a normal distribution and attains an average score exceeding three on a scale ranging from 1 (indicating strong disagreement) to 5 (indicating strong agreement), with the midpoint denoting neutrality. The outcomes, based on the items associated with each construct, are comprehensively delineated in Table 6. The collective mean score for team effectiveness was ascertained to be 3.79, surpassing the neutral value of 3. Consequently, it can be deduced that the participants concurred with the assertion that team effectiveness exerts a positive influence on team innovation performance. The mean and standard deviation for each construct served as an indicator of the normality test's success. Furthermore, it was established that all seven measurement items within this construct achieved mean scores surpassing 3, signifying unanimous agreement among the respondents.

### ***4.2.1 Team Effectiveness***

Descriptive statistics, including mean and standard deviation, were applied subsequent to the Exploratory Factor Analysis. One of the key assumptions underpinning multivariate statistics pertains to the normality of this examination. As elucidated in the work of Black & Babin (2019), it is imperative that each measurement item exhibits a normal distribution and attains an average score exceeding three on a scale ranging from 1 (indicating strong disagreement) to 5 (indicating strong agreement), with the midpoint denoting neutrality. The outcomes, based on the items associated with each construct, are comprehensively delineated in Table 6. The collective mean score for team effectiveness was ascertained to be 3.79, surpassing the neutral value of 3.

Consequently, it can be deduced that the participants concurred with the assertion that team effectiveness exerts a positive influence on team innovation performance. The mean and standard deviation for each construct served as an indicator of the normality test's success. Furthermore, it was established that all seven measurement items within this construct achieved mean scores surpassing 3, signifying unanimous agreement among the respondents.

**Table 7 Team Effectiveness**

Variables	Mean	Std. Deviation
I meet my commitments in a timely manner.	3.70	0.868
I dedicate my time to pursue new opportunities in my company.	3.76	0.945
I am not afraid to fail, and I treat failure as a learning opportunity.	3.77	0.796
I treat innovation as a long-term strategy rather than a short-term fix.	3.72	0.781
I have the internal talent to succeed in our innovation projects in my company.	3.83	0.844
I am a committed employee who is willing to be a champion of innovation.	3.96	0.993
<b>Total</b>	<b>3.79</b>	<b>0.871</b>

**Source: Field Work (2023)**

#### ***4.2.2 Team Innovation Performance***

Team Innovation Performance pertains to a collective effort, where individuals collaborate to originate and put into practice fresh concepts, procedures, products, or services (Ali et al., 2020).

The aggregate mean score for this construct stood at 3.7, denoting a commendable level of

performance by teams regarding innovation. It is noteworthy that all five measurement items exhibited mean scores surpassing 3 (indicative of agreement), underscoring the unanimous agreement among the survey respondents regarding all measurement items.

**Table 8 Team Innovation Performance**

Variables	Mean	Std. Deviation
I have a burning desire to explore opportunities and to create new things with my fellow employees in the company	3.82	1.070
My team members come up with creative solutions to problems	3.62	1.054
Our innovation efforts have led me to better my job performance than others in our industry.	3.77	1.045
My team members exhibit creativity on the job when given the opportunity to do	3.74	1.133
My company are good at leveraging our relationships with customers to pursue innovation.	3.55	1.134
<b>Total</b>	<b>3.7</b>	<b>1.087</b>

**Source: Field Work (2023)**

#### ***4.2.3 Innovation Capability***

Moreover, it's important to highlight that the average value of innovation capability exceeded 3. This implies that innovation capability has a positive impact on team innovation performance. As detailed in Table 8, each of the four (4) measurement items obtained mean scores that exceeded 3. Respondents indicated consensus on their ability to assist innovation experts in tackling

organizational challenges, their proactive dedication to improving skills through participation in innovative initiatives, the presence of efficient collaborative tools for supporting innovative endeavors, and their unrestricted capacity to voice opinions, especially when dealing with unconventional or contentious ideas aimed at enhancing organizational innovation.

