DEMYSTIFYING INTRAPRENEURSHIP: MEDIATING ROLE OF MIDDLE MANAGEMENT IN NURTURING INNOVATION ACROSS LARGE ORGANIZATION

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Dedication

I would want to express my gratitude to my late father and elder brother, my lovely wife, my cute son, my astute niece, as well as my dearest friends and entire family members. Their unflinching love and enduring support have been my guiding light during this research. I am grateful to them for having faith in me and for motivating me to strive for this specific achievement. With deepest affection and appreciation, this work is dedicated to you.

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ABSTRACT

DEMYSTIFYING INTRAPRENEURSHIP: MEDIATING ROLE OF MIDDLE MANAGEMENT IN NURTURING INNOVATION ACROSS LARGE ORGANIZATION

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"Ideas are a dime a dozen.
People who implement them are priceless."
Mary Kay Ash

In the tumultuous landscape of modern corporate dynamics, innovation and organizational rejuvenation emerge as non-negotiable imperatives. This study ventures into the strategic realm of middle managers, illuminating their pivotal role in fostering intrapreneurship to cultivate an environment teeming with innovation within organizations.

Through a rigorous examination of the intricate interplay between demographics, organizational variables, and key factors of innovation, including technological adaptation and the strategic influence wielded by middle-level managers, this research endeavors to unveil the fundamental elements underpinning a thriving culture of innovation.

Harnessing a quantitative methodology firmly anchored in the post-positivist paradigm, this study meticulously dissects the strategies deployed by middle managers to cultivate intrapreneurial talent and ignite the flames of innovation. By unraveling the complex tapestry of individual and organizational dynamics, it offers a holistic understanding of the mechanisms driving innovation within corporate ecosystem.

Ultimately, this paper transcends mere scholarly discourse, offering actionable insights tailored to empower managers amidst the storm of unprecedented disruption. It underscores the indispensable role of middle managers as vanguards of innovation in the relentless march towards organizational excellence in today's dynamic corporate landscape.

LIST OF ABBREVIATIONS

AVE: Average variance extracted

DWS: Downward Strategy

FM: Facilitating Mechanisms

HRM: Human Resource Management

HTMT: Heterotrait-monotrait ratio

IT: Information Technology

MLM: Middle-Level Manager

MNC: Multinational Corporation

MS: Managerial style

OP: Organizational Performance

OS: Organizational Factors of Culture and Support

OT: Technological Opportunities

PLS: Partial Least Squares

RC: Resources and Constraints

SB: Strategic Behavioural Renewal

SEM: Structural Equation Modeling

UWS: Upward Strategy

VIF: Variance Inflation Factor

WD: Development Support Work Design

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CHAPTER I:

INTRODUCTION

1.1 Introduction

The global business environment is fast-changing with new-age technologies and budding players successfully steering the rules of the game (Kürner, 2020). The increase rate of industry digitization fueled by new-age technologies like Machine Learning & Artificial Intelligence has made the business landscape highly dynamic (George, 2021). Due to this rapidly changing landscape, many incumbents find their leadership positions increasingly precarious and exposed (Kürner, 2020).

Companies have had to transform themselves to secure a favorable position in their respective industries due to the cut-throat competition, fierce rivalry, demanding customers, and shorter product life cycles which compels them to explore new avenues to ensure their survival and success (Galván-Vela et al., 2021).

In an ever-changing business ecosystem, ongoing innovation is the only way to ensure long-term success for the corporation (Kör et al., 2021). Large established organizations' long-term success is dependent not just on their ability to exploit current capabilities and enhance efficiency (Gonthier & Chirita, 2019), but also on their willingness to take risks, explore new territories, and build dynamic capabilities to stay competitive (Kör et al., 2021). Corporate entrepreneurship, also known as Intrapreneurship, is one of such strategies which has gained traction in recent years as a potent tool for the development of new innovative (Hamel, 2002), businesses and projects having a high degree of risk (Sekerin et al., 2020) to help resolve this threat for large corporations (Kürner, 2020).

Folks that discover innovative approaches to achieve growth are known as Intrapreneurs (George, 2021). They have a distinct characteristics and capabilities: they are thought leaders, creators, storytellers, collaborators, and silo-busters, to name a few (De Pree et al., 2018) . They work within an organization to develop new products, services, methodologies, and business models in order to create shared value and address systemic issues (De Pree et al., 2018; Guven, 2020).

According to McDowell (2017), there is a significant correlation between employee ingenuity and innovativeness within a company, which leads to organizational growth and profitability. While many scholars have found a positive linkage between intrapreneurship and business performance (Abou-Moghli & Al-Abdallah, 2018). As cited by Rietveld (2020), the concepts are grounded in Schumpeter (1934), that profits are a direct result of innovation, whereas operational efficiency are an outcome of short-term improvement initiatives, according to his theory of economic development. As a result, academia is becoming increasingly interested in Intrapreneurship as a research topic (Kürner, 2020).

As cited by Hirte (2018), middle management is often in charge of promoting agility and transformation, especially in large firms. The overall mindset, attitude, and approach of middle managers distinctly impact the success of any organizational transformation program (Hirte, 2018).

1.2 Research Problem

Many studies on intrapreneurship research have emphasized the importance of nurturing intrapreneurial talents (Klofsten et al., 2021). However, they are unclear on how such competencies are developed and the subsequent role of management in bolstering such capabilities within businesses (Klofsten et al., 2021) even though the academicians have been (Huang et al., 2021). Hence, there is a need to explore the stimulating role of

management especially the role of middle managers (Sadiq & Hussain, 2018), to identify strategies for improving organizational empowerment and other key factors (Moghaddas et al., 2020) enabling discovering and development of intrapreneurs across the organization (Blanka, 2019).

Existing literature has provided little exposure to the combined fields of dynamic capacity building, nurturing innovation, and the role of middle managers, implying a valid need for this study (Hirte, 2018).

Therefore, it is very pertinent to further investigate the pivot role of middle managers in creating a vibrant ecosystem in a large organization that allows for the discovery and development of intrapreneurs at all levels, to propel the much-needed innovation (Hirte, 2018).

1.3 Purpose of Research

The objective of this study is to add to the growing body of knowledge about intrapreneurship and innovation (De Pree et al., 2018) and generate practical recommendations on how organization can empower middle managers to create a conducive ecosystem which can help nurture the development of innovative activities across all levels of the organization (Sekerin et al., 2020). The topic is extremely significant in today's world due to the paradigm change fueled by Covid-19 (Sekerin et al., 2020). Particularly, the study has the following sub-objectives:

I. Understanding the role of organizational factor to enhance Innovation & Intrapreneurship in the organization.
II. Evaluating the role of MLM to translate strategies into performance.
III. Examining the role of technological opportunities which can change the relationship between types of strategies and performance.

IV. Assessing the role of demographics and organizational variables fostering intrapreneurship within an organization.

Consequently, this research intends to build upon the key internal factors uncovered in the study of corporate entrepreneurial environments by Hornsby et al. (2002) and the associated role of middle managers as stated in Alam et al. (2020).

1.4 Significance of the Study

The results of this study possess substantial promise in delineating the function of middle managers in cultivating intrapreneurship within firms. This research illuminates the methods and approaches utilized by middle managers to nurture intrapreneurial skills, so enhancing our comprehension of their crucial function in fostering innovation internally.

Practically, the findings of this study have the potential to elevate organizational tactics focused on empowering middle managers to actively promote intrapreneurship. Moreover, it would be prudent for firms to contemplate the modification of performance measures and incentive frameworks to motivate and acknowledge middle managers for their role in nurturing innovation.

Furthermore, the results of this study have the potential to facilitate leadership development programs aimed at providing middle managers with the necessary skills and competences to successfully foster intrapreneurship within their specific areas. This could entail furnishing employees with instruction in domains like entrepreneurial leadership, innovation management, and creative problem-solving.

Overall, by elucidating the role of middle managers in the exploration and advancement of intrapreneurship, this research offers significant perspectives that have the potential to influence organizational strategies aimed at fostering a culture of innovation and driving long-term competitive advantage.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Conceptual framework

Although a singular, all-encompassing theoretical framework dedicated to intrapreneurship theory in relation to nurturing Innovation delineating the role of middle management is yet to be established. Yet, we can leverage several theoretical viewpoints and notions that enhance our comprehension of the correlation between intrapreneurship and innovation within the context of a middle-manager's function. Some pertinent theoretical frameworks and concepts are listed below:

Entrepreneurship Theory:

The notion of entrepreneurship, which emphasizes the formation of new businesses and the recognition and seizing of opportunities, is the foundation of intrapreneurship. Theoretically, intrapreneurship is based on ideas like resource acquisition, creativity, risk-taking, and opportunity recognition. The foundation for comprehending and researching intrapreneurship is the application of entrepreneurship theory to the internal environment of firms (Cadar et al., 2015).

Innovation Theory:

The process of developing and putting into practice new concepts, goods, services, or business models is the main emphasis of innovation theory. Innovation theory offers a framework for comprehending the importance of experimentation, risk-taking, and creativity in the context of intrapreneurship (Greenacre et al., 2012). The theory looks at what helps and what doesn't when it comes to creative idea generation and application in businesses. Joseph Schumpeter embarked on the inaugural systematic endeavor within the

realm of economics to scrutinize the intricacies of innovation during the initial decades of the twentieth century (Arriaga Martínez & Roque López, 2017). He delineated three distinct stages within the process: inception, advancement, and proliferation. Schumpeter delineates invention as the initial manifestation of an idea; innovation as the primary commercial utilization of an invention in the market; and diffusion as the proliferation of the technology or process across the market.

Moreover, Schumpeter, (1934) underscored in his subsequent research the significance of major corporations in fostering innovation to enhance their competitive edge, hence catalyzing economic advancement. Schumpeter's most crucial contribution is in the conceptual distinction he drew between invention and innovation (Alerasoul et al., 2022).

Organizational Learning Theory:

The study of organizational learning looks at how businesses produce, absorb, and apply knowledge to improve their capacities and output. Organizational learning theory highlights the significance of knowledge acquisition, knowledge sharing, and the development of a learning culture in the context of intrapreneurship to promote intrapreneurial activities (Basten & Haamann, 2018). The approach emphasizes how intrapreneurial conduct is fostered by ongoing learning and adaptation.

According to Nonaka & Konno, (1998), the process of creating organizational knowledge is envisioned as a spiral that is continually repeated in four phases (Basten & Haamann, 2018). The interaction of these stages within the boundaries of implicit as well as explicit knowledge is illustrated in following figure.

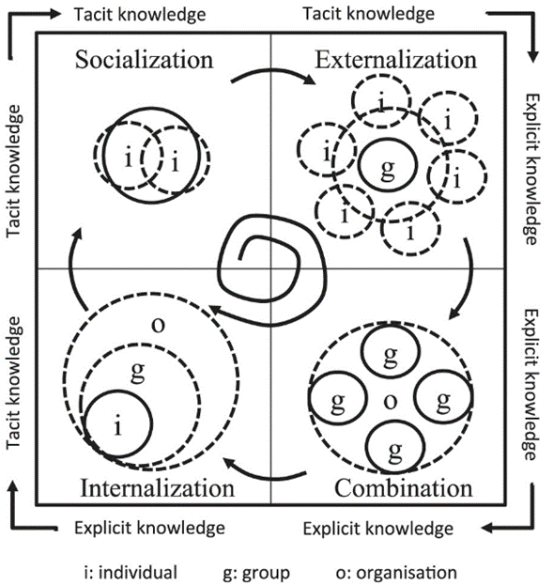

Figure 1: Spiral of Organizational Knowledge Creation

Adapted from: (Nonaka & Konno, 1998)

According to organizational learning theory, there are two ways that organizational learning can be applied: through exploration and exploitation (Rietveld, 2020). Exploitation learning replaces the organization's past knowledge, enhances operational capabilities, and strengthens long-standing organizational practices, commonly referred to as tacit knowledge. Exploration learning, often referred to as 'explicit knowledge', has the potential to create whole new routines as well as improve tactical versatility and ingenuity (Huang et al., 2021). In summary, companies internalize information by using, institutionalizing, and enhancing the exploration and transitioning efficiency of knowledge, creating a valuable resource (Zhu et al., 2019).

Human Capital Theory:

The knowledge, abilities, and skills that people possess and how they affect the functioning of organizations are the main topics of human capital theory. Human capital theory highlights the significance of employee abilities, entrepreneurial mentality, and motivation to propel intrapreneurial actions in the setting of intrapreneurship. The notion emphasizes how intrapreneurial talent may be nurtured through education, training, and development initiatives (Mariz-Pérez et al., 2011).

Resource-Based View (RBV):

The importance of capabilities and resources in establishing and maintaining competitive advantage is emphasized by RBV. It emphasizes the value of corporate resources like networks, knowledge, skills, and funding in the context of intrapreneurship. According to the hypothesis, firms that have valuable and distinctive resources that can be used for innovation have a higher chance of seeing success with their intrapreneurial endeavors (Madhani, 2010).

For a resource to confer a competitive advantage and ensure enduring performance, it must meet the stringent 'VRIN' criteria.

Valuable (V): Resources hold significance when they offer strategic merit to the organization. Resources prove their worth by either facilitating enterprises in capitalizing on market opportunities or mitigating market dangers. Having a resource is futile if it fails to contribute to or augment the firm's worth.

Scarce (S): Resources should be elusive amidst the firm's current and prospective rivals. Consequently, resources must be scarce or distinctive in order to provide competitive benefits (Madhani, 2010). Resources held by multiple enterprises in the market do not inherently confer a competitive edge, as they are unable to formulate and implement a

distinctive business plan that sets them apart from their rivals. **Imperfect Imitability (I):** Imperfect imitability entails rendering the replication or emulation of resources unfeasible. There are numerous obstacles that may hinder the replication of a resource, such as challenges in resource acquisition, unclear correlation between capability and competitive edge, or the intricacy of resources. Resources serve as the foundation for maintaining a competitive edge in the long term, provided that rival enterprises incapable of possessing these resources or unable to obtain them.

Non-Substitutability (N): The concept of non-substitutability in resources denotes the irreplaceability of resources by any alternative. Here, competitors will find it challenging to replicate the performance by substituting resources with alternative options.

Agency Theory:

The relationship between principals, such as owners or upper management, and agents, such as employees, is examined under agency theory. Agency theory analyzes the incentives and difficulties of enabling staff members to operate as entrepreneurs inside the company in the context of intrapreneurship. In order to promote intrapreneurial conduct, the idea emphasizes how crucial it is to match the interests of principals and agents (Eisenhardt, 1989).

Social Exchange Theory:

Social exchange theory investigates interpersonal interactions and the exchange of resources, support, and rewards within social relationships. It emphasizes the value of reciprocity, trust, and supportive connections between intrapreneurs and other members of the company in the context of intrapreneurship. According to the thesis, intrapreneurs

require a positive network and an atmosphere at work in order to succeed (Cropanzano et al., 2017).

To summarize, researchers and practitioners can gain a deeper understanding and analysis of the phenomenon of intrapreneurship by utilizing these theoretical underpinnings. This conceptual framework offers a foundation for researching intrapreneurial behavior determinants, organizational environments that support or impede intrapreneurship, and the results and effects of intrapreneurial endeavors inside enterprises.

2.2 Intrapreneurship phenomenon

The term Intrapreneurship is derived from the word Intrapreneur (in·tra·pre·neur), which means an individual possessing entrepreneurial acumen, who adeptly pioneers advancements for the betterment of their employer, their personal satisfaction, and the broader society. In simple terms, an intrapreneur is a visionary individual who operates as an entrepreneur confined within the set parameters of an organization. The literature on intrapreneurship dates to the 1970s, but it wasn't until the 1980s that it really took off (Galván-Vela et al., 2021). Interestingly, as per the findings of the bibliometric research, works on intrapreneurship and corporate entrepreneurship began to appear in high-impact scientific journals in the early 1990s (Galván-Vela et al., 2021) and has further increased over the last decade as a result of the academician's diverse focus (Alam et al., 2020; Chan et al., 2017). Though the concept of intrapreneurship has seen significant development over the years, however its origins may be traced back to 1974. The notion has evolved over the past four decades as depicted in following figure.