**Table 9 Innovation Capability**

Variables	Mean	Std. Deviation
I am capable of supporting innovation experts in solving problems in the company.	3.55	1.134
I deliberately stretch and build my competencies by their participation in new initiatives.	3.60	1.085
I have good collaboration tools to support my innovation efforts.	3.67	1.097
I am able to freely voice my opinions, even about unconventional or controversial ideas in improving the innovative organization.	3.60	1.085
<b>Total</b>	<b>3.605</b>	<b>1.100</b>

**Source: Field Work (2023)**

#### **4.2.4 Team Recognition**

Finally, in terms of team acknowledgment, as denoted by the average score, it surpassed the 3-point threshold. An analysis of Table 9 demonstrates that the mean scores for all three measurement items exceeded 3. This suggests a consensus among the respondents that they have a sense of pride in their team affiliations, receive satisfactory recognition from their supervisors, and share strong connections with their fellow team associates.

**Table 10 Team Recognition**

<b>Variables</b>	<b>Mean</b>	<b>Std. Deviation</b>
I am pleased to be a member of this team	3.80	0.990
I receive enough recognition from my manager and other leaders	3.62	0.970
I feel strong ties with members of my team	3.84	0.962
<b>Total</b>	<b>3.753</b>	<b>0.974</b>

**Source: Field Work (2023)**

### **4.3 Path Analysis**

Table 10 scrutinizes the study's hypotheses, employing path analysis to investigate direct effects. This analytical approach dissects the relationships between independent variables and the dependent variable, validating or contradicting existing theories. Structural Equation Modeling (SEM) was utilized through Amos (version 23) to conduct the analysis. The table presents direct effects involving both control variables (gender, age, working experience, and educational qualification) and independent latent variables (Team Effectiveness, Innovation Capability, and Team Recognition) on the dependent variable, Innovative Team Performance. It offers a detailed exploration of the direct associations between demographics and Innovative Team Performance, as well as connections among latent variables. The initial focus of this analysis is on demographics as control variables for data interpretation.

From the findings in Table 9, it's evident that gender significantly influences Innovative Team Performance, supported by a p-value of 0.011 and an independent t-test statistic of 2.538, which falls below the threshold of 1.96 for a two-tailed test, in line with Jafari & Ansari-Pour's (2019)

recommendations. Gender, in this context, contributes to 24% of the variance in companies' success ( $\beta = 0.240$ ;  $p$ -value = 0.011). Similarly, working experience and educational qualifications have a noteworthy impact on Innovative Team Performance, with working experience contributing 11% and displaying statistical significance ( $\beta = 0.113$ ;  $C. R = 2.189$ ;  $P$ -value = 0.029), while educational background contributes 12% and is also statistically significant ( $\beta = 0.119$ ;  $C. R = 2.253$ ;  $P$ -value = 0.024). Conversely, employees' age is statistically insignificant, having a negative impact of 3.6% on Innovative Team Performance ( $\beta = -0.036$ ;  $C. R = -0.658$ ;  $P$ -value = 0.511). The study extends its examination to explore the direct, mediating, and moderating effects among variables, including Team Effectiveness, Innovation Capability, Team Recognition, and Innovative Team Performance. Path analysis is utilized, employing a bootstrap sample of 5000 and a 95% confidence level analyzed through the Bias-Corrected (BC) percentile method. Figure 3 provides a visual representation of the structural paths investigated in this study.