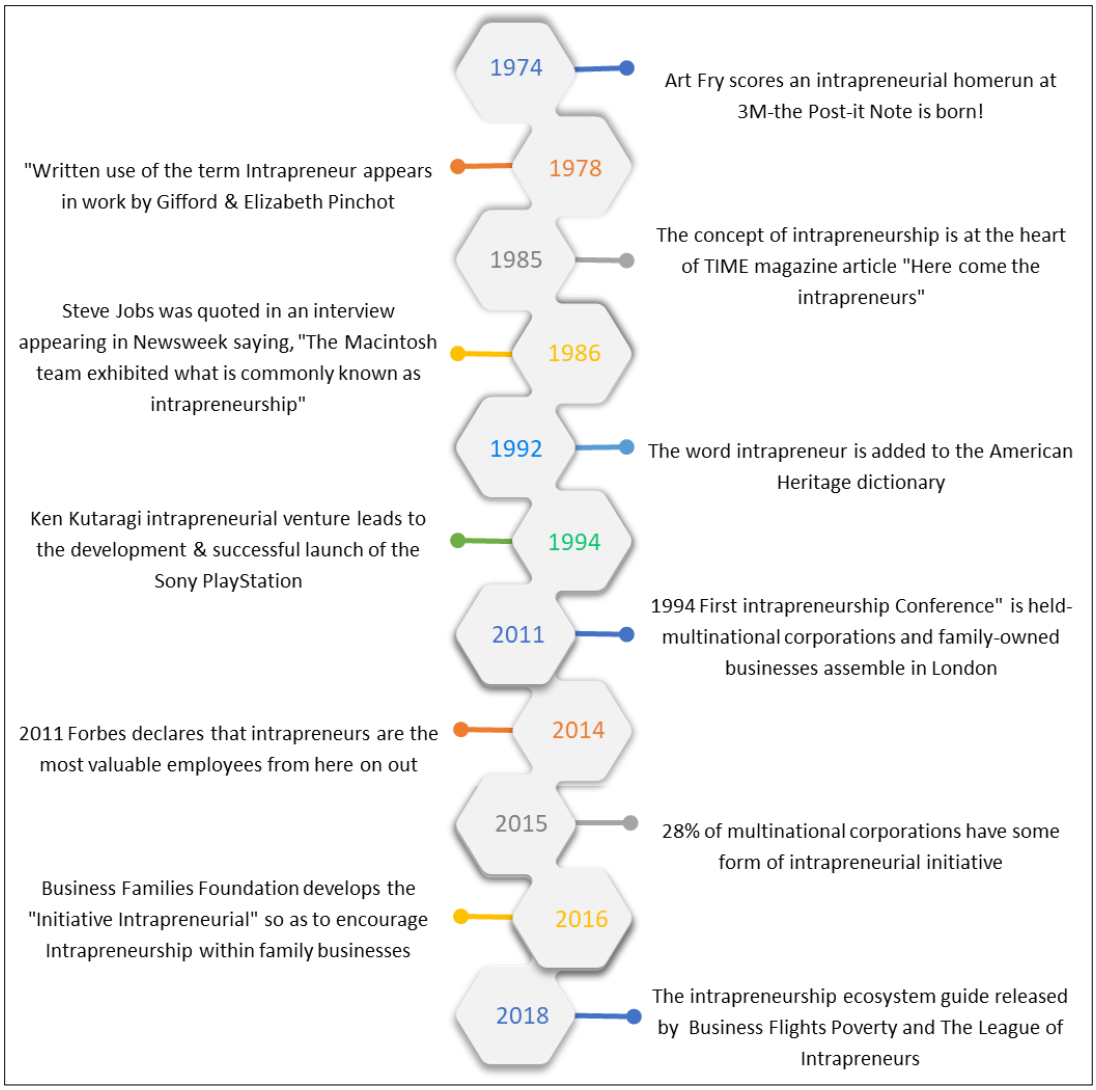

Figure 2: History of Intrapreneurship

Adapted from: (Labrecque, 2017)

According to Zahra (1991), there are two types of corporate entrepreneurship (CE): centralized and distributed corporate entrepreneurship. The distributed CE was further identified as intrapreneurship by Pinchot (1985). Corporate entrepreneurship (CE) also

means intrapreneurship (Rigtering et al., 2019) or manifestation of CE (Sharma & Chrisman, 1999). While entrepreneurship within an organization is defined as intrapreneurship (Antoncic, 2007; Huang et al., 2021).

Although academics frequently interchange the terms "CE" and "intrapreneurship," several studies suggest that CE refers to entrepreneurial activities that are driven top-down within the company, while intrapreneurship refers to business ventures that employees of the company pursue from the bottom up (Huang et al., 2021; Rigtering et al., 2019).

As cited by Sakhdari, (2016) , Burgelman in his seminal paper in year 1983 has made the ground-breaking claim that employee entrepreneurialism at lower levels of the organisation primarily drives corporate entrepreneurship (Sakhdari, 2016).

Prior research suggests that the process of producing new innovations within an organization by an individual or a group of individuals affiliated with an established business is known as intrapreneurship (Galván-Vela et al., 2021; Sharma & Chrisman, 1999). The intrapreneurship assists businesses with innovation, improving internal performance, adapting to external changes, and reviving their industries (Augusto Felício et al., 2012; Huang et al., 2021) and enables the organization to improve its profitability thereby giving the organization a competitive advantage (Galván-Vela et al., 2021).

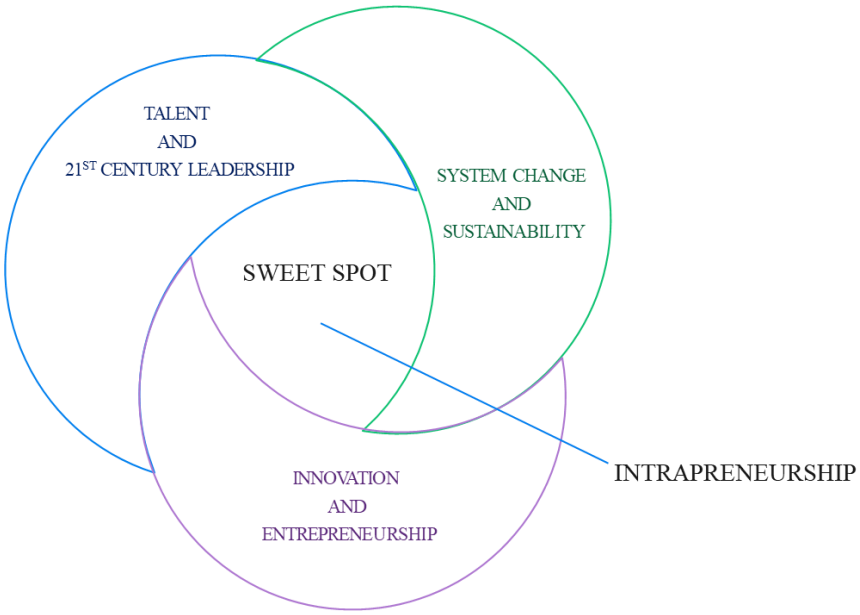

Figure 3: Sweet Spot for Intrapreneurship

Adapted from: (De Pree et al., 2018)

Research suggests that intrapreneurship has four main key components: a) "new business ventures", or "expanding the organization's product and service lines"; b) "inventiveness", or "developing and commercializing new products, services, and technologies"; c) "organizational renewal, or changing, developing, and restructuring" d) "Proactivity or acting ahead of time to address a potential problem" (Antoncic & Hisrich, 2001; Huang et al., 2021).

It steadily emerged as an adaptive response to the needs of businesses in a dynamic ecosystem (Sakhdari, 2016). Moreover, as cited by Blanka (2019), the idea of intrapreneurship is premised on the notion that valuable human capital persists in entrepreneurial employees within existing firms. Intrapreneurship, as per Pinchot (1985), could be a significant solution to the lack of capabilities surrounding innovation and competitiveness within established organization's (Klofsten et al., 2021). While

intrapreneurship, innovation, and entrepreneurship may appear distinct, they do really possess certain shared characteristics.

Since intrapreneurship is a strategy that helps businesses expand their capabilities and opportunities by initiating new businesses and leveraging resources, (Covin & Slevin, 1991; Klofsten et al., 2021) . It enhances the roles and capacity of the companies with hierarchical and traditional management structures to build new frontiers for firms without imposing major changes (Moghaddas et al., 2020).

2.3 Intrapreneurship as a potent tool to foster innovation

Intrapreneurship exhibits a multi-dimensional nature and is based on various entrepreneurship theoretical frameworks (Huang et al., 2021) . These frameworks have their roots either in innovation entrepreneurship (Schumpeter, 1934) and innovation management by Drucker in late nineteen seventies. In particular, the need to create a sustainable innovation strategy firms need to drive intrapreneurial culture within their organization (Covin & Slevin, 2008).

According to studies, intrapreneurship can be a key factor in boosting corporate performance (Covin & Slevin, 2008; Hornsby et al., 2002; Sakhdari, 2016; Zahra, 1991) , growth and profitability (Covin & Slevin, 1991; Sakhdari, 2016).

For doing things differently, intrapreneurship depends on new knowledge. This manifests into innovation in goods and services, systems, processes, strategies, and markets (Sakhdari, 2016). For the acquisition, integration, development, and exploitation of new knowledge, networking capabilities can be just as important as structural factors (Sakhdari, 2016) which are predominantly explained in the literature as to why some businesses are more entrepreneurial than others (Sakhdari, 2016).

In today's fast-paced business world, new strategies to ramp up a company's capitalization and competitiveness are emerging and one of such focus areas is the growth of intrapreneurship, which can help companies accelerate their innovations (Sekerin et al., 2020).

As stated in Sekerin et al. (2020), the top 1,000 largest corporations in the world by market valuation are predicted to boost their expenditure on innovative initiatives by 25% by 2022, compared to 2017, because executives thinks that only via innovation-driven growth the company will be able to stay competitive.

Many CEOs have traditionally prioritized innovation. The pandemic, on the other hand, has driven this urgency which has resulted in a 10-point increase to seventy five percent in the total number of firms citing innovation as a top-3 priority: the highest yearly gain as per BCG's 15-year most Innovative companies' study (Boston Consulting Group, 2021).

The connections across the various industries, companies, and product lines are much stronger than ever. This has resulted in a paradigm shift: businesses are no longer confined within their own industry whether intentionally or unconsciously (Claire & Joanna, 2021). Instead, they've gone to a larger, more complex, open, and interconnected system – an ecosystem (Claire & Joanna, 2021).

According to McKinsey's research the economic ramification over $60 trillion in total income will be at stake by 2025, due to the paradigm shift taking place in the industries (Catlin et al., 2020). Companies often overlook the fact that their approach to innovation is also susceptible to change and to put in perspective, businesses must be creative in how they innovate (Claire & Joanna, 2021).

As a result, companies are increasingly establishing innovation divisions as a strategic instrument for transformation to promote intrapreneurship and accelerate

innovation activities within their organizations (Hirte, 2018). However, this innovation division cannot be siloed from the rest of the company as game-changing innovations necessitate a comprehensive approach across the enterprise to produce the desired results (Corbett, 2018).

Employees must have some stake in the game in order to be truly innovative. They should not think of innovation as something only for senior management; rather, it should be everyone's opportunity (Braineet, 2022). Every business should start off by assuming that its current team has a ton of unrealized potential. However, inviting and utilizing the innovative ideas while keeping that in mind is the real challenge (Balmaekers, 2018).

Thus, people need to be connected by an entrepreneurial fabric that enables for a more diffused approach in researching, approving, and financing new ideas to break down the silos across the organization, and this is where the intrapreneurship can play a vital role in a company's overall strategy (Balmaekers, 2018) as presented in following figure.

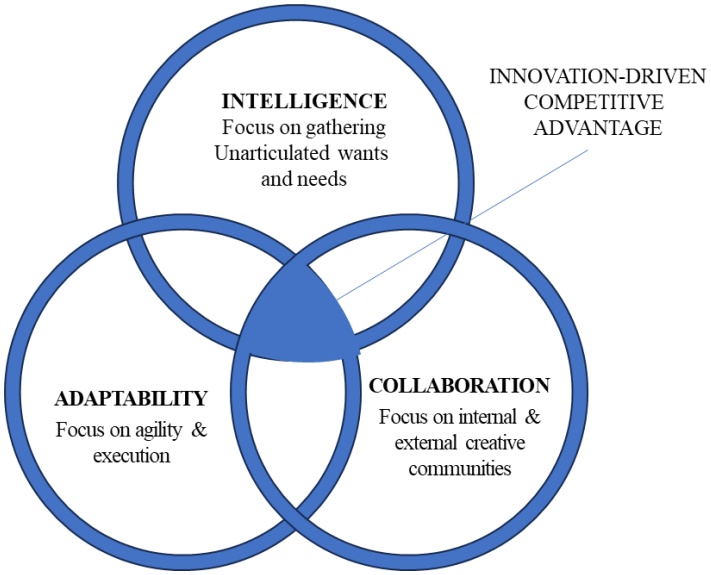

Figure 4: The Next Generation Organization

Adapted from: (Balmaekers, 2018, 2022)

Despite this momentum, innovation is far more challenging than it appears given the unpredictability, and depth involved and one of the key obstacles is that innovation necessitates the unique capability to incorporate multiple perspectives (Claire & Joanna, 2021). Organization should develop a company-wide innovation strategy to find ways to encourage employees to think about innovation and involve them in the process (Braineet, 2022). Innovation will inevitably involve some risk of failure. However, companies need to accept this fact downplay it, and support risky endeavors (Braineet, 2022)

Organizations are often caught up between the options of building, investing, buying, or partnering (Claire & Joanna, 2021). For instance, whom should they team up with to achieve their business goals given the technological challenges and dynamic business environment? how can they facilitate multiple collaborations and strategic initiatives that are running concurrently? they are confronted with a plethora of options yet limited resources, competing but interdependent goals, and a disconnect between business and technology divisions as a result of this prevailing dilemma (Claire & Joanna, 2021).

The success of large firms relies more on the systems, resources and policies that are in place that support these Innovation professionals (Manimala et al., 2006; Rietveld, 2020)**.** To thrive, intrapreneurs require a rich & supportive intrapreneurial ecosystem that boast of internal and external policies, practices, resources, and relationships which collectively fosters innovation (De Pree et al., 2018). The diagram gives a glimpse of the intrapreneurial landscape.

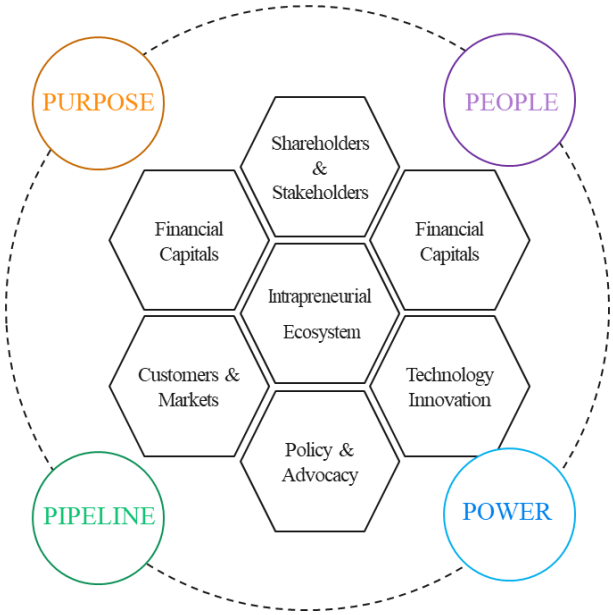

Figure 5: Intrapreneurial Ecosystem

Adapted from: (De Pree et al., 2018)

Moreover, the continuous innovation is an iterative process and manifests over a period (Kör et al., 2021). As cited by (Rietveld, 2020), Duncan was the first to use the term "ambidextrous" in 1985. He used this term to describe companies that can adapt their organizational structures to enable both the inception and implementation of innovation (Rietveld, 2020).

Gürsoy and Guven, (2016) discover that a firm's innovative culture has a positive impact on intrapreneurship, both in aggregate and by dimension (i.e., innovation, risk-taking, proactivity, self-determination, and extension of individual network (Huang et al., 2021). As stated by Kör et al. (2021), developing dynamic competencies for continuous innovation is critical since market competitiveness necessitates the production of new information, products, and services (Pezeshkan et al., 2016; Teece, 2007).

Augusto Felício et al., (2012) suggest that intrapreneurship can be explained by innovation and several other pivotal factors (Huang et al., 2021). Researchers link intrapreneurship with innovation mainly from the definition, process, and outcomes perspective and stated that intrapreneurship and innovation appear to represent two sides of the same coin (Huang et al., 2021).

2.4 Intrapreneurship and Corporate Incubators

The corporate incubator is one of the various types of corporate entrepreneurship that strives to boost innovation and business model creation in organization's (Kürner, 2020). One such step is the creation of corporate incubators, which offer a platform for the systematic convergence of support to develop ideas (Kürner, 2020).

A supportive environment in the workplace can encourage people to engage in intrapreneurial activity (Kuratko et al., 2005). According to research, employees' intrapreneurial participation is stimulated by the organizational structure, management support, and work discretion (Neessen et al., 2019).

The corporate incubators can effectively transcend into knowledge, digital, geographic, and even cultural boundaries. It can help boost the essential components of intrapreneurial success such as availability, awareness, accessibility, and affordability of financial, human, intellectual, and even social capital (Gonthier and Chirita, 2019; Kürner, 2020).

Numerous organizations have adopted the corporate incubator/accelerator strategy, which has kind of evolved into an umbrella phrase for any program offering mentorship, networking opportunities, and finance (Gonthier and Chirita, 2019; Kürner, 2020).

Thus, large established organizations have started to set up internal incubation systems to allow their employees & external stakeholders to pursue and develop new

business ideas in order to develop novel products while pursuing incremental advantages (Huang et al., 2021; Tushman & O´Reilly, 1996).

Corporate incubators are the best platform to develop new capabilities and business models (Gonthier & Chirita, 2019). Understanding the importance and efficacy of such initiative is especially beneficial for major corporations considering the benefits of incubators/accelerators in stimulating intrapreneurial activity (Hirte, 2018). While the managers need to address the challenges associated with the implementation of a corporate incubator as it depicts a significant change in the overall company culture (Hirte & Sieger, 2018).

2.5 Role of middle managers in discovery & development of Intrapreneurs

Many scholars' others have argued that competitive advantage is the result of special organisational resources in a number of widely read papers titled "Competitive Advantage and Middle Management Strategic Roles (Kürner, 2020).

According to this perspective, the knowledge, and skills that organisation members have amassed collectively over time are the most significant strategic resources. Such human assets do not have organisational capabilities that can be purchase from the open market (Hirte & Sieger, 2018). These capabilities are hard or impossible to imitate because they are acquired over a long period of time and as part of intricate interpersonal processes. The term "core capabilities" refers to these capabilities when they successfully set a company apart from its rivals (Hirte & Sieger, 2018) and offer the potential for a more long-lasting advantage compared to specific products or technologies that are nestable.

Dynamic capability, or the capacity to create new capabilities, is thus in theory the aspect of an organisation that is most likely to be linked to long-term economic

performance (Hirte & Sieger, 2018) and middle managers, by virtue of their position, are crucial to the development of these skills.