**Table 11 Path Coefficients**

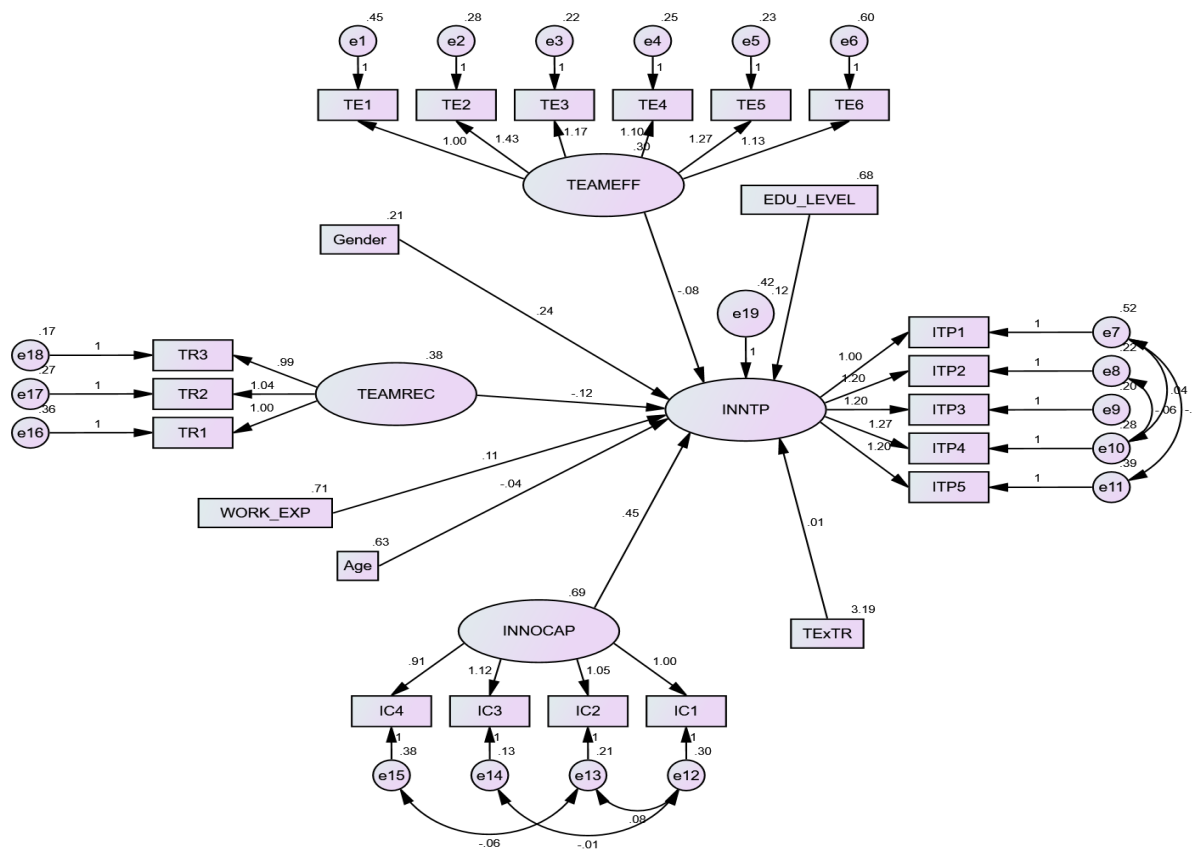
Path	UnStd. Estimate	S.E.	C.R.	P-value
GENDER → INNTP	.240	.095	2.538	.011
AGE → INNTP	-.036	.055	-.658	.511
EDU_QUA → INNTP	.119	.053	2.253	.024
WORK_EXP → INNTP	.113	.052	2.189	.029
TEAMEFF → INNTP	.447	.066	6.752	.000
INNOCAP → INNTP	.124	.078	3.585	.013
TE <sub>EX</sub> TR → INNTP	.011	.024	.449	.654

**Model Fit Indices:**  $CMIN = 208.548$ ;  $DF = 123$ ;  $CMIN/DF = 1.696$ ;  $CFI = .971$ ;  $TLI = .964$ ;  $RMR = .036$ ;  $RMSEA = .053$ ;  $PClose = .0340$

\*\* ~  $P$ -value significant at 1% (0.01)