According to studies by Wooldridge and Floyd, (1990), every market pulse reaches the organization via various channels, and middle managers are usually in a better position to identify, assess, and implement an appropriate course of action. The middle management is the intermediate management layer accountable to senior management and in charge of leading the lower pyramid in an organization (Roth, 2016). They are an organization's machinery that churns out actions and results in accordance with the corporate strategy.

Quinn (1985), was among the first to establish the strategic importance of middle management and their valuable contributions in the innovation life cycle management of the large corporation (Hornsby et al., 2002). Due to their proximity to employees and senior management, middle-level managers play an influential role as mediators in enabling and accelerating transformation within an organization (Blanka, 2019; Kuratko et al., 2005).

As stated by Hisrich et al. (2017), intrapreneurship necessitates an intrapreneurial ecosystem within an enterprise and middle-level managers plays a crucial role as enablers to drive intrapreneurial activities within the business, based on the organizational orientation & commitment to intrapreneurship (Blanka, 2019; Guven, 2020).

Since Clayton Christensen popularized disruptive innovation theory in his book "The Innovators Dilemma" in the 1990s, it has been widely addressed in literature by many scholars (Sadiq & Hussain, 2018). It states that an organization's success, or failure in such a dynamic environment may be determined by the managers' competency, intuition, and risk-taking abilities (Henderson, 2006; Sadiq & Hussain, 2018; Vecchiato, 2016; Yu & Hang, 2010).

The roles of middle managers have been defined as: promoting new strategic alternatives, synthesizing, and communicating key priorities, facilitating adaptation and

organizational development, and executing the strategy while managing changes (Floyd & Wooldridge, 1997) .

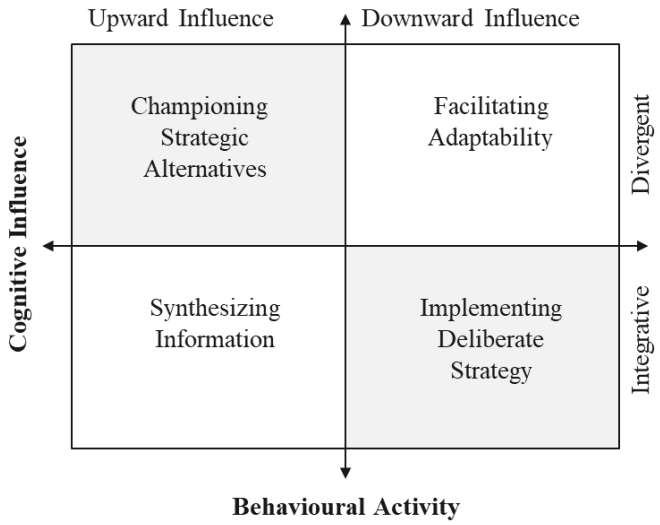

Figure 6: A Typology of Middle Management Roles in Strategy

Adapted from: (Floyd & Wooldridge, 1993).

It is widely contended by numerous experts that competitive advantage stems from distinctive organizational resources. From this perspective, the paramount strategic assets consist of the aggregate knowledge and abilities amassed by members of the company throughout time. The organizational competencies linked to these human resources are not commodities available for purchase in the open market, rather It is acquired gradually through intricate interpersonal procedures, these qualities are inherently challenging, if not unfeasible, to replicate (Floyd & Wooldridge, 1993). Core competences are the distinguishing factors that set a company apart from its rivals. When contrasted with individual items or technologies that are replicable, capabilities provide the promise of a

more enduring competitive edge. Fundamentally, the capacity for dynamic capability, which pertains to the aptitude for cultivating fresh competencies, stands out as the characteristic of firms that is most apt to correlate with sustained economic success (Floyd & Wooldridge, 1993).

Through promoting, synthesizing, and facilitating, middle managers surpass, or even disregard, the plans ingrained in the intentional strategy of top management. Arguably, the most prevalent strategic function is the execution of the directives set forth by senior management. At this juncture, the strategic impact hinges on the adeptness of middle managers in deploying current resources with efficiency and efficacy. Indications point towards a growing disparity between plans and actions, although this discrepancy is frequently linked to the resistance of middle management. Our study indicates an additional rationale (Wooldridge & Floyd, 1990).

As cited by Sadiq and Hussain (2018) , more often the essential framework of strategic ideas is formed at the middle and lower tiers of hierarchical organizations (Yu & Hang, 2010). According to studies, the position of front-line managers has evolved from implementers to a key source of entrepreneurial ventures over time (Radaelli & Sitton-Kent, 2016; Sadiq & Hussain, 2018). Several research experts have emphasized the importance of this ever-changing role over the years (Sadiq & Hussain, 2018).

For example, frontline managers are proactive in establishing strategies, according to the research by Zimmermann et al. (2018). Likewise, another study on employee support for organizational change indicated that change driven by middle managers garners more support from employees than those triggered by top executives or business leaders (Heyden et al., 2017; Sadiq & Hussain, 2018). While several other scholars have highlighted the importance of middle management for fostering agility and transformation, particularly in

large organisation structures. As a result, middle managers' attitude and initiatives have a significant impact on the success of any organisational change initiatives.

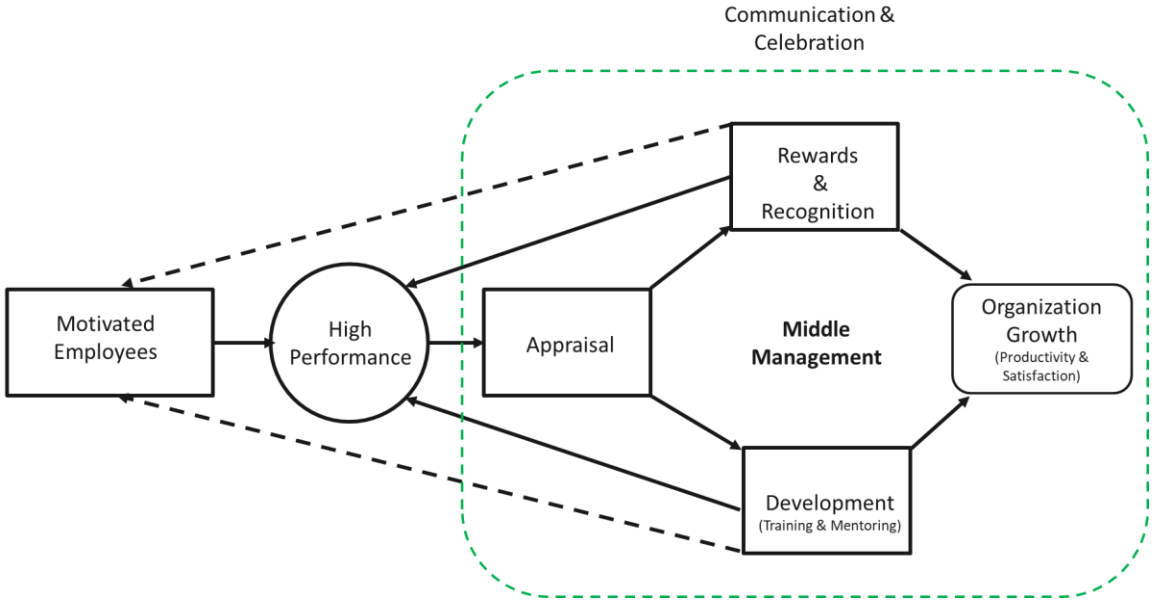

Figure 7: Middle Management Role in Stimulating Organization Growth

In this context, the middle managers' role needs to be re-assessed to equip them with the requisite skills, tools, and methodologies to foster cooperation, collaboration, and nurture such an ecosystem to flourish (Hirte, 2018).

This leads us to understand that, in addition to proactively establishing a competitive edge for the firm, a solution to incumbent enterprises' failure in a dynamic market may have a foothold in the organization's middle and lower decision-making layers (Sadiq et al., 2021). Hence, there is a need to explore and leverage the strategic role of managers in the middle and lower tiers to foster intrapreneurship (Sadiq et al., 2021).

2.6 Summary

Innovation, it may sound fashionable and glamorous, however its easier said than done. Leading or doing innovation in large organizations can feel like being on an island (Balmaekers, 2021) . As cited by (De Pree et al., 2018), firms are by definition intended to promotes command and routine “they are inhospitable environments for innovation” as described by Levitt (2002). The average age of a firm in the Standard and Poor's 500 Index was under 20 years, down from 35 years in the 1990s, and is anticipated to fall even further to 12 years by 2027, so companies must either “disrupt or be ready for disruption” (De Pree et al., 2018). As a result, corporate venture, incubators, accelerators, hackathons, and other initiatives to unlock innovation and entrepreneurial capacity have emerged (De Pree et al., 2018).

Every company requires new ideas to survive and grow profitability and, hence, it must find several ways to tap and harness the entrepreneurial talent (Mansanta, 2019). As affirmed by Hamel (2002) “Intrapreneurship is a potent tool for nurturing innovation and enhancing companies’ profitability.” Organizations that aspire to constantly innovate, need innovation professionals: intrapreneurs, to drive the functions of discovery and development transcending from initiation through incorporation (Corbett, 2018).

The World Economic Forum predicts that ‘Analytical thinking’, and ‘Innovation’ will be the two skills with the highest demand in 2025. Today’s workforce, particularly younger generations are demanding a new way of working. They understand that workforce across the globe is entering a new era powered by technology, purpose, and exponential change (De Pree et al., 2018). They want to be actively involved in it: "they sense and expect that their positions are symbiotic with the corporation rather than servile."

As per the World Economic Forum (2019) *Global Shapers Annual Survey 2018*-19, majority of younger professionals reinforced that an opportunity to “make a difference

in society continues to be the top factor they look for in a job as stated in 2015-16 survey (De Pree et al., 2018). However, it goes beyond what the business needs. Meeting people's aspirations is another goal (George, 2021). Today's workforce is dominated by people who want to take control of their own careers. According to one of study conducted by Deloitte (2016), the loyalty of business leaders is typically low as they are in quest for better opportunities to amplify their career aspirations (George, 2021).

According to a different Forbes-cited study, current employees rather than entrepreneurs were responsible for the majority of successful innovations in recent decades (Kumar, 2021). The Post-It sticky notes, iPhone, Mac, Google AdSense, and Gmail are just a few examples of the flagship innovation emerging out of the most renowned organization due to their rich intrapreneurial ecosystem (Taparia, 2019).

Companies that take advantage of entrepreneurial talent across all levels today, will undoubtedly have a competitive advantage in the future (Smet et al., 2021). Given the current state of affairs, developing intrapreneurship provides the ideal opportunity to attract and motivate the workforce to do their best and collaborate on innovation for the mutual benefit to meet their career aspirations and the firm’s growth & profitability, resulting in a win-win situation for all (Taparia, 2019).

Therefore, rather than merely creating innovation jobs, businesses should develop innovation professionals, and many academics agree that a company's most valuable and crucial innovation asset is its people (Corbett, 2018).

So, the key to success would be to identify people with entrepreneurial mindset in a large organization and enable them with tools and process, encourage them with the freedom to experiment and test thereby creating a conducive environment for them to flourish (De Pree et al., 2018). This is one of the advantages of having an intrapreneur: they are familiar

with corporate culture while also possessing an entrepreneurial mindset (De Pree et al., 2018).

Teece (2016), claims that a deeper knowledge of dynamic competencies, in particular the role of middle managers with entrepreneurial orientation, contributes to a solid foundation to establish robust innovation ecosystem. Concurrently, intrapreneurial managers are key in achieving better resource allocation amid extreme uncertainty, as well as contributing to innovation and business performance (Klofsten et al., 2021).

This comes as no surprise, as intrapreneurship has been correlated to greater sales and profitability as a result of improved growth and performance (Abou-Moghli & Al-Abdallah, 2018; Deprez et al., 2018)

Authors have found that the middle and lower-level managers are influenced by a variety of organizational elements to undertake strategic actions (Sadiq & Hussain, 2018). Therefore, the role of middle and lower-level managers in a modern organization is critical to its survival (Sadiq et al., 2021) . Their actions shape the strategic drive that an organization may need to develop new core competencies to surpass the competition in the longer run (Sadiq et al., 2021).

Hence, large enterprises should think of Innovation as the capacity that demands organization-wide support (Corbett, 2018). By leveraging the strategic role of middle management in identifying and developing intrapreneurs across the organization it can establish a self-sustaining innovation ecosystem to achieve the competitive edge (Corbett, 2018).

CHAPTER III:

METHODOLOGY

3.1 Overview of the Research Problem

Innovating and being entrepreneurial is crucial for any organization to maintain consistent performance in today's ever-changing business environment. However, there still needs to be a greater understanding of how certain organizational factors can promote such activities within a company. This knowledge gap also extends to the role of middle-level managers (MLMs), whose influence on strategic initiatives may be critical but needs to be better explained in the literature. While strategic activities are believed to be the bridge between organizational structures and outcomes, the managerial actions that contribute to successful mediation must be more clearly defined. Additionally, with the emergence of technological opportunities, it is essential to investigate their potential effects on the relationship between organizational strategies and performance metrics. Lastly, we need to explore the influence of demographics and organizational variables on innovation, technological adaptation, MLM strategic influence, and organizational success in greater detail. This research aims to analyze these complex relationships and provide a comprehensive understanding of the factors that contribute to a thriving and innovative organizational environment.

3.2 Operationalization of Theoretical Constructs

Independent Variables: Organisational Factors

Organisational Culture and Support (OS): Reflects the degree to which the organisational environment is conducive to supporting the strategic and operational goals of the company. Developmental Support and Work Design (WD): This represents the

extent to which the organisation invests in the growth and development of its employees and the efficiency of work design.

Resources and Constraints (RC): Captures the availability of resources and the presence of constraints that affect strategic execution within the organisation.

Facilitating Mechanism (FM): Encompasses the systems and processes that facilitate or impede strategy implementation.

Strategic Behavior Renewal (SBR): Indicates the organisation's capacity to renew and adapt its strategic behaviors in response to internal and external changes.

Dependent Variable: Organisational Performance

Organisational Performance (OP): Measured by (Dess & Robinson, 1984), this variable signifies the outcome of the organisation's strategic efforts, encompassing financial performance, market position, and operational efficiency.

Moderating Variable: Technological Opportunities

Technological Opportunities: Defined by Zahra (1996), this variable moderates the relationship between the independent variables and the dependent variable, influencing how technological advancements can alter the impact of organisational factors on performance.

Mediating Variables: Middle Management Strategic Influence

Upward Influence: The ability of middle managers to influence strategic decisions and direction by communicating upwards within the organisational hierarchy.

Downward Influence: The capacity of middle managers to disseminate and implement strategic goals and initiatives downwards to their teams.

Illustration of the Theoretical Model

The model begins with the independent variables, which are the different aspects of organisational factors identified by Hornsby et al., (2002). Each of these factors — OS,

WD, RC, FM, and SBR — directly influences the dependent variable, Organizational Performance, as posited by Dess & Robinson, (1984). Technological Opportunities further moderate the impact of these independent variables on Organizational Performance. This suggests that the relationship between organisational factors and performance outcomes can vary based on technological advancement and opportunities available to the organisation.

Additionally, the model includes mediators in the form of Middle Management Strategic Influence (both upward and downward), following the conceptualisation by Floyd & Wooldridge (1997). These mediating variables provide a pathway through which the independent variables can indirectly affect the dependent variable, highlighting the nuanced role of middle management in shaping organisational outcomes.

This theoretical model provides a comprehensive representation of the relationships between various organisational factors and performance outcomes, considering the moderating effects of technology and the mediating role of middle management. It sets the stage for empirical testing of how different elements within an organisation interact to drive performance, with particular attention to the strategic influence of technology and middle management levels. Using a Likert scale to measure these constructs allows for quantitative assessment and the application of statistical methods to validate the proposed relationships.

Table 1: Constructs or Variables used in the Model.