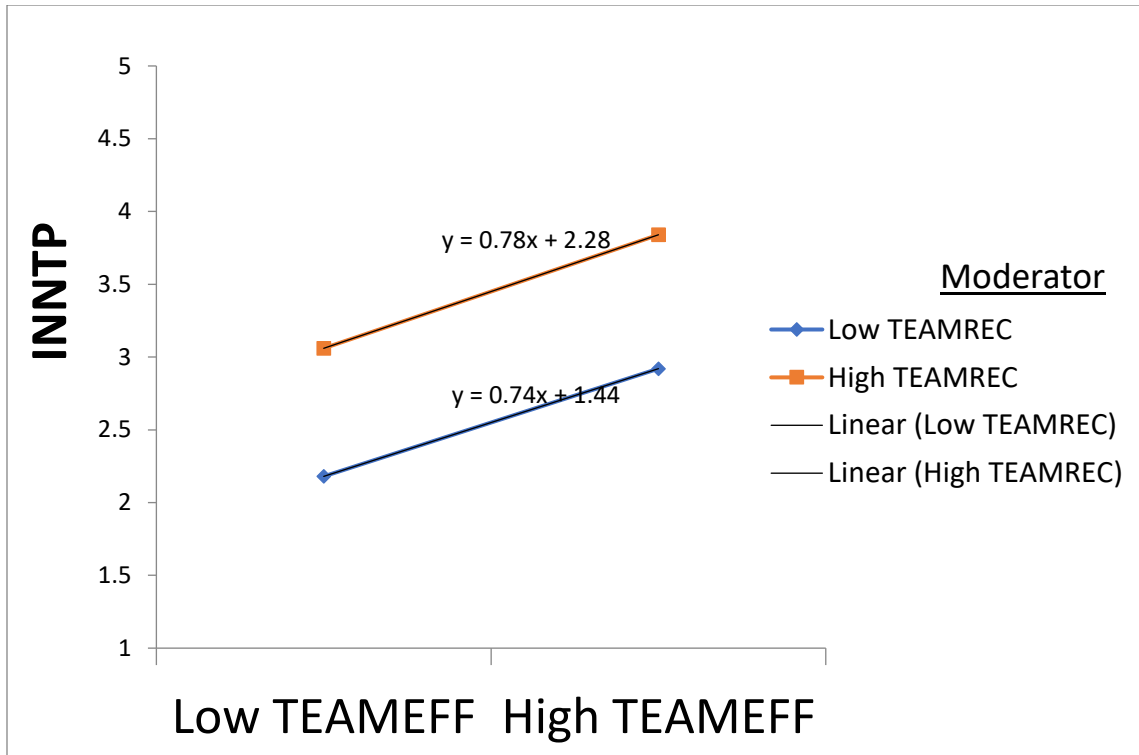
\* ~  $P$ -value significant at 5% (0.05)

**Source: Field Survey (2023)**



**Figure 3 Structural Equation Model**

*Source: Field Survey (2023)*



**Figure 4: Two-way interaction**

**Source: Field Survey (2022)**

Figure 3 illustrates the bidirectional interaction between the independent variable, Team Effectiveness, and the dependent variable, Team Innovative Performance, both of which are under the influence of the moderator, team recognition. The visual representation in Figure 4 indicates that as Team Effectiveness increases, team recognition predicts a higher level of Team Innovative Performance.

## **4.4 Discussion of Findings**

### **4.5.1 The Extent of Relationship between Team Effectiveness and team Innovative Performance.**

The analysis revealed a significant relationship between team effectiveness and team innovative performance, denoted by TEAMEFF → INNTP, with a p-value of 0.000, falling below the threshold of 0.05. To further support this finding, an independent t-test yielded a value of 6.752, which exceeds the threshold of 1.96 (in a two-tailed test), as suggested by Hair et al. (2010). This provides strong evidence of the impact of team effectiveness on team innovative performance, with a substantial effect of 39.7% ( $\beta=0.447$ ; C. R=6.752; P- value= 0.000).