Sn	Constructs	Variable's role in the model	PLS-SEM Technique
1	Organizational factor Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2002).	Independent variables	Measurement model: To test each construct reliability and validity. Model quality Metrics: R square, F square, VIF Path Model: To test each path stats. Sign: Bootstrapping, & t test
1.1	Organizational Culture and Support (OS)		
1.2	Developmental Support and Work Design (WD)		
1.3	Resources and Constraints (RC)		
1.4	Facilitating Mechanism (FM)		
1.5	Strategic Behaviour Renewal (SBR)		
2	Organizational Performance Dess, G. G., & Robinson Jr, R. B. (1984).	Dependent variable	
3	Technological opportunities Zahra, S. A. (1996).	Moderating variable	
4	Middle management strategic influence - Floyd and Wooldridge (1992)	Mediators	
4.1	Upward strategy		
4.2	Downward strategy		

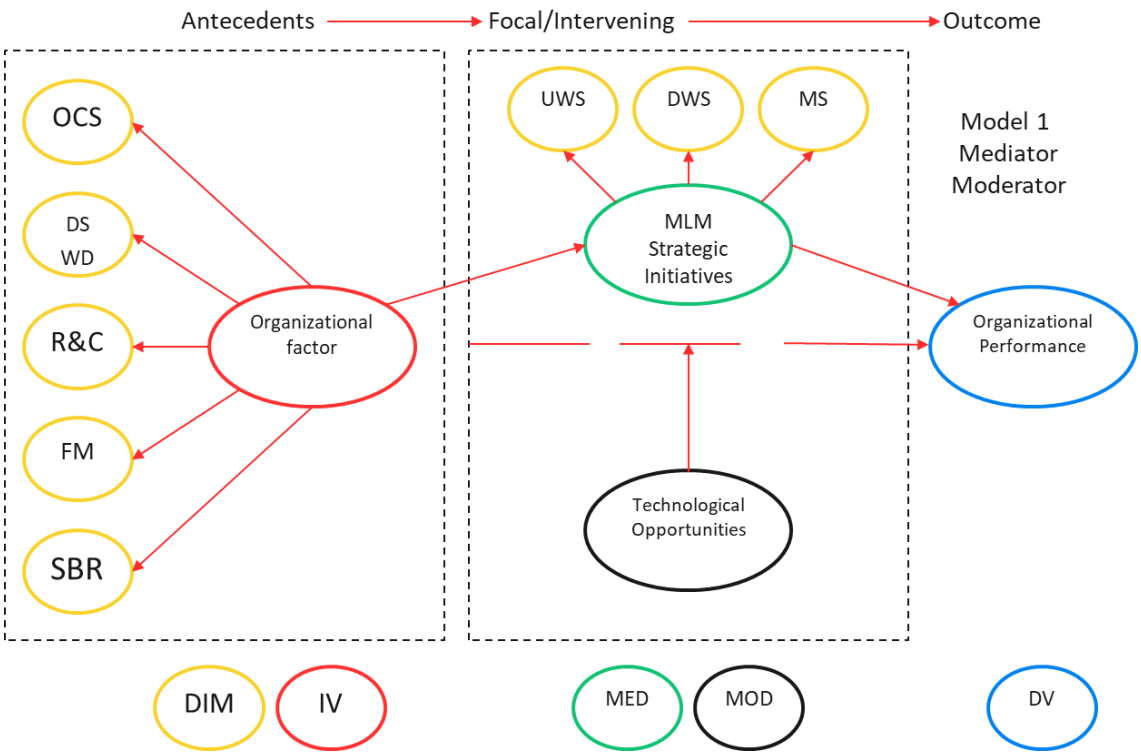

Figure 8: Constructs or Variables used in the Model

3.3 Research Purpose and Questions

The thrust of this inquiry lies in elucidating the key elements that drive innovation and intrapreneurship within organisation. The investigation is anchored in the following research questions, each dissecting a critical aspect of organisational dynamics and strategic management:

Organisational Factors and Innovation Support:

The research initiates by probing into the organisational factors that are instrumental in fostering an environment conducive to innovation and intrapreneurship. This question intends to uncover the array of cultural, structural, and procedural elements within an organisation that collectively create a fertile ground for novel ideas and internal

entrepreneurial ventures. By identifying these factors, the study provides actionable insights into how organisations can strategically enhance their innovative capacity.

Middle-Level Managers' Role in Strategic Initiatives:

The second question shifts the focus to the role of middle-level managers (MLMs) in influencing and shaping strategic initiatives. Given their pivotal position within the organisational hierarchy, MLMs are often at the nexus of strategic decision-making and implementation. This query delves into the extent of their influence and the specific actions they undertake that significantly impact the organisation's strategic trajectory.

Strategic Activities as Mediators:

Exploring the mediating role of strategic activities, this question examines how upward, downward, and managerial styles of strategic activities serve as conduits through which organisational factors translate into performance outcomes. The inquiry dissects how these directional strategic flows and managerial styles act as intermediaries, potentially enhancing or diluting the effects of organisational factors on overall performance.

Technological Opportunities as Moderators:

With technology being a critical factor in contemporary business landscapes, the fourth question investigates the moderating effect of technological opportunities on the relationship between various strategies and organisational performance. It seeks to determine whether the presence of technological advancements can amplify or temper the effectiveness of strategic initiatives in improving performance metrics.

Impact of Demographics and Organisational Variables:

The final question posits that demographics and organisational variables may significantly influence the organisational factors, technological opportunities, MLM strategic influence, and, ultimately, the organisational performance. This comprehensive

question explores how these background variables shape the organisational environment and the strategic processes, potentially leading to varying outcomes in organisational performance.

Based on the above discussion, research questions are formulated:

RQ1. What organisational factors play a vital role in supporting innovation and intrapreneurship in the organisation?

RQ2. What is middle-level managers' (MLM) role in influencing strategic initiatives within an organisation?

RQ3. What strategic activities (upward, downward, managerial style) are enacted as mediators between organisational factors and performance?

RQ4. Do technological opportunities mediate between the type of strategies and organisational performance?

RQ5. Does demographics and Organisational variables play a vital role in Organisational factors, Technological opportunities, MLM Strategic influence and Organisational performance?

Each research question is crafted to peel back the layers of complex organisational processes and the multifaceted role of strategic management. Through this investigation, the study aspires to contribute a nuanced understanding of how innovation and strategic actions are cultivated and sustained in organisational settings, offering a foundation for future research and practical applications in strategic management and organisational development.

3.4 Research Design

Post-positivism and Quantitative Inquiry: This study is anchored in the post-positivism paradigm, which acknowledges the possibility of error in human understanding

and embraces a rigorous scientific approach to minimise subjectivity. It accepts that absolute truth can never be fully attained but proposes that researchers can approach an objective understanding of the world through careful measurement and observation. Embracing this paradigm, the research method employed in this study is primarily quantitative, aimed at converting nuanced qualitative constructs into objectively measurable data. By utilising a 5-point Likert scale, subjective experiences and perceptions are quantified, allowing for the statistical analysis of variables that were once considered abstract. This conversion from qualitative to quantitative is not just a methodological choice but a philosophical stance on how knowledge is constructed, validated, and generalised within the context of the study's objectives.

Descriptive Research Design

This study's research design is descriptive, systematically capturing the phenomena as they exist in their natural setting. This design is meticulously planned to describe the range of behaviours, attitudes, and attributes within the targeted population, offering a snapshot of the current state of organisational factors, technological opportunities, and strategic influence exerted by middle management. Descriptive statistics will serve as the foundation, providing a comprehensive sample profile and facilitating a deeper understanding of the distributions and central tendencies within the data. This approach sets the stage for subsequent inferential analysis and allows the study to draw inferences about the potential relationships or causal pathways among the constructs of interest. By describing the variables in detail, the study lays the groundwork for the application of advanced statistical techniques such as PLS-SEM, which will be used to test hypotheses and model complex relationships.

3.5 Population and Sample

Before commencing with data collection, the study sought the expertise of seasoned professionals to understand the role of middle-level managers better and determine the appropriate target population for the survey. Given the reliance on a survey-based methodology for data gathering, the sample design was pivotal to the research's success and validity. The study's unit of analysis comprises managers at various levels within the organisational hierarchy, with particular emphasis on those in middle-level positions. This strategic focus is due to middle-level managers' integral role in translating upper management's strategic directives into operational success, as they stand at the intersection of high-level planning and day-to-day execution.

The study employed a simple random probability sampling design, ensuring that each potential participant had an equal chance of being selected. The sample size calculation yielded a range of 385 to 600 participants, adhering to the proportion-based sample size determination formula:

$$n=(Z^2\times p\times(1-p)/ E^2)$$

where:

n = sample size

Z = Z-value (the number of standard deviations from the mean)

p = estimated proportion of an attribute that is present in the population

E = margin of error

3.6 Participant Selection

For this study, a robust sample of 404 senior professionals was chosen over six months, providing a substantive foundation for the research conclusions. This sample size was significant enough to ensure a diverse representation of managerial perspectives,

encompassing a variety of departments, functions, and roles. By doing so, the study was able to capture a broad spectrum of insights into the differing impacts and perceptions of organisational strategies and practices across multiple levels of management.

The sample not only spanned various managerial positions but also included a range of organisations differentiated by sector, size, and headquarters location. This breadth in sampling was crucial for a comprehensive analysis of the data, allowing for the exploration of sector-specific trends, organisational size implications, and geographical influences on management practices and perspectives.

The deliberate choice of a six-month sampling period was instrumental in capturing the dynamic nature of management behaviour and attitudes, which may fluctuate across different business cycles and evolve with organisational changes. This timeframe allowed managers to fully engage with and reflect upon various strategic initiatives, technological advancements, and organisational transitions, providing a depth of context to their responses. Such a time-extended approach to data collection ensured that the resulting dataset was rich and accounted for potential temporal variations in strategic initiatives and managerial influence, thereby enhancing the study's longitudinal robustness and the interpretive value of its findings.

3.7 Instrumentation

Questionnaire construction: The survey instrument is a critical tool in this study's methodological arsenal, designed to capture nuanced data across a spectrum of organisational dynamics within the management context. The questionnaire is meticulously structured into three primary sections: Demographic Factors, Organisational Factors, and Study Constructs, each aimed at dissecting the multifaceted nature of organisational behaviour and strategic management influence.

The study captured data through a questionnaire or instrument. The questionnaire contains three sections: namely, Demographic factors, organisational factors, and study constructs, which included. Organisational factor Hornsby et al. (2002) included OS-Organisational culture and support (Independent), WD-Developmental support and work design (Independent), RC-Resources and Constraints (Independent), FM-Facilitating mechanism (Independent), SBR-Strategic Behaviour Renewal (Independent), Organizational Performance Dess & Robinson (1984). (Dependent), Technological opportunities Zahra (1996). (Moderator), Middle management strategic influence – Upward, Downward and Managerial style Floyd & Wooldridge (1997) (Mediators). All the DV, MV, and IV were measured through a 5-point rating Likert scale.

Section I: Demographic Factors

This initial section establishes a foundational understanding of the respondent's background, facilitating a demographic segmentation of the data for subsequent comparative analysis. The demographic factors encompass essential personal and professional attributes, such as age, gender, educational background, and work experience. By capturing this data, the study can control for demographic variability and more accurately attribute findings to the organisational factors in question.

Section II: Organisational variables or background

The questionnaire meticulously captures essential organisational background variables to understand the context within which respondents operate comprehensively. It seeks to ascertain the 'Company Status,' differentiating between public and private, as this status can significantly influence internal processes and culture. Respondents are also asked to identify the 'Sector' their company belongs to, such as finance, technology, or healthcare. This helps to contextualise the data within industry-specific norms and practices. Another critical variable is 'Company Size in Terms of Employees,' where

respondents indicate whether they work for a small, medium, or large organisation, providing insights into the organisational structure and resources available. Finally, the 'Company Headquarters Located' section aims to pinpoint the geographical and regional base of the company, acknowledging that location can impact business operations, strategic opportunities, and the role of middle-level managers. Collecting this information allows for a nuanced analysis of how organisational characteristics influence talent management dynamics and employee engagement across diverse corporate landscapes.

Section III: Study constructs

Organisational Culture and Support (OS)

Delving into the organisational ethos, this subsection gauges how much a supportive culture permeates the entity, recognising it as a potentially powerful independent variable influencing myriad corporate outcomes. Items here measure the employee's perception of the organisation's commitment to fostering an environment conducive to strategic innovation and support.

Developmental Support and Work Design (WD)

The focus is on how the organisation's developmental support and work design enable or hinder employee growth and strategic engagement. This segment examines whether the organisational structures effectively promote employee development aligned with strategic objectives.

Resources and Constraints (RC)

Assessing the resources available to employees for executing strategic initiatives, along with the constraints that may impede progress, this section investigates the organisation's capacity and limitations in resource allocation as independent variables influencing strategic behaviours and outcomes.

Facilitating Mechanism (FM)

In this part, the questionnaire probes the mechanisms that facilitate strategy execution within the organisation. It examines the processes, systems, and frameworks that enable or obstruct strategic implementation.

Strategic Behavior Renewal (SBR)

To stay competitive, organisations must renew their strategic behaviours continuously. This section evaluates how frequently and effectively an organisation revisits and updates its strategies to adapt to the ever-changing market conditions.

Organisational Performance (OP)

A critical dependent variable, organisational performance, is measured here regarding perceived effectiveness, efficiency, and outcomes. This section taps into the respondents' views on the organisation's performance trajectory, using the seminal work by Dess & Robinson (1984) as a reference point.

Technological Opportunities (Moderator)

Technology often plays a pivotal role in shaping strategic opportunities. This subsection measures the moderating effect of technological advancements and the organisation's ability to capitalise on these opportunities for strategic gain.

Middle Management Strategic Influence (Mediators)

Floyd & Wooldridge (1997) emphasised the nuanced roles of middle managers in strategic processes. As such, this section addresses the mediating effects of middle management's upward, downward, and managerial style influences, capturing how these roles shape the flow and implementation of strategic initiatives.

Measurement Scale

All constructs, whether independent, dependent, or mediating variables, are measured using a 5-point Likert scale, providing a quantifiable means of capturing

perceptions and attitudes. Respondents are asked to rate their level of agreement with various statements, ranging from 'Strongly Disagree' to 'Strongly Agree.'

3.8 Data Collection Procedures

The data collecting procedure refers to the method by which the study aims to obtain the data it requires. This academic study aims to collect primary data, which will be gathered using a customized questionnaire in accordance with the research objectives. The self-completion questionnaire will be produced in an online electronic version and disseminated through digital and social media channels in an effort to increase response rates. While maintaining anonymity, the respondent's privacy will be protected to serve the dual purpose of boosting the overall participation and gathering the reliable data.

3.9 Data Analysis

The data analysis for this study was meticulously orchestrated to glean a deep understanding of the demographic distribution, organisational background variables, and the study constructs, ensuring a comprehensive evaluation of the data collected.

Demographic Distribution and Organisational Background Variables:

The analysis commenced with a thorough frequency analysis of the demographic characteristics of the respondents. This initial step was crucial to establish a demographic profile of the managerial participants, such as age, gender, educational background, and years of experience. Similar frequency analyses were conducted for organisational background variables, like company size and sector, to provide a detailed depiction of the organisational contexts from which the data was drawn. These frequency distributions offered the first layer of insight into the sample's composition, setting the stage for more nuanced analyses.

Descriptive Analysis of Study Constructs:

Descriptive statistics were then employed to delve into the study constructs. This involved thoroughly examining each construct, including Organizational Culture and Support, Technological Opportunities, and Middle Management Influence. Descriptive analysis was applied at three levels: the overall construct, its underlying dimensions, and the individual items that comprise each dimension. This granular approach provided a multifaceted view of how each construct is perceived across the sample, highlighting areas of strength and opportunities for development within the managerial ranks.

Reliability Analysis:

A reliability analysis was conducted for each dimension to ensure the internal consistency of the constructs. This involved computing Cronbach's alpha for the dimensions within each construct, with a threshold set to determine acceptable reliability. A high Cronbach's alpha indicated that the items within a dimension reliably measured the same underlying concept, affirming the robustness of the constructs used in the study.

Inferential Statistics:

Upon establishing the reliability of the constructs, inferential statistical tests were conducted. T-tests and ANOVAs were used to explore potential differences in perceptions of the study constructs across selected demographic and organisational background variables. These tests aimed to identify significant variations in the data linked to specific demographic groups or organisational contexts, offering insights into how different factors may influence perceptions of organisational effectiveness, the role of technology, and the strategic influence of middle-level managers.

Advanced Statistical Techniques and Study Constructs

Building on a solid descriptive base, the study progresses to more sophisticated levels of analysis by employing advanced statistical techniques like PLS-SEM. This

methodological step is crucial for testing the study's hypotheses and unravelling the causal paths among the constructs. PLS-SEM is particularly suited for this research because of its robustness in handling complex models and ability to work with small to medium-sized samples. It provides the means to assess the direct and indirect effects of organisational factors such as culture, support, resources, and strategic behaviour renewal on organisational performance. Moreover, it enables examining how middle management's strategic influence and technological opportunities may mediate or moderate these relationships. By integrating the principles of probability sampling and using a well-structured questionnaire to gather data, the study ensures that the results are statistically valid and reflective of the broader population. In essence, the research methodology combines the clarity and precision of quantitative analysis with the nuanced understanding of descriptive research, all within the robust post-positivism framework, to offer empirically grounded and theoretically enlightening insights.

3.10 Research Design Limitations

While this study provides significant insights into the strategic roles of middle-level managers and organizational practices, it is essential to acknowledge its limitations. Although rigorous, a simple random probability sampling method may only partially account for the complex stratification within the managerial hierarchy or the unique contexts of different organizations. Additionally, the reliance on self-reported data through surveys may introduce response biases, as participants might provide socially desirable answers or need more self-awareness of their performance and influence.

Secondly, though the sample size of 404 senior professionals was robust, however it still needs to capture the full diversity of management practices across the entire industry, especially considering the dynamic nature of the private sector. There may be a need to

collect the data for more than six months to observe behaviour and attitudes across various business cycles to witness the long-term effects of strategic initiatives and organizational changes. Furthermore, focusing on managers from a specific tier may overlook the nuanced interactions between different levels of the organizational structure.

Technological changes, a key variable in this study, are rapid and often unpredictable, so the findings might only partially represent the evolving landscape. Lastly, while the study attempts to generalize findings, the results are confined to the specific sectors, sizes, and locations of the organizations included in the sample, which may limit the applicability of the conclusions to other contexts or industries. These limitations should be carefully considered when interpreting the study's findings and should inform the direction of future research.

3.11 Conclusion

This research explored the complex terrain of organizational dynamics, probing the multifaceted role played by internal factors, middle-level managers, strategic activities, and technological advancements in fostering innovation and bolstering organizational performance. The study embraced a hypothetico-deductive approach anchored in quantitative research by employing a post-positivism paradigm. The investigation was carried out through a meticulously designed survey, harnessing questionnaire-based data collection to ensure precision and reliability in the results. A robust body of hypotheses was rigorously tested using cutting-edge techniques like Partial Least Squares Structural Equation Modeling (PLS-SEM), ensuring analytical rigour.

The findings of this study not only offer a granular understanding of the catalytic effects of organizational factors and the strategic influence of middle-level managers but also elucidate the mediating role of technological opportunities in shaping organizational

outcomes. Additionally, the impact of demographics and organizational variables on these relationships was dissected, providing a comprehensive view of the innovation ecosystem within organizations. The entire research approach was meticulously crafted to substantially contribute to the current literature, filling pivotal knowledge gaps and offering empirical insights that could guide future strategic initiatives within organizations. The synthesis of advanced analytical techniques and a robust theoretical framework has allowed this research to cast a new light on the underpinnings of innovation and intrapreneurship, paving the way for further scholarly exploration and practical application in organizational studies.

CHAPTER IV:

RESULTS & FINDING

4.1 Introduction

Data analysis is a central component in the entirety of the research process, particularly its outcomes. It guides the direction of the research, aligning closely with the formulated research questions and hypotheses. These hypotheses are deeply rooted in existing literature, encompassing general management, strategic management, and human resource management.

Phases of Data Analysis

The data analysis segment of this study is categorized into three broad phases:

- **Phase 1: Demographic and Organizational Profiling**

  This phase involves demographic and organizational profiling, employing descriptive statistics and reliability tests to validate the data.

- **Phase 2: Hypothesis Testing**

  Utilizes statistical methods such as the T-test and ANOVA to test the formulated hypotheses.

- **Phase 3: Core Analysis through PLS-SEM**

  The primary focus of this phase is to test the body of the hypothesis using Partial Least Squares Structural Equation Modeling (PLS-SEM).

Study Constructs and their Analysis

The study incorporates various constructs, each undergoing rigorous analysis:

• **Organizational Factors**: Including culture and support (OS), developmental support work design (WD), resources and constraints (RC), facilitating mechanisms (FM), and strategic behavioural renewal (SBR).

• **MLM Strategic Initiatives**: This encompasses upward (UP) and downward (DW) strategies and Managerial style (MS).

• **Technological Opportunities (OT) and Organisational Performance (OP):**

Each of these constructs has been subjected to reliability tests, computation of items, dimensions, and descriptive statistics. A comprehensive exploration of the correlation among these constructs has also been conducted.

T-test, ANOVA, and PLS-SEM

Subsequent analyses involve the t-test and ANOVA, linked to the study constructs through demographic and organizational variables. Notably, some variables demonstrated significant differences. The core of the hypothesis is then tested through PLS-SEM, with organizational factors serving as predictors. In this model, MLM strategies act as mediators, technological opportunities as moderators, and organizational performance is considered the outcome variable. The results indicate that all the paths in the model are statistically significant.

This detailed approach to data analysis ensures a comprehensive understanding of the interplay between organizational factors, MLM strategies, technological opportunities, and their impact on organizational performance. The significance of each path in the PLS-SEM model underscores the intricate relationships that govern organizational dynamics in the context of Strategic management, Leadership, and Human resource management (HRM).

4.2 The Research

Table 2: Demographic Profile

Gender:

		Count	Percentage
Gender	**Male**	306	75.74
	Female	98	24.26

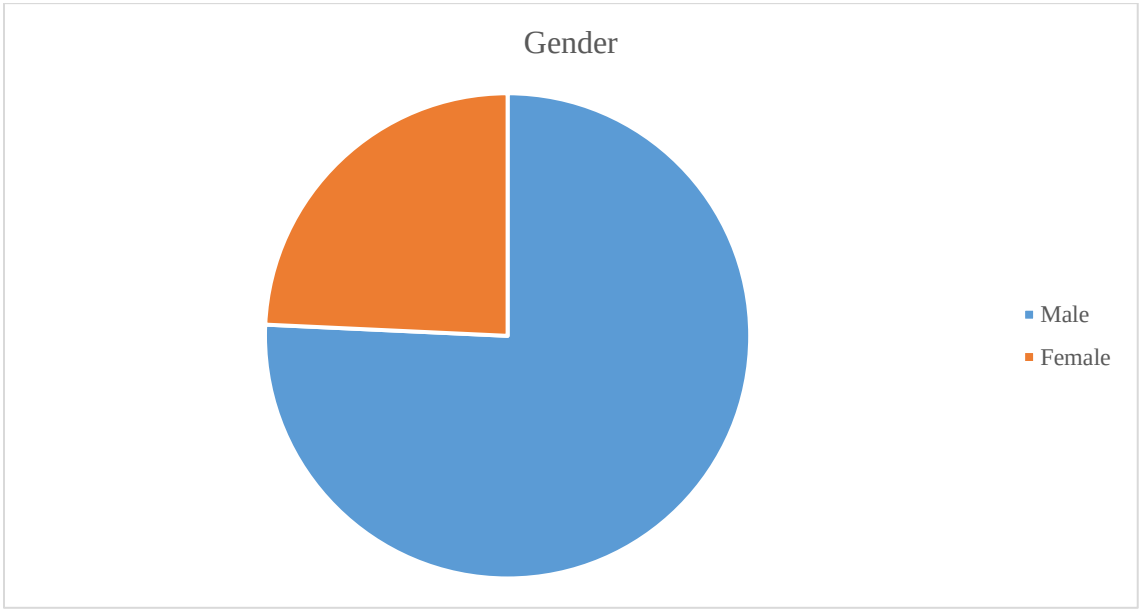

Figure 9: Gender Mix

Inference:

From this information, we can infer that the total number of individuals in the dataset is the sum of the counts for male and female, which is 404 (306 males + 98 females). These percentages represent the relative distribution of males and females within the dataset.

Age

		Count	Percentage
Age	**41-50 yrs**	164	40.59
	31-40 yrs	160	39.6
	51+ yrs	48	11.88
	< 30 yrs	32	7.92

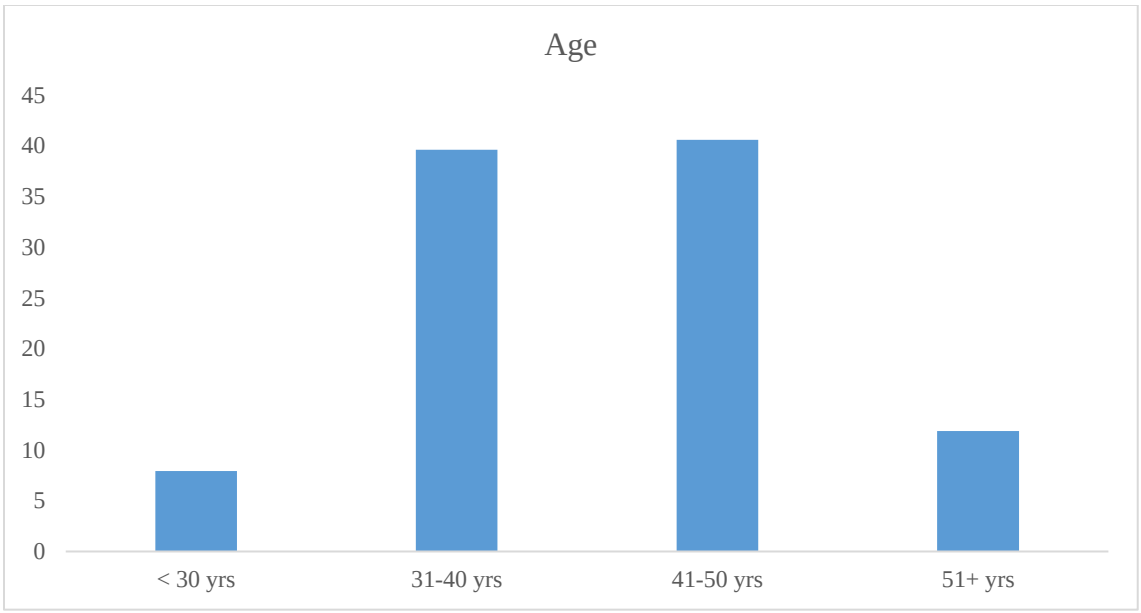

Figure 10: Age

Inference:

In the category of < 30 yrs there are 32 individuals below the age of 30, accounting for around 7.92% of the total. In 41-50 yrs there are 164 individuals in this age group, constituting approximately 40.59% of the total. In case of 31-40 yrs there are 160 individuals in this age group, making up about 39.6% of the total. In the category of 51+

yrs there are 48 individuals aged 51 years and above, representing approximately 11.88% of the total.

Educational Qualification

		Count	Percentage
Education	**Professional Degree (BTech/MBA/MBBS/CA etc.)**	288	71.29
	Post-Graduate	98	24.26
	Under Graduate	18	4.46

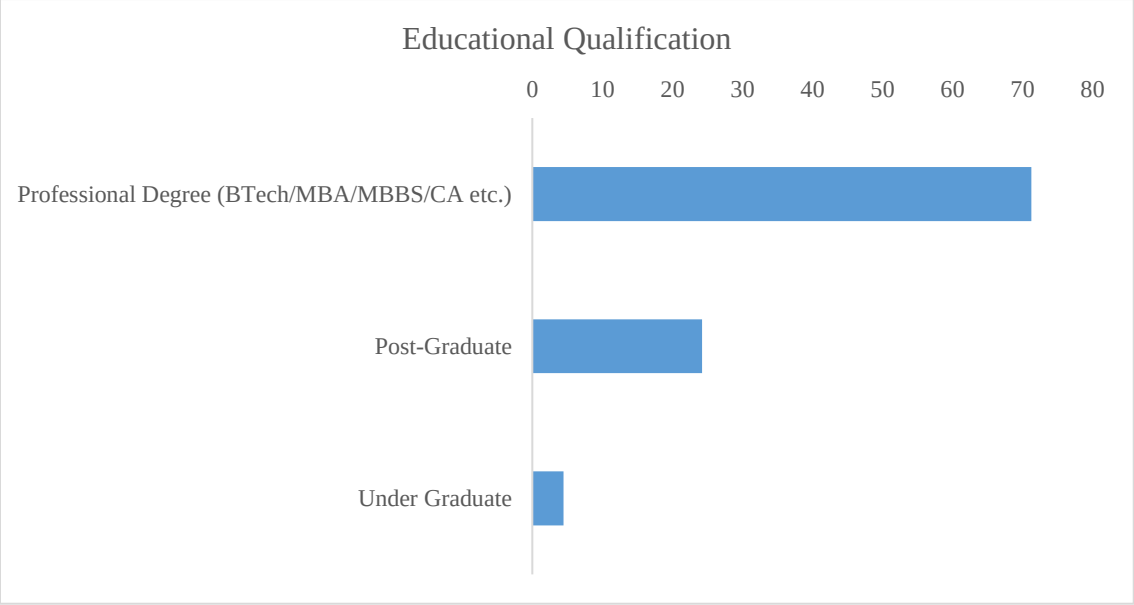

Figure 11: Educational Qualification

Inference:

In Professional Degree (BTech/MBA/MBBS/CA, etc.) there are 288 individuals with professional degrees, representing approximately 71.29% of the total. In the case of Post Graduate there are 98 individuals with post-graduate education, constituting about

24.26% of the total and in Under Graduate there are 18 individuals with undergraduate education, making up approximately 4.46% of the total.

Work Experience:

		Count	Percentage
Total Work Experience	< 5 yrs	18	4.46
	5 - 10 yrs	46	11.39
	11 - 15 yrs	84	20.79
	15 + yrs	256	63.37

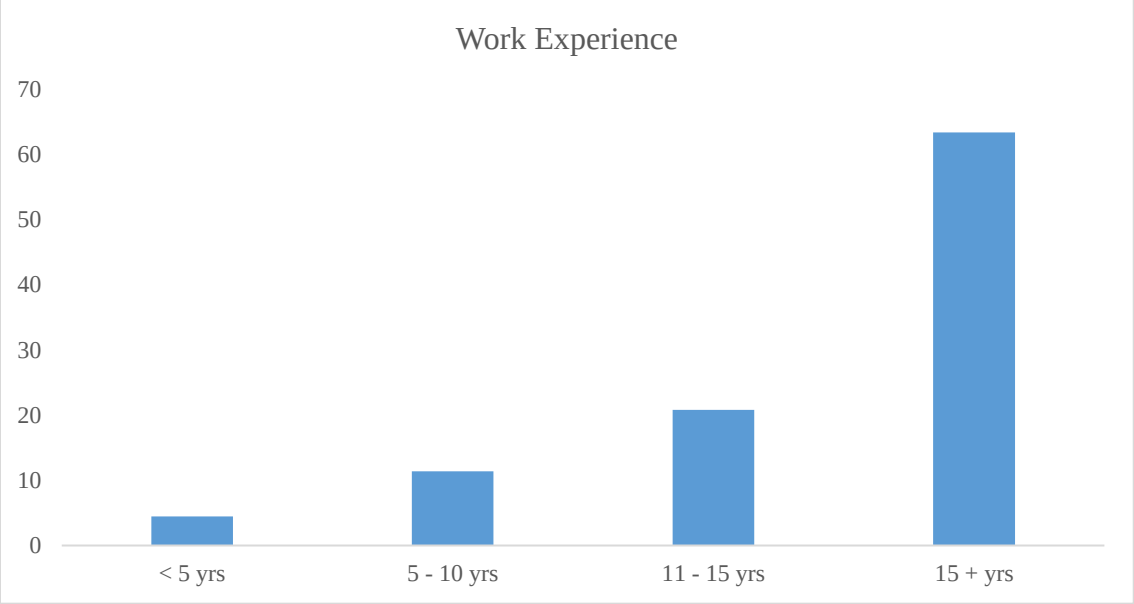

Figure 12: Work Experience

Inference:

In the category of < 5 yrs there are 18 individuals with less than 5 years of work experience, making up approximately 4.46% of the total. In 5 - 10 yrs there are 46 individuals with 5 to 10 years of work experience, representing about 11.39% of the total.

In the category of 11 - 15 yrs there are 84 individuals with 11 to 15 years of work experience, constituting around 20.79% of the total and in 15 + yrs there are 256 individuals with 15 years or more of work experience, making up approximately 63.37% of the total.

Organizational Level

		Count	Percentage
Organizational Level	**Middle mgmt. (I level and II level managers)**	156	38.61
	Operational level mgmt. (Project lead, Team lead)	144	35.64
	Top mgmt. (Unit Head/Sub-Unit Head)	60	14.85
	Executive mgmt. (CEO/COO/CMO/CHRO/MD)	44	10.89

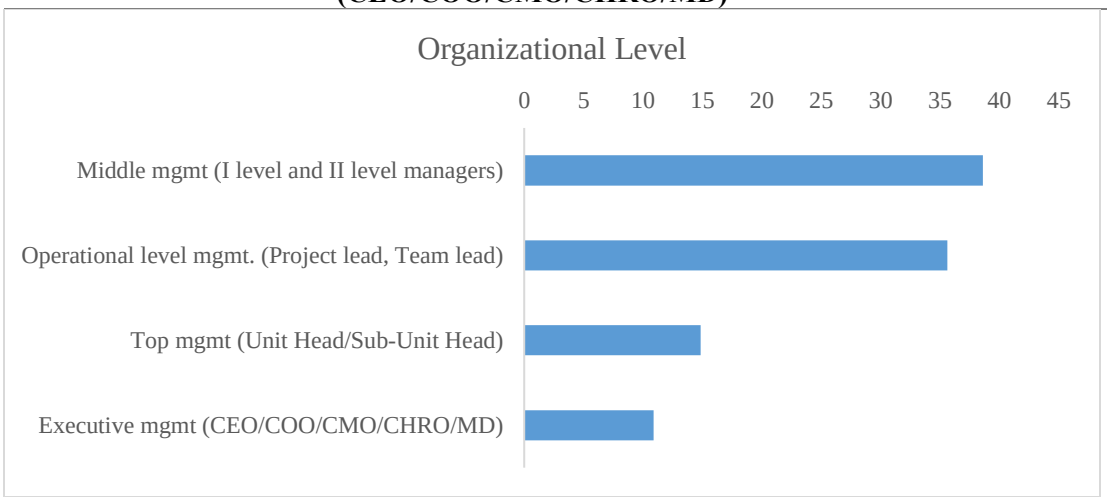

Figure 13: Organizational Level

Inference:

Middle mgmt (I level and II level managers) there are 156 individuals in middle management, constituting approximately 38.61% of the total. Operational level mgmt. (Project lead, Team lead) there are 144 individuals in operational level management, making up about 35.64% of the total. Top mgmt (Unit Head/Sub-Unit Head) there are 60 individuals in top management roles, representing approximately 14.85% of the total. Executive mgmt (CEO/COO/CMO/CHRO/MD) there are 44 individuals in executive management positions, accounting for around 10.89% of the total.

Company Status

		Count	Percentage
Company status	**Private Ltd.**	180	44.55
	MNC	176	43.56
	Public Listed	48	11.88

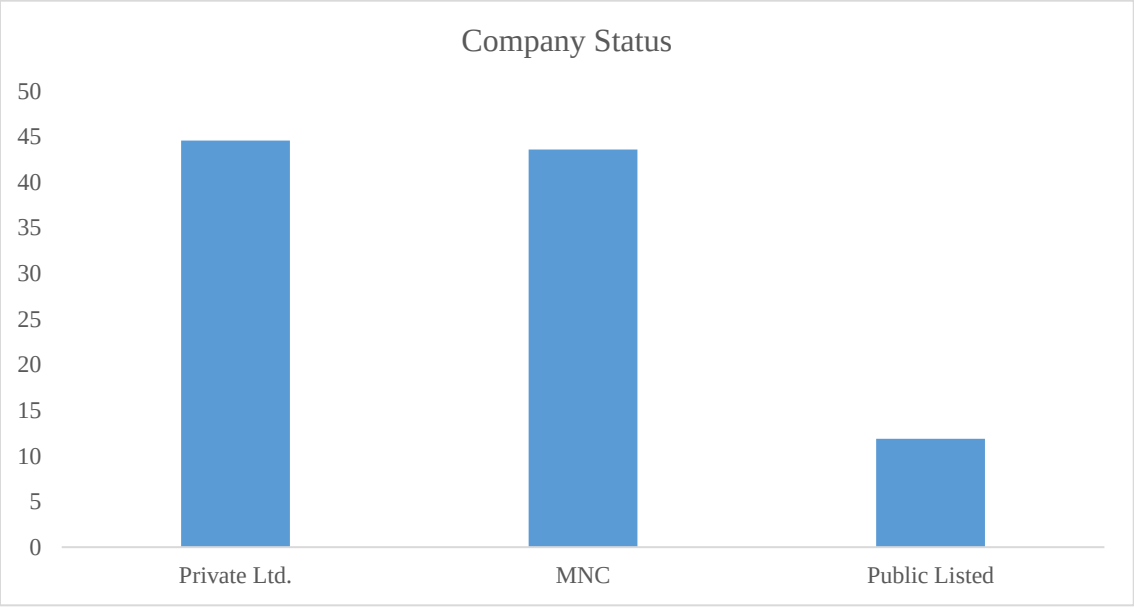

Figure 14: Company Status

Inference:

In Private Ltd. there are 180 individuals working in private limited companies, constituting approximately 44.55% of the total. With MNC (Multinational Corporation) there are 176 individuals working in multinational corporations, making up about 43.56% of the total. In Public Listed there are 48 individuals working in publicly listed companies, representing approximately 11.88% of the total.