Numerous studies align with the findings of this study, emphasizing the critical role of team effectiveness in influencing innovative team performance. Research, such as that conducted by Van et al., (2019), has consistently shown that effective teams are more inclined to engage in innovative activities and generate creative solutions. Kang and Park (2018) discovered that effective teams exhibit advanced knowledge creation and sharing capabilities, serving as a foundation for innovation. Moreover, highly cooperative and well-coordinated teams are more likely to partake in innovative behaviors, fostering a creative environment that encourages employees to propose inventive solutions (Nurhamizah et al., 2019). Khojastehpour and Nematollahi (2019) highlighted the positive association between team effectiveness and team innovation performance, particularly in technology companies where effective teamwork significantly predicts innovation success.

Furthermore, Wang et al. (2021) found a positive link between team effectiveness and team learning, which subsequently predicted innovative performance. Their study, which involved 186 teams within a Chinese high-tech firm, revealed that team effectiveness was positively correlated with team learning, and team learning was positively correlated with innovative performance. This suggests that team effectiveness enhances team learning, ultimately contributing to improved innovative performance. In summary, the collective evidence underscores that team effectiveness positively correlates with innovative team performance, as effective teams exhibit superior communication, collaboration, and problem-solving skills, making them more likely to engage in innovative behaviors and generate creative solutions. Therefore, the researcher asserts that,

*H1; team effectiveness has a direct positive effect on team innovation performance, was thus accepted by this study.*

#### **4.5.2 The mediating effect of innovation capability on the relationship between team effectiveness and team innovative performance**

In this segment, we delve into the mediating influence of innovation capability concerning the association between team effectiveness and team innovative performance. To scrutinize this mediating role, a Sobel's Test analysis was employed, and the results are delineated in Table 12.

**Table 12 The Mediating Effect**

Paths	Direct Effect		Indirect Paths				Indirect Effect ( <i>a*b</i> )	Sobel's Test
			<i>A</i>		<i>B</i>			
	Est.	C.R.	Est.	C.R.	Est.	C.R.		
TEAMEFF → INNOCAP → INNTP	0.197	4.655	0.561	4.035	0.124	3.585	0.069	3.478

*Source: Field Survey (2023)*

The mediating role of innovation capability in the connection between team effectiveness and team innovative performance was assessed through the path TEAMEFF → INNOCAP → INNTP, as demonstrated in Table 11. The analysis revealed a partial mediating effect of innovation capability on the relationship between team effectiveness and team innovative performance. This partial mediation was supported by the significance of two crucial pathways: first, the relationship between team effectiveness and innovation capability (path "a") was significant at 0.561 (4.035 exceeding 1.96), and second, the relationship between innovation capability and team innovative performance (path "b") was statistically significant at 0.124 (3.585 exceeding 1.96). The Sobel's Test, with an estimate of 3.478 (also exceeding 1.96), further confirmed this partial mediating effect (Abu-Bader & Jones, 2021). Thus, it can be concluded that innovation capability partially mediates the relationship between team effectiveness and team innovative performance, and this mediation is statistically significant. The analysis demonstrated that the mediator, innovation capability, accounted for a 6.9% impact on the relationship between the two variables. This study is consistent with existing research models that explore the mediating role of innovation capability. According to the resource-based and dynamic capabilities-based views of firms, organizations must cultivate diverse resources and capabilities to effectively innovate and adapt to evolving

business environments (Barney et al., 2019). Empirical studies offer evidence supporting the positive relationship between innovation capability and innovation, in line with theoretical underpinnings. For instance, Nurhayati et al., (2021) found a significant positive influence of innovation capability on innovation performance. Lau and Lo (2019) reported a positive link between Technological Innovation Capability and innovation performance. Research by Maldonado-Guzmán et al., (2018) revealed a positive and significant association between innovation capabilities and SMEs' business performance. Indeed, innovation capability is a critical factor for firm success, and without its development, consistent and widespread innovation and effective business performance are challenging to achieve (Kim et al., 2018; Iddris, 2019; Yeşil & Doan, 2019). Some researchers assert that organizations with such innovation potential can effectively harness their essential resources and competencies, leading to positive innovation and, consequently, improved firm performance (YuSheng & Ibrahim, 2020). Therefore, the researcher asserts that,

*H2; innovation capability has a direct positive effect on team innovation performance, was thus accepted by this study.*

#### **4.5.3 The extent of which team recognition moderates the relationship between team effectiveness and team innovative performance?**

The moderation effect of team recognition on the relationship between team effectiveness and team innovative performance was examined by assessing the direct effect, as presented in Table 10. This analysis involved the utilization of the interaction term (TExTR), which acted as a moderator of team recognition to study its direct impact on the relationship between team effectiveness and team innovative performance. The moderation effect was expressed by the path TExTR → INNTP.

However, this analysis yielded a statistically insignificant result with a p-value of 0.650, exceeding the significance level of 0.05, and the effect was characterized by a  $\beta$  value of 0.011 and a C. R of 0.499, resulting in a p-value of 0.654. Consequently, it can be concluded that team recognition does not act as a moderator in the relationship between team effectiveness and team innovative performance. Contrary to these results, it was found by various studies that when teams are recognized for their achievements and innovative ideas, they are more likely to continue seeking creative solutions to challenges. Recognition creates a positive feedback loop, inspiring teams to push their boundaries, take risks, and think outside the box. El Masri & Suliman (2019), found that talent management and employee recognition can significantly affect the level of employee performance, as well contributing to the organizational success and positioning. They indicated that there is a strong positive yet a statistically significant relationship between Employee Recognition and Employee Performance leading to the performance of an organization. Again, Presslee et al., (2023), also in their research concluded that Team-based recognition has a direct effect on employee effort, while Thomas et al., (2019) also argued that Team-level identification predicted perceived and actual team performance.

Litchfield et al. (2018) argue that team recognition is a psychological attachment where individuals derive a sense of self-worth from their group membership. This sense of belonging encourages team members to give their best. On the other hand, Kreidler & Tilebein (2018) contend that some level of psychological attachment to a team can enhance creativity and innovation. Team recognition can either inspire individuals to act in the best interests of the team or motivate them to perform creatively. the relationship between team effectiveness and team innovation performance is well-established. However, the role of team recognition as a moderator in this relationship is often underestimated. Team recognition enhances the positive impact of team

effectiveness on innovation by motivating and inspiring team members. Organizations should recognize the potential of team recognition as a powerful driver of innovation and make it an integral part of their team-building and innovation strategies. The researcher therefore asserts that, *H3: Team recognition positively moderates the relationship between team effectiveness and team innovation performance, was not supported by this study.*

#### **4.6 Conclusion of the Chapter Four**

Based on the data findings and analysis, it is evident that the relationship between team effectiveness and team innovative performance is statistically significant. To further explore this relationship, the interaction term (TExTR) was employed as a moderator of team recognition, allowing for an examination of its direct influence on team innovative performance. However, the analysis revealed that the moderation effect of team recognition on the relationship between team effectiveness and team innovative performance was statistically insignificant. Additionally, the mediating effect of innovation capability on the relationship between team effectiveness and team innovative performance was determined to be partial based on the data findings. This conclusion was supported by the Sobel's Test estimation, which reported a value of 0.069 ( $3.478 > 1.96$ ).

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

#### 5.0 Introduction

This section intends to provide a concise overview of the key discoveries derived from the study's data analysis. It subsequently offers suggestions to address specific concerns identified during the research and provides an overall conclusion based on the study's outcomes.