Sector

		Count	Percentage
Sector	**Telecom/IT**	272	67.33
	Others	62	15.35
	Manufacturing	34	8.42
	Banking & Insurance	26	6.44
	Retail	6	1.49
	Pharma	4	0.99

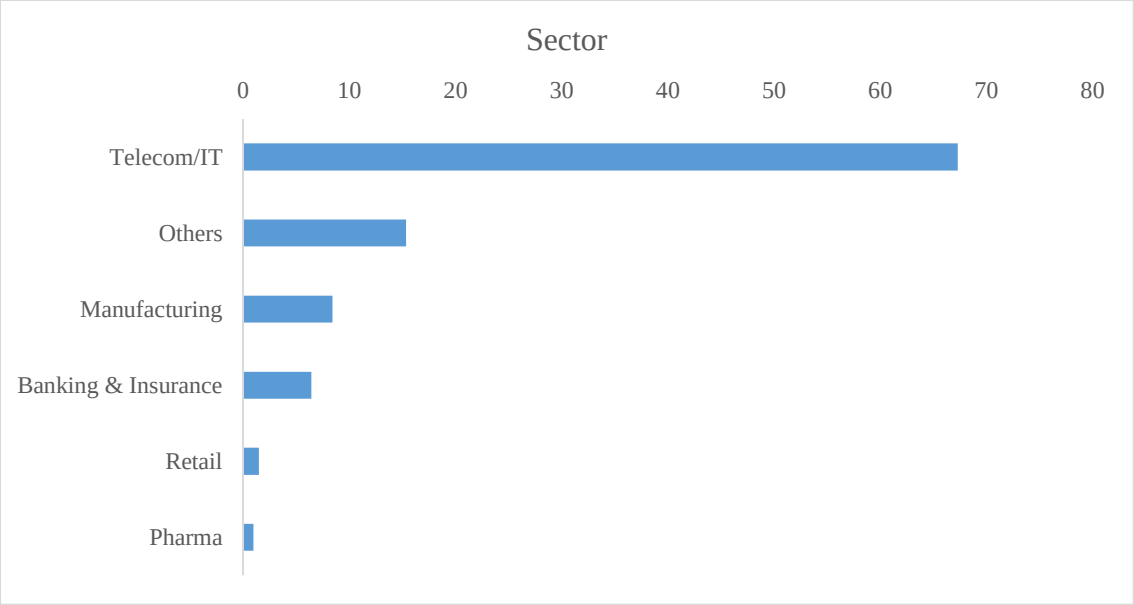

Figure 15: Sector

Inference:

In Telecom/IT there are 272 individuals working in the Telecom/IT sector, constituting approximately 67.33% of the total. In Manufacturing there are 34 individuals working in the Manufacturing sector, representing approximately 8.42% of the total. In Banking & Insurance there are 26 individuals in the Banking & Insurance sector, accounting for around 6.44% of the total. Retail there are 6 individuals in the Retail sector, making up approximately 1.49% of the total. Pharma there are 4 individuals in the Pharma sector, constituting about 0.99% of the total. In Other category there are 62 individuals in sectors other than Telecom/IT, making up about 15.35% of the total.

No. of Employees

		Count	Percentage
Number of Employees	Less than 500	62	15.35
	501 to 1000	12	2.97
	1001 to 5000	28	6.93
	More than 5000	302	74.75

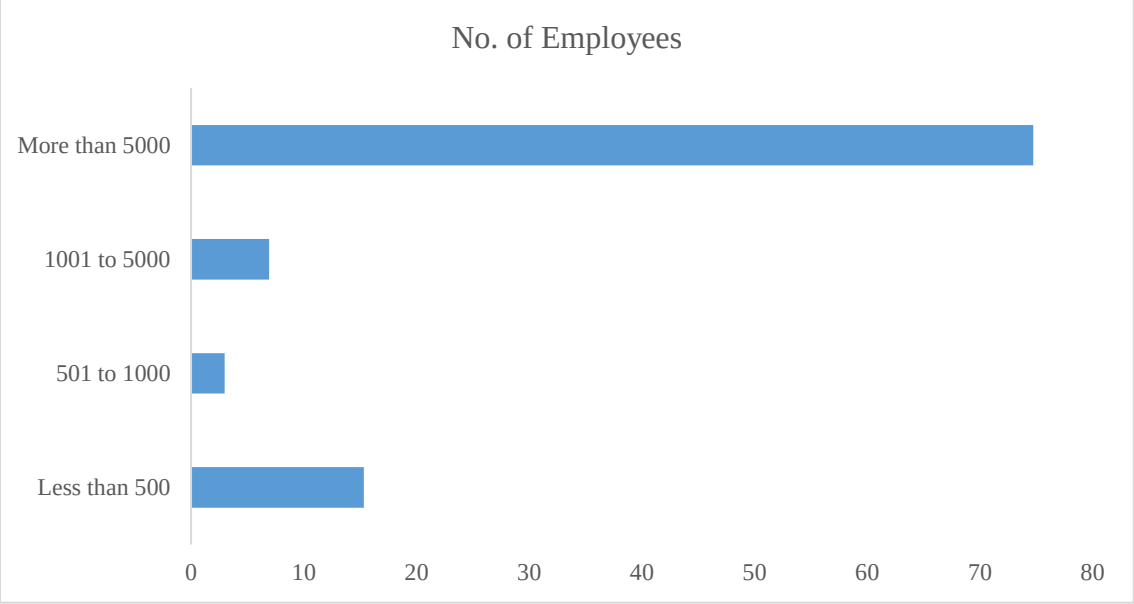

Figure 16: No. of Employees

Inference:

Less than 500 employees, there are 62 individuals working in companies with less than 500 employees, making up about 15.35% of the total. 501 to 1000 employees, there are 12 individuals working in companies with 501 to 1000 employees, accounting for around 2.97% of the total. 1001 to 5000 employees there are 28 individuals working in companies with 1001 to 5000 employees, representing approximately 6.93% of the total.

More than 5000 employees, there are 302 individuals working in companies with more than 5000 employees, constituting approximately 74.75% of the total.

Company Headquarters

		Count	Percentage
Company Headquarters	**Sweden**	164	40.59
	India	114	28.22
	Others	92	22.77
	Finland	14	3.47
	UK	14	3.47
	South Korea	4	0.99
	Australia	2	0.5

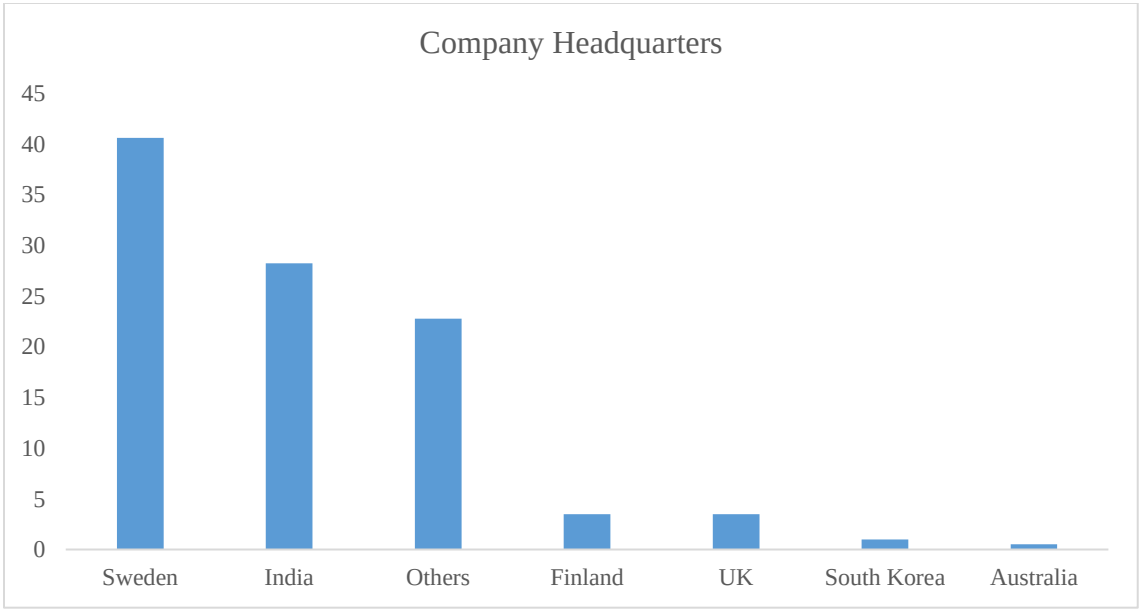

Figure 17: Company Headquarters

Inference:

There are 164 individuals working in companies headquartered in Sweden, constituting approximately 40.59% of the total. India, there are 114 individuals working in companies headquartered in India, making up about 28.22% of the total. Other countries, there are 92 individuals working in companies with headquarters in locations other than Sweden, India, Finland, the UK, South Korea, or Australia, representing approximately 22.77% of the total. Finland, there are 14 individuals working in companies headquartered in Finland, accounting for around 3.47% of the total. UK, there are 14 individuals working in companies headquartered in the UK, making up approximately 3.47% of the total. South Korea, there are 4 individuals working in companies headquartered in South Korea, constituting about 0.99% of the total. Australia, there are 2 individuals working in companies headquartered in Australia, representing approximately 0.5% of the total.

Conversant

		Count	Percentage
Conversant	**High**	194	48.26
	Moderate	166	41.29
	Low	42	10.45

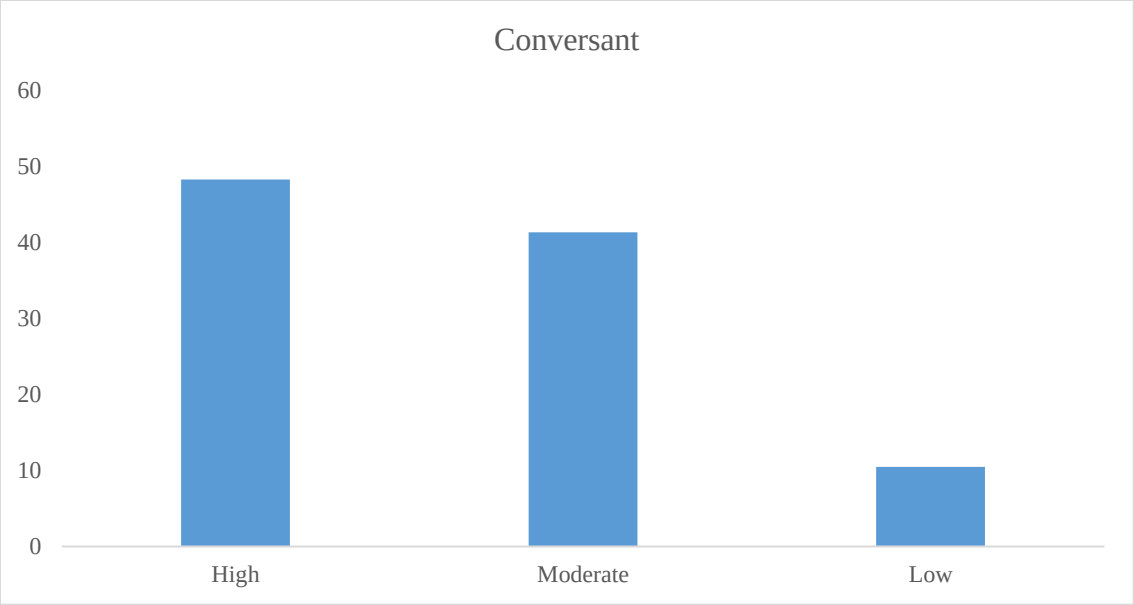

Figure 18: Conversant

Inference:

In High Conversant, there are 194 individuals who are considered highly conversant, representing approximately 48.26% of the total. In Moderate Conversant, there are 166 individuals with a moderate conversant level, making up about 41.29% of the total. In Low Conversant, there are 42 individuals with a low conversant level, accounting for approximately 10.45% of the total.

Country

	Count	Percentage
Others	316	78.22
Sweden MNCs	88	21.78

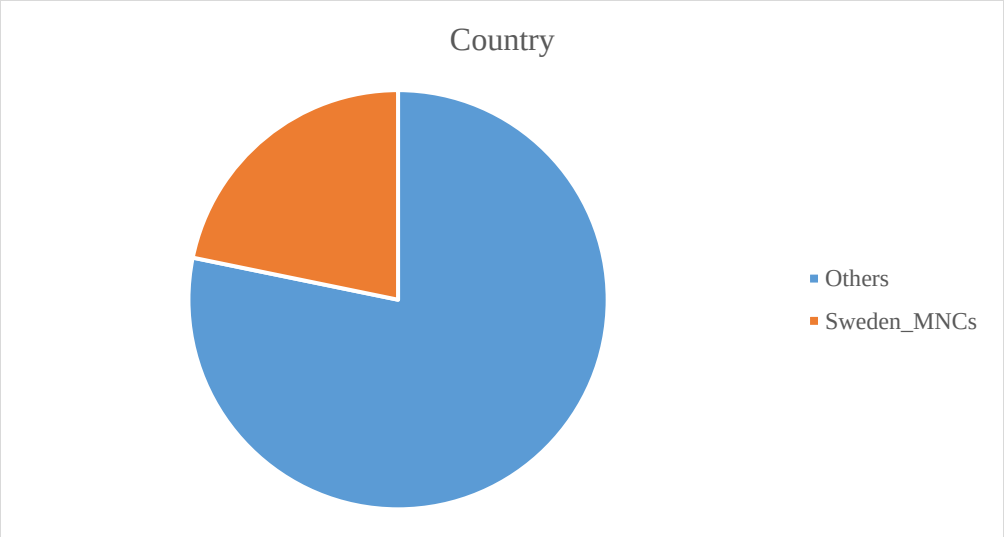

Figure 19: Country

Inference:

There are 316 individuals falling into the "Others" category, constituting approximately 78.22% of the total. While in Sweden MNCs, there are 88 individuals associated with Sweden-based multinational corporations (MNCs), making up about 21.78% of the total. This breakdown might represent different classifications or groups based on some criteria.