#### 5.1 Summary of Findings

The primary objective of this research was to develop a deeper comprehension of the intricate dynamics at play within organizational contexts concerning team effectiveness, team innovation performance, team recognition, and innovation capability. The study sought to explore the intricate web of associations and interactions among these pivotal variables to elucidate their combined influence on driving innovation within teams. The research took place in Asokore Mampong, situated in the Ashanti region of Ghana, with employees from Salon Pharmaceuticals, CBS Supreme Industry, and Royal Foam Limited Company participating as respondents. Employing a quantitative research design, specifically adopting a descriptive survey approach, the study encompassed a population of 670 employees within the selected organizations. For the purpose of data analysis, a combined approach utilizing stratified and simple random sampling techniques was applied, resulting in a sample size of 250 respondents. The questionnaire items used for data collection were adapted from prior research and customized to encompass the study's key variables, which included team effectiveness, team innovative performance, team recognition, and innovation capability. Structural Equation Model (SEM) via Amos (version 23) served as the methodology for data analysis. The analytical process encompassed several stages, such as

Exploratory Factor Analysis, Confirmatory Factor Analysis, Direct Path Effect analysis, Discriminant Validity assessment, and Indirect Effect analysis. The outcomes of the data analysis led to the following conclusions: Gender exhibited a significant impact on Innovative Team Performance, contributing to a (24%) influence on a company's success through its workforce. Meanwhile, the age of employees did not demonstrate a discernible effect on Employee Job Performance, contributing a mere (3%). The working experience of employees had a notable effect on Innovative Team Performance, contributing (11%) and reaching statistical significance. Moreover, employees' educational qualifications were found to significantly impact Employee Performance, contributing (12%) and demonstrating statistical significance. The research also established the presence of a statistically significant relationship between team effectiveness and team innovative performance. Nevertheless, the moderating effect of team recognition on this relationship was determined to be statistically insignificant. Furthermore, the mediating role of innovation capability in the relationship between team effectiveness and team innovative performance was ascertained to be partial, with a Sobel's Test estimation of 0.069 ( $3.478 > 1.96$ ).

## **5.2 Conclusion**

The research investigated the implications of team effectiveness and team innovation performance, considering the mediating influence of innovation capability and the moderating role of team recognition. The research was centered on the manufacturing sector within Ghana, specifically within the Asokore Mampong Municipal area in the Ashanti Region. The study selected three manufacturing companies: Salon Pharmaceuticals, CBS Supreme Industry, and Royal Foam Company Limited. The sample comprised 250 out of 670 permanent employees from the three manufacturing firms. The study revealed that the levels of team effectiveness, innovation

capability, and team innovation performance were notably high in these organizations. The findings indicated a significant positive correlation between team effectiveness and team innovation performance. Furthermore, innovation capability was identified as a partial mediator in the relationship between team effectiveness and team innovation performance. Lastly, the analysis of the interaction term (TExTR) as a moderator for team recognition concerning its direct impact on team innovation performance did not yield statistically significant results.

### **5.3 Recommendations**

1. Organizations ought to prioritize endeavors that bolster team effectiveness, encompassing activities like team-building, educational programs, and skill development initiatives. This can be achieved by promoting teamwork, enhancing communication, and fostering collaboration among team members to optimize their potential for innovative performance.
2. Organizations should make substantial investments in nurturing innovation capabilities within their teams. Alongside this, they should allocate resources, provide tools, and offer training that bolsters creativity, stimulates idea generation, and facilitates the implementation of innovative solutions.
3. Organizational leaders must lead by example, placing a premium on innovation and demonstrating their unwavering dedication to cultivating an innovation-centric culture. It is incumbent upon organizations to inspire their leaders to actively interact with teams, extend guidance, and provide unwavering support for innovative endeavors.

### **5.3 Suggestion for Further Studies**

Investigating the correlations among team effectiveness, team innovation performance, innovation capabilities, and team recognition presents a promising avenue for scholarly exploration, offering multiple prospects for additional research. This introduction delineates a range of proposed research directions, with the overarching goal of broadening our comprehension of how these elements intersect, adapt within evolving contexts, and present prospective remedies for organizations committed to nurturing innovation and enhancing collective team productivity. It is advisable for researchers to delve into the influence of cultural factors on the correlations among team effectiveness, innovation performance, innovation capabilities, and team recognition. Cross-cultural investigations can aid in ascertaining the consistency of these relationships across diverse cultural contexts and identifying potential cultural moderating factors.