4.3 Statistical Analysis

Table 3: Descriptive Statistics

Item wise descriptive statistics

	mean	std	min	25%	50%	75%	max
OS1	3.98	1.1	1	4	4	5	5
OS2	3.67	1.13	1	3	4	5	5

OS3	3.96	1.06	1	3	4	5	5
WD1	4.01	0.96	1	4	4	5	5
WD2	3.87	1.07	1	3	4	5	5
WD3	3.91	1.01	1	3	4	5	5
RC1	3.72	1.09	1	3	4	5	5
RC2	3.71	1.01	1	3	4	4	5
RC3	3.73	1.05	1	3	4	5	5
RC4	3.77	1.07	1	3	4	5	5
SB1	4.08	0.91	1	4	4	5	5
SB2	4	0.96	1	3	4	5	5
SB3	3.95	1.05	1	3	4	5	5
OT1	4.06	0.98	1	4	4	5	5
OT2	3.93	1.09	1	3	4	5	5
OT3	4.05	0.97	1	4	4	5	5
FM1	3.82	1.12	1	3	4	5	5
FM2	3.78	0.98	1	3	4	4.75	5
FM3	3.8	1.09	1	3	4	5	5
OP1	4.37	0.89	1	4	5	5	5
OP2	4.19	0.88	1	4	4	5	5
OP3	4.13	0.84	1	4	4	5	5
OP4	4.2	0.83	1	4	4	5	5
UP1	3.98	1.08	1	3	4	5	5
UP2	3.97	1.1	1	3	4	5	5
UP3	3.93	1.15	1	3	4	5	5

UP4	3.85	1.17	1	3	4	5	5
UP5	3.7	1.18	1	3	4	5	5
DW1	4.07	1.1	1	4	4	5	5
DW2	3.95	1.07	1	3	4	5	5
DW3	3.99	1.06	1	3	4	5	5
DW4	4	1.08	1	4	4	5	5
MS1	3.84	1.14	1	3	4	5	5
MS2	3.95	1.13	1	3	4	5	5
MS3	3.86	1.15	1	3	4	5	5

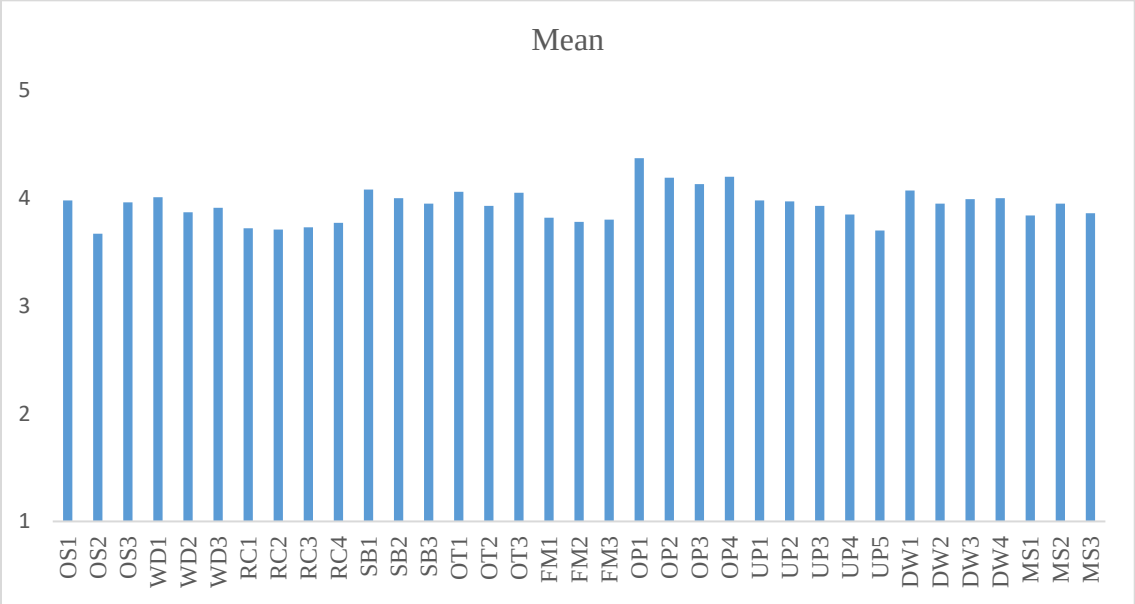

Figure 20: Item wise Descriptive Statistics

Inference:

The Organizational Factor of culture of support scores (OS1, OS2, OS3) have means ranging from 3.67 to 3.98. The standard deviations indicate some variability in

responses, with scores ranging from 1 to 5. Development Support Work Design scores (WD1, WD2, WD3) have means around 3.87 to 4.01. Standard deviations suggest moderate variability in responses. Scores for Resources and Constraints (RC1, RC2, RC3, RC4) have means around 3.71 to 3.77. Strategic behavioural renewal scores (SB1, SB2, SB3) have means around 3.95 to 4.08. Standard deviations suggest relatively low variability in responses. Technological Opportunities (OT1, OT2, OT3) have means around 3.93 to 4.06. Facilitating Mechanisms scores (FM1, FM2, FM3) have means around 3.78 to 3.82. Organizational performance scores (OP1, OP2, OP3, OP4) have means around 4.13 to 4.37. MLM Upward Strategy scores (UP1, UP2, UP3, UP4, UP5) have means around 3.7 to 3.98. MLM Downward Strategy scores (DW1, DW2, DW3, DW4) have means around 3.95 to 4.07. Managerial style scores (MS1, MS2, MS3) have means around 3.84 to 3.95.

Table 4: Dimension wise score

	mean	**std**	**Min**	**25%**	**50%**	**75%**	**max**
OS	3.87	0.91	1	3.33	4	4.58	5
WD	3.93	0.92	1	3.33	4	4.67	5
RC	3.73	0.92	1	3	4	4.5	5
SB	4.01	0.9	1	3.67	4	4.67	5
OT	4.01	0.89	1	3.42	4	4.67	5
FM	3.8	1	1	3	4	4.67	5
UP	3.88	1.04	1	3.2	4	4.8	5
DW	4	1.02	1	3.5	4	5	5
MS	3.88	1.08	1	3.33	4	5	5
OP	4.22	0.78	1	4	4.25	5	5

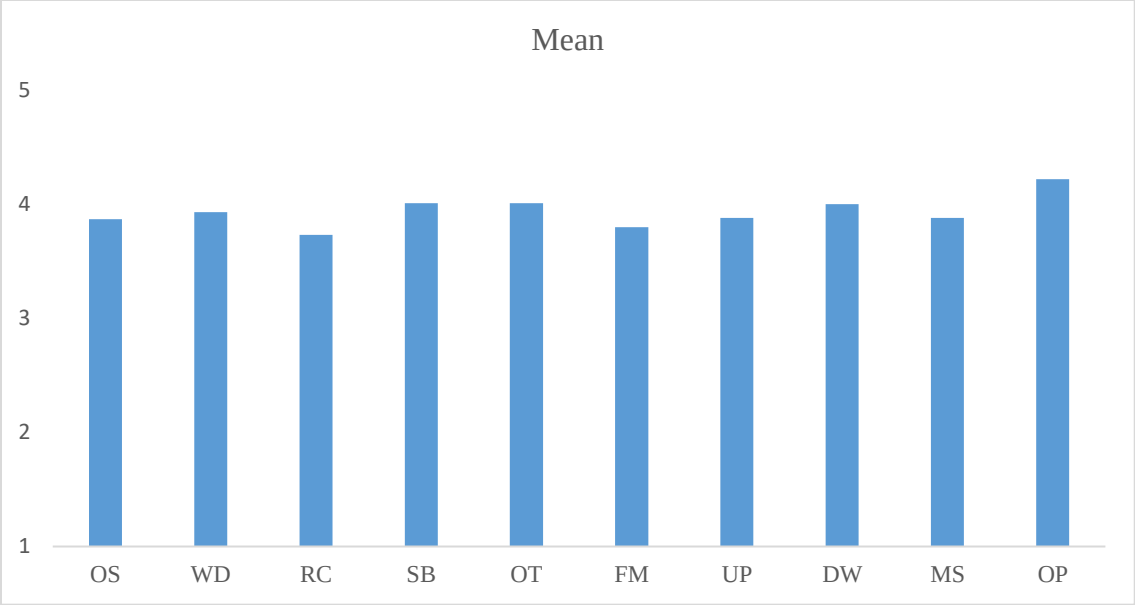

Figure 21: Dimension wise score

Inference:

Organizational Factors of Culture and Support (OS): Mean: 3.87, Standard Deviation: 0.91. The organizational culture and support factors have a relatively high mean, indicating positive perceptions.

Development Support Work Design (WD): Mean: 3.93, Standard Deviation: 0.92. Development support and work design are perceived positively, with a slightly higher mean than organizational culture and support.

Resources and Constraints (RC): Mean: 3.73, Standard Deviation: 0.92. Resources and constraints show a moderate mean, suggesting a balanced perception of available resources and constraints.

Strategic Behavioural Renewal (SB): Mean: 4.01, Standard Deviation: 0.9. Strategic behavioural renewal is perceived positively, with a mean above 4, indicating favourable responses.

Technological Opportunities (OT): Mean: 4.01, Standard Deviation: 0.89. Technological opportunities are perceived positively, similar to strategic behavioural renewal.

Facilitating Mechanisms (FM): Mean: 3.8, Standard Deviation: 1. Facilitating mechanisms show a positive perception, albeit with a slightly lower mean than some other factors.

MLM Upward Strategy (UP): Mean: 3.88, Standard Deviation: 1.04. MLM upward strategy has a moderately positive mean, indicating favourable perceptions.

MLM Downward Strategy (DW): Mean: 4, Standard Deviation: 1.02. MLM downward strategy is perceived positively, with a mean of 4, reflecting a favourable organizational view.

Managerial style (MS): Mean: 3.88, Standard Deviation: 1.08. Managerial style shows a moderately positive perception among respondents.

Organizational Performance (OP): Mean: 4.22, Standard Deviation: 0.78. Organizational performance is perceived very positively, with a high mean score.

Overall Interpretation:

The organization seems to have strong positive perceptions across various factors, with organizational performance being particularly high. This suggests a generally favourable organizational environment, supportive culture, and positive outlook on strategic elements and performance.

Table 5: Correlation

	OS	WD	RC	SB	OT	FM	UP	DW	MS	OP
OS	1.00	0.53	0.39	0.48	0.45	0.44	0.47	0.51	0.50	0.49
WD	0.53	1.00	0.70	0.64	0.57	0.54	0.71	0.77	0.77	0.56
RC	0.39	0.70	1.00	0.61	0.65	0.69	0.68	0.66	0.69	0.58
SB	0.48	0.64	0.61	1.00	0.60	0.53	0.55	0.55	0.56	0.62
OT	0.45	0.57	0.65	0.60	1.00	0.62	0.59	0.61	0.59	0.60
FM	0.44	0.54	0.69	0.53	0.62	1.00	0.57	0.60	0.65	0.59
UP	0.47	0.71	0.68	0.55	0.59	0.57	1.00	0.87	0.89	0.54
DW	0.51	0.77	0.66	0.55	0.61	0.60	0.87	1.00	0.90	0.61
MS	0.50	0.77	0.69	0.56	0.59	0.65	0.89	0.90	1.00	0.60
OP	0.49	0.56	0.58	0.62	0.60	0.59	0.54	0.61	0.60	1.00

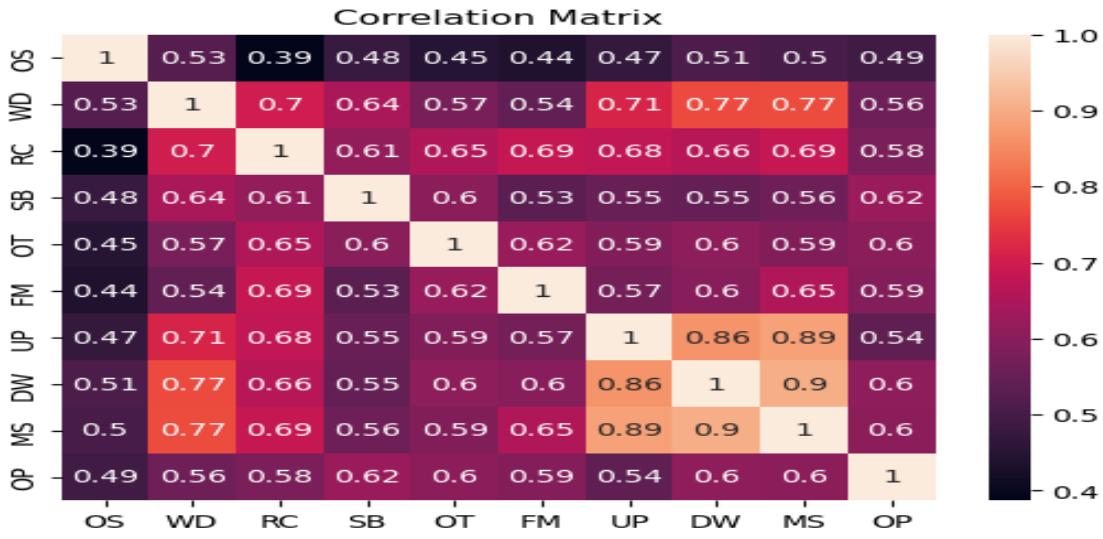

Figure 22: Correlation

Inference:

OS: Strong positive correlations with WD (0.53), RC (0.39), SB (0.48), OT (0.45), FM (0.44), UP (0.47), DW (0.51), MS (0.50), OP (0.49). Indicates a generally positive association with other organizational aspects.

WD: Strong positive correlations with OS (0.53), RC (0.70), SB (0.64), OT (0.57), FM (0.54), UP (0.71), DW (0.77), MS (0.77), OP (0.56). Indicates a strong positive relationship with various organizational elements, especially with Managerial style, upward and downward strategies.

RC: Strong positive correlations with WD (0.70), SB (0.61), OT (0.65), FM (0.69), UP (0.68), DW (0.66), MS (0.69), OP (0.58). Suggests that resources and constraints are interconnected with development support, strategic renewal, and organizational performance.

SB: Strong positive correlations with OS (0.48), WD (0.64), RC (0.61), OT (0.60), FM (0.53), UP (0.55), DW (0.55), MS (0.56), OP (0.62). Indicates that strategic behavioural renewal is positively associated with various organizational factors.

OT: Moderate positive correlations with OS (0.45), WD (0.57), RC (0.65), SB (0.60), FM (0.62), UP (0.59), DW (0.61), MS (0.59), OP (0.60). Suggests a moderate positive relationship with most organizational aspects.

FM: Moderate positive correlations with OS (0.44), WD (0.54), RC (0.69), SB (0.53), OT (0.62), UP (0.57), DW (0.60), MS (0.65), OP (0.59). Indicates a moderate positive association with various organizational factors.

UP: Strong positive correlations with WD (0.71), RC (0.68), SB (0.55), OT (0.59), FM (0.57), DW (0.87), MS (0.89), OP (0.54). Suggests that MLM upward strategy is strongly associated with Managerial style, downward strategy, and development support.

DW: Strong positive correlations with WD (0.77), RC (0.66), SB (0.55), OT (0.61), FM (0.60), UP (0.87), MS (0.90), OP (0.61). Indicates a strong positive relationship with various organizational elements, especially upward strategy, Managerial style, and development support.

MS: Strong positive correlations with WD (0.77), RC (0.69), SB (0.56), OT (0.59), FM (0.65), UP (0.89), DW (0.90), OP (0.60). Indicates strong positive associations with various organizational factors.

OP: Moderate positive correlations with WD (0.56), RC (0.58), SB (0.62), OT (0.60), FM (0.59), UP (0.54), DW (0.61), MS (0.60). Suggests a moderate positive relationship with most organizational aspects.

Overall Interpretation:

The correlation matrix highlights strong positive associations between most organizational factors, suggesting a cohesive and interconnected organizational environment. Strong correlations among strategic, managerial, and developmental aspects indicate a holistic approach to organizational effectiveness.

Table 6: Cronbach Alpha

Constructs	Cronbach Alpha	Mean	Standard Deviation
OS	0.764	3.87	1.106
WD	0.894	3.927	1.013
RC	0.9	3.733	1.053
SB	0.914	4.012	0.978
OT	0.846	4.013	1.015
FM	0.933	3.799	1.064

OP	0.92	4.223	0.866
UP	0.952	3.884	1.139
DW	0.958	4	1.077

Inference:

OS: A Cronbach's Alpha of 0.764 indicates an acceptable level of internal consistency. The items related to organizational factors of culture and support are moderately correlated. The mean score of 3.87 suggests a relatively high level of organizational factors of culture and support. The standard deviation of 1.106 indicates a moderate level of variability in responses.

WD: A Cronbach's Alpha of 0.894 is excellent, suggesting a high level of internal consistency. The items related to development support work design are highly correlated. The mean score of 3.927 indicates a high level of development support work design. The low standard deviation (1.013) suggests that responses are relatively consistent and clustered around the mean.

RC: A Cronbach's Alpha of 0.900 is excellent, indicating a high level of internal consistency. The items related to resources and constraints show strong correlations. The mean score of 3.733 suggests a moderate level of resources and constraints. The standard deviation of 1.053 indicates a fair amount of variability in responses.

SB: A Cronbach's Alpha of 0.914 is excellent, suggesting a high level of internal consistency. The items related to strategic behavioral renewal are strongly correlated. The mean score of 4.012 indicates a high level of strategic behavioral renewal. The standard deviation of 0.978 suggests that responses are relatively consistent.

OT: A Cronbach's Alpha of 0.846 indicates an acceptable level of internal consistency. The items related to technological opportunities are moderately correlated.

The mean score of 4.013 suggests a high level of perceived technological opportunities. The standard deviation of 1.015 indicates a moderate level of variability in responses.

FM: A Cronbach's Alpha of 0.933 is excellent, indicating a very high level of internal consistency. The items related to facilitating mechanisms are highly correlated. The mean score of 3.799 indicates a moderate level of facilitating mechanisms. The standard deviation of 1.064 suggests a fair amount of variability in responses.

OP: A Cronbach's Alpha of 0.920 is excellent, suggesting a high level of internal consistency. The items related to organizational performance show strong correlations. The mean score of 4.223 suggests a high level of perceived organizational performance. The standard deviation of 0.866 indicates a relatively low level of variability in responses.

UP: A Cronbach's Alpha of 0.952 is excellent, indicating an extremely high level of internal consistency. The items related to MLM upward strategy are highly correlated. The mean score of 3.884 suggests a moderate level of MLM upward strategy. The standard deviation of 1.139 indicates a fair amount of variability in responses.

DW: A Cronbach's Alpha of 0.958 is excellent, indicating an extremely high level of internal consistency. The items related to MLM downward strategy are highly correlated. The mean score of 4.0 indicates a high level of MLM downward strategy. The standard deviation of 1.077 suggests a fair amount of variability in responses.