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**APPENDIX**  
**QUESTIONNAIRE**

This questionnaire seeks to find out the relationship between team effectiveness and team innovation performance; the mediating role of innovation capability and the moderating role of team recognition. The responses you provide would contribute to improve innovative performance in the organization. There is no right or wrong answer. The information you provide would be used solely for academic purposes and your anonymity shall be kept in ultimate confidentiality.

**SECTION A**

Demographic Data

Gender: Male [ ] female [ ]

Age: 18 – 25 years [ ] 26 – 40 years [ ] 41 years and above [ ]

Working Experience: Less than 5 years [ ] 5 – 10 years [ ] 11 – 15 years [ ] More than 15 years [ ]

Educational Level: BECE/WASSCE [ ] Diploma [ ] Bachelor [ ] Masters/Ph.D [ ]

**SECTION B**

**QUESTIONNAIRE FOR SURVEYING TEAM EFFECTIVENESS**

Employees are to indicate their level of response from ‘strongly disagree’ to ‘strongly agree’.

SD- strongly disagree D- disagree N- neutral A- agree SA- strongly agree

S/N	TEAM EFFECTIVENES	SD	D	N	A	SA
1.	I meet my commitments in a timely manner.					
2.	I dedicate my time to pursue new opportunities in my company.					
3.	I am not afraid to fail, and I treat failure as a learning opportunity.					
4.	I treat innovation as a long-term strategy rather than a short-term fix.					

5.	I have the internal talent to succeed in our innovation projects in my company.					
6.	I am a committed employee who is willing to be a champion of innovation.					
7.	I exemplify the right innovation behaviours for others to follow.					

## SECTION C

### QUESTIONNAIRE FOR SURVEYING INNOVATIVE TEAM PERFORMANCE

Employees are to indicate their level of response from ‘strongly disagree’ to ‘strongly agree’.

SD- strongly disagree D- disagree N- neutral A- agree SA- strongly agree

S/N	TEAM INNOVATION PERFORMANCE	SD	D	N	A	SA
1.	I have a burning desire to explore opportunities and to create new things with my fellow employees in the company					
2.	My team members come up with creative solutions to problems					
3.	Our innovation efforts have led me to better my job performance than others in our industry.					
4.	My team members exhibit creativity on the job when given the opportunity to do					
5.	My company are good at leveraging our relationships with customers to pursue innovation.					
6.	My team members come up with new and practical ideas to improve performance,					
7.	My team members search out new technologies, processes, techniques, and/or product ideas					
8.	Our innovation projects have helped our organization develop new capabilities that we did not have over the years.					

## SECTION D

### QUESTIONNAIRE FOR SURVEYING INNOVATION CAPABILITY

Employees are to indicate their level of response from ‘strongly disagree’ to ‘strongly agree’.

SD- strongly disagree D- disagree N- neutral A- agree SA- strongly agree

S/N	INNOVATION CAPABILITY	SD	D	N	A	SA
1.	I am satisfied with my level of participation in our innovation initiatives.					
2.	I am capable of supporting innovation experts in solving problems in the company.					
3.	I take responsibility for my own actions and avoid blaming others.					
4.	I deliberately stretch and build my competencies by their participation in new initiatives.					
5.	I work well together in teams to capture opportunities.					
6.	I have good collaboration tools to support my innovation efforts.					
7.	I am able to freely voice my opinions, even about unconventional or controversial ideas in improving the innovative organization.					

## SECTION E

### QUESTIONNAIRE FOR SURVEYING TEAM RECOGNITION

Employees are to indicate their level of response from ‘strongly disagree’ to ‘strongly agree’.

SD- strongly disagree D- disagree N- neutral A- agree SA- strongly agree

S/N	TEAM RECOGNITION	SA	A	N	D	SD
1.	I see myself as a member of this team					
2.	I feel valued at work					
3.	I identify with other members of my team					
4.	I am pleased to be a member of this team					
5.	I feel strong ties with members of my team					
6.	I receive enough recognition from my manager and other leaders					