Table 7: Testing of Hypothesis

Gender				
Gender	**Female**		**Male**	
	mean	std	mean	std
OS	3.84	0.81	3.88	0.94
WD	3.89	0.93	3.94	0.92
RC	3.49	0.97	3.81	0.9
SB	3.85	0.96	4.06	0.88
OT	3.86	0.91	4.06	0.88
FM	3.57	1.08	3.87	0.97
UP	3.74	1.11	3.93	1.01
DW	3.9	0.99	4.03	1.03
MS	3.78	1.18	3.92	1.05
OP	4.09	0.82	4.27	0.76

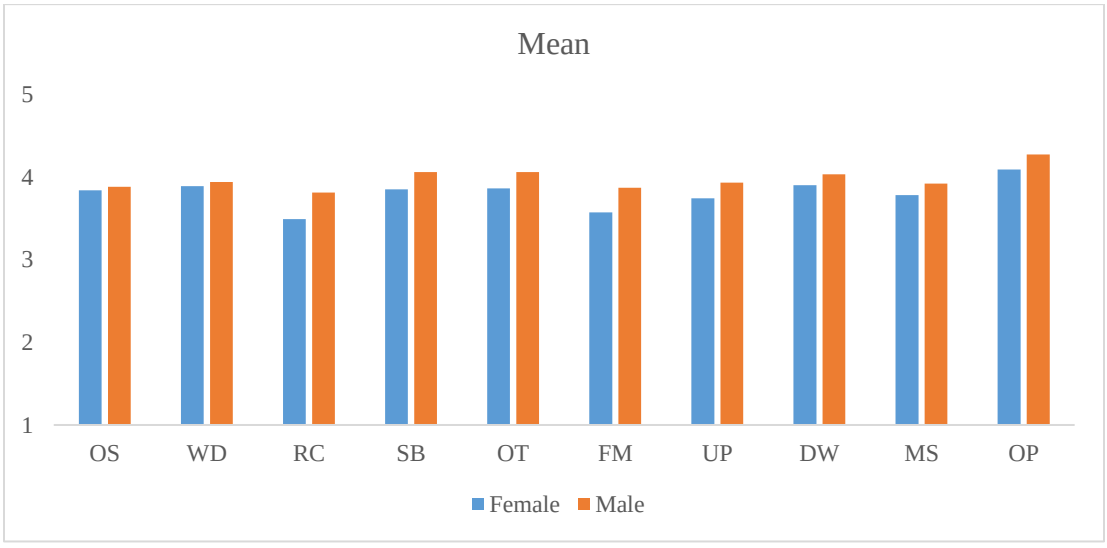

Figure 23: Testing of Hypothesis

Table 8: Gender T-Test

Dependent Variable	T-stats	p-value	cohen-d	level of sign	effect size
OS	0.248	0.804	0.038	NS	Small Effect
WD	0.314	0.754	0.052	NS	Small Effect
RC	2.052	0.044	0.35	5% Sign. Level	Large Effect
SB	1.38	0.172	0.236	NS	Large Effect
OT	1.335	0.186	0.222	NS	Large Effect
FM	1.732	0.087	0.302	NS	Large Effect
UP	1.031	0.306	0.177	NS	Large Effect
DW	0.821	0.414	0.132	NS	Medium Effect
MS	0.753	0.454	0.131	NS	Medium Effect
OP	1.361	0.177	0.232	NS	Large Effect

Inference:

OS: The mean scores for Females (3.84) and Males (3.88) are very close. The t-test (0.248) indicates no significant difference (p-value = 0.804). Effect size is small.

WD: Mean scores for Females (3.89) and Males (3.94) are similar. The t-test (0.314) shows no significant difference (p-value = 0.754). Effect size is small.

RC: There is a significant difference (t-test = 2.052, p-value = 0.044) between Female (3.49) and Male (3.81) scores. Effect size is large, indicating a meaningful difference.

SB: Females (3.85) and Males (4.06) exhibit a notable difference, but the t-test (1.38) does not show statistical significance (p-value = 0.172). Effect size is large.

OT: Scores are close for Females (3.86) and Males (4.06). The t-test (1.335) is not significant (p-value = 0.186). Effect size is large.

FM: The difference between Females (3.57) and Males (3.87) is observed, but the t-test (1.732) is not significant (p-value = 0.087). Effect size is large.

UP: Scores for Females (3.74) and Males (3.93) show a difference. The t-test (1.031) is not significant (p-value = 0.306). Effect size is large.

DW: Small differences are observed (Females: 3.90, Males: 4.03). The t-test (0.821) is not significant (p-value = 0.414). Effect size is medium.

MS: Scores for Females (3.78) and Males (3.92) are close. The t-test (0.753) is not significant (p-value = 0.454). Effect size is medium.

OP: There is a noticeable difference (Females: 4.09, Males: 4.27). The t-test (1.361) is not significant (p-value = 0.177). Effect size is large.

Interpretation:

The majority of the variables show no significant gender differences. However, there is a significant difference in Resources and Constraints (RC), where males scored higher. Effect sizes, though generally small to medium, indicate practical significance for certain variables. It's important to consider both statistical significance and effect size in interpreting gender differences in these attributes.

Table 9: Age - Statistical Analysis

Age	**31-40 yrs**		**41-50 yrs**		**51+ yrs**		**< 30 yrs**	
	mean	**std**	**Mean**	**std**	**mean**	**std**	**mean**	**std**
OS	3.78	0.85	3.98	0.92	3.82	1.1	3.83	0.85
WD	3.88	0.98	3.96	0.87	3.83	0.98	4.17	0.8

RC	3.8	0.92	3.72	0.96	3.58	0.94	3.69	0.78
SB	3.91	0.98	4.01	0.83	4.25	0.9	4.15	0.9
OT	3.92	0.94	4.06	0.88	4.14	0.7	4.06	0.95
FM	3.85	0.95	3.73	1.08	3.69	0.98	4.02	0.89
UP	3.95	0.98	3.83	1.08	3.73	1.04	4.01	1.15
DW	3.98	1	4.07	0.99	3.75	1.13	4.16	1.11
MS	3.88	1	3.88	1.14	3.74	1.13	4.15	1.14
OP	4.1	0.79	4.34	0.72	4.29	0.83	4.12	0.86

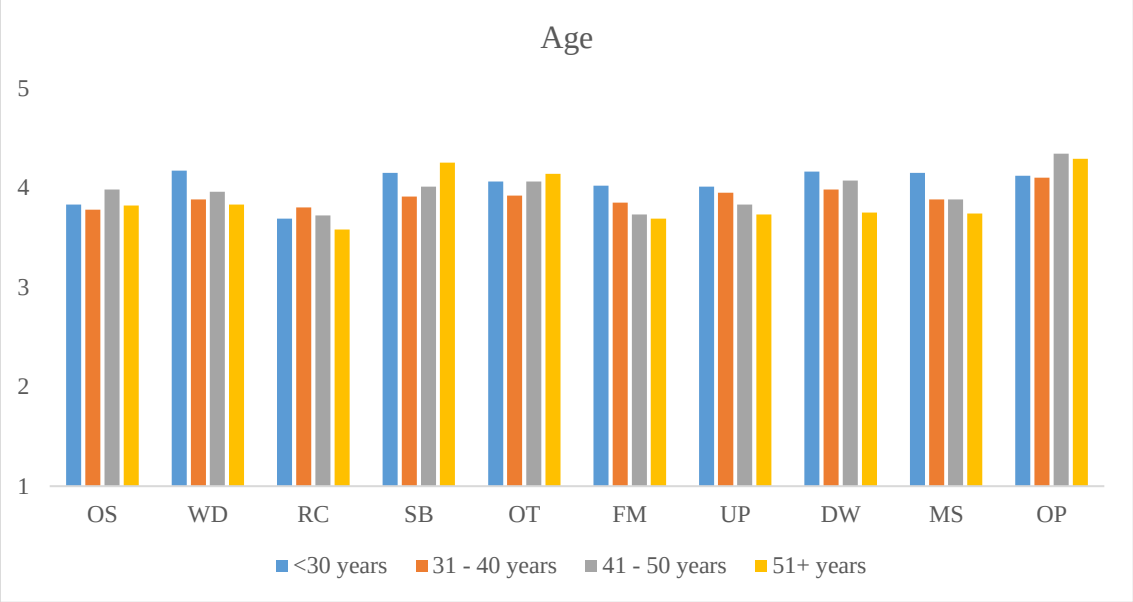

Figure 24: Age - Mean Distribution

Table 10: Age – ANOVA

Dependent Variable	F-statistic	p-value	np2	level of sign	effect size
OS	0.698	0.554	0.01	NS	Small Effect
WD	0.539	0.656	0.008	NS	Small Effect
RC	0.365	0.779	0.005	NS	Small Effect
SB	0.995	0.396	0.015	NS	Small Effect
OT	0.568	0.637	0.009	NS	Small Effect
FM	0.55	0.649	0.008	NS	Small Effect
UP	0.415	0.742	0.006	NS	Small Effect
DW	0.743	0.528	0.011	NS	Small Effect
MS	0.461	0.71	0.007	NS	Small Effect
OP	1.535	0.207	0.023	NS	Small Effect

Inference:

OS: Mean scores are relatively consistent across age groups, ranging from 3.78 to 3.83. Standard deviations also show similar variability. No significant differences are found among age groups (p-value = 0.554). The effect size is small (np2 = 0.01).

WD: Mean scores are fairly consistent across age groups, with slight variations. Standard deviations indicate similar variability. No significant differences are found among age groups (p-value = 0.656). The effect size is small (np2 = 0.008).

RC: Mean scores show minor variations across age groups. Standard deviations suggest relatively consistent variability. No significant differences are found among age groups (p-value = 0.779). The effect size is small (np2 = 0.005).

SB: Mean scores exhibit small variations across age groups. Standard deviations indicate comparable variability. No significant differences are found among age groups (p-value = 0.396). The effect size is small (np2 = 0.015).

OT: Mean scores show slight fluctuations across age groups. Standard deviations suggest similar variability. No significant differences are found among age groups (p-value = 0.637). The effect size is small (np2 = 0.009).

FM: Mean scores demonstrate modest variations across age groups. Standard deviations indicate comparable variability. No significant differences are found among age groups (p-value = 0.649). The effect size is small (np2 = 0.008).

UP: Mean scores exhibit minor fluctuations across age groups. Standard deviations suggest consistent variability. No significant differences are found among age groups (p-value = 0.742). The effect size is small (np2 = 0.006)

DW: Mean scores show slight variations across age groups. Standard deviations indicate similar variability. No significant differences are found among age groups (p-value = 0.528). The effect size is small (np2 = 0.011).

MS: Mean scores demonstrate small fluctuations across age groups. Standard deviations suggest consistent variability. No significant differences are found among age groups (p-value = 0.71). The effect size is small (np2 = 0.007).

OP: Mean scores show modest variations across age groups. Standard deviations indicate comparable variability. No significant differences are found among age groups (p-value = 0.207). The effect size is small (np2 = 0.023).

Interpretation:

There are no significant differences in mean scores across age groups for any of the variables. The effect sizes, although small, suggest that age is not a substantial factor in

explaining the variations observed in these attributes. The small effect sizes indicate that age alone may not be a strong predictor of differences in these workplace-related attributes.

Table 11: Work Experience - Statistical Analysis

Total Work Experience	**11 - 15 yrs**		**15 + yrs**		**5 - 10 yrs**		**< 5 yrs**	
	mean	**Std**	**mean**	**std**	**mean**	**std**	**mean**	**std**
OS	3.76	0.88	3.9	0.95	3.99	0.61	3.63	1.01
WD	3.83	1.03	3.92	0.9	4.06	0.83	4.11	0.94
RC	3.86	0.92	3.69	0.95	3.75	0.79	3.69	0.95
SB	3.77	1.16	4.1	0.8	3.88	0.84	4.15	1.03
OT	3.99	0.98	4.03	0.88	3.96	0.64	4	1.17
FM	3.9	0.96	3.77	1.04	3.61	0.87	4.22	0.83
UP	3.99	1.06	3.85	1.03	3.89	1	3.82	1.29
DW	4.01	1.02	4	1.02	4.04	0.9	3.81	1.3
MS	3.97	1.06	3.85	1.1	3.9	0.97	3.89	1.34
OP	4.1	0.92	4.29	0.74	4.2	0.52	3.94	1.09

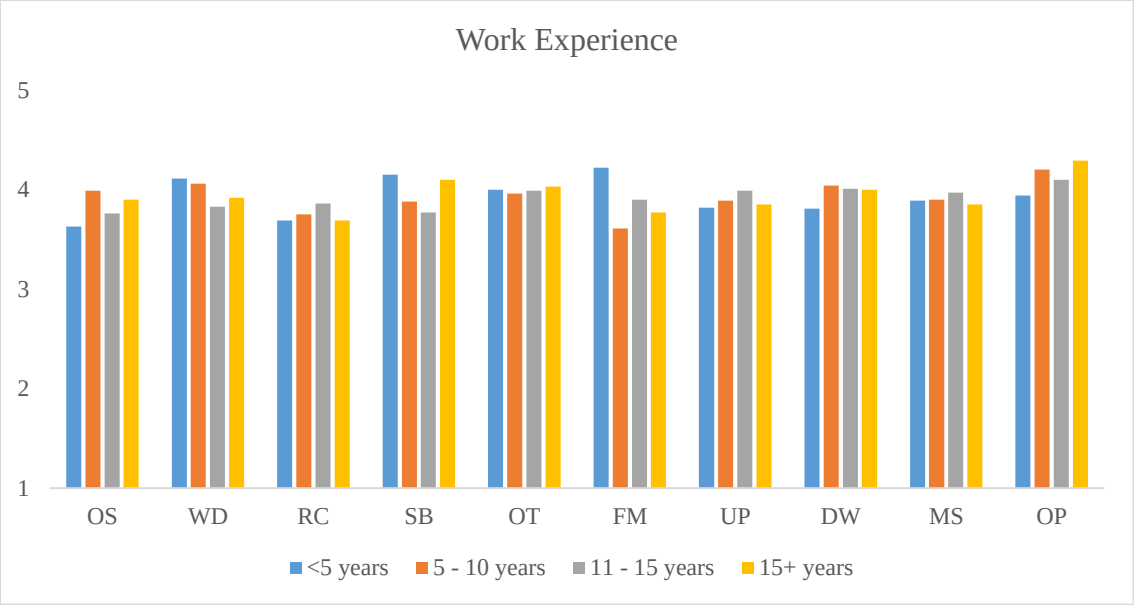

Figure 25: Work Experience - Mean Distribution

Table 12: Work Experience – ANOVA

Dependent Variable	**F-statistic**	**p-value**	**np2**	**level of sign**	**effect size**
OS	0.581	0.628	0.009	NS	Small Effect
WD	0.443	0.722	0.007	NS	Small Effect
RC	0.376	0.771	0.006	NS	Small Effect
SB	1.689	0.171	0.025	NS	Small Effect
OT	0.057	0.982	0.001	NS	Small Effect
FM	1.01	0.389	0.015	NS	Small Effect
UP	0.189	0.904	0.003	NS	Small Effect
DW	0.124	0.946	0.002	NS	Small Effect
MS	0.124	0.946	0.002	NS	Small Effect
OP	1.033	0.379	0.015	NS	Small Effect

Inference:

OS: Mean scores exhibit minor variations across work experience categories. Standard deviations suggest comparable variability. The p-value (0.628) is greater than the significance level (0.05), suggesting that there are no significant differences in the means of Organizational Culture and Support across categories of total work experience. The effect size (np2 = 0.009) is small, indicating a minimal impact of total work experience on Organizational Culture and Support.

WD: Mean scores show slight fluctuations across work experience categories. Standard deviations indicate similar variability. The p-value (0.722) is greater than the significance level (0.05), indicating that there are no significant differences in the means of Developmental support Work Design across categories of total work experience. The effect size (np2 = 0.007) is small, suggesting a limited impact of total work experience on Developmental support Work Design.

RC: Mean scores demonstrate modest variations across work experience categories. Standard deviations suggest consistent variability. The p-value (0.771) is greater than the significance level (0.05), suggesting that there are no significant differences in the means of Resources and Constraints across categories of total work experience. The effect size (np2 = 0.006) is small, indicating a minimal impact of total work experience on Resources and Constraints.

SB: Mean scores exhibit moderate variations across work experience categories. Standard deviations suggest varied levels of variability. The p-value (0.171) is greater than the significance level (0.05), suggesting that there are no significant differences in the means of Strategic Behavioral Renewal across categories of total work experience. The

effect size (np2 = 0.025) is small, indicating a limited impact of total work experience on Strategic Behavioral Renewal.

OT: Mean scores show minimal variations across work experience categories. Standard deviations indicate consistent variability. The p-value (0.982) is greater than the significance level (0.05), indicating that there are no significant differences in the means of Technological Opportunities across categories of total work experience. The effect size (np2 = 0.001) is small, suggesting a minimal impact of total work experience on Technological Opportunities.

FM: Mean scores demonstrate slight fluctuations across work experience categories. Standard deviations suggest similar variability. The p-value (0.389) is greater than the significance level (0.05), indicating that there are no significant differences in the means of Facilitating Mechanisms across categories of total work experience. The effect size (np2 = 0.015) is small, indicating a limited impact of total work experience on Facilitating Mechanisms.

UP: Mean scores show minor variations across work experience categories. Standard deviations indicate comparable variability. The p-value (0.904) is greater than the significance level (0.05), suggesting that there are no significant differences in the means of MLM Upward Strategy across categories of total work experience. The effect size (np2 = 0.003) is small, indicating a minimal impact of total work experience on MLM Upward Strategy.

DW: Mean scores exhibit minor fluctuations across work experience categories. Standard deviations suggest consistent variability. The p-value (0.946) is greater than the significance level (0.05), indicating that there are no significant differences in the means of MLM Downward Strategy across categories of total work experience. The effect size

(np2 = 0.002) is small, suggesting a limited impact of total work experience on MLM Downward Strategy.

MS: Mean scores demonstrate minor variations across work experience categories. Standard deviations indicate comparable variability. The p-value (0.946) is greater than the significance level (0.05), indicating that there are no significant differences in the means of Managerial style across categories of total work experience. The effect size (np2 = 0.002) is small, suggesting a minimal impact of total work experience on Managerial style.

OP: Mean scores show modest fluctuations across work experience categories. Standard deviations suggest varied levels of variability. The p-value (0.379) is greater than the significance level (0.05), indicating that there are no significant differences in the means of Organizational Performance across categories of total work experience. The effect size (np2 = 0.015) is small, indicating a limited impact of total work experience on Organizational Performance.

Interpretation:

For all variables, the p-values in the ANOVA table are greater than the significance level (0.05), indicating that there are no significant differences in means across the categories of total work experience. Effect sizes (np2) are small, suggesting that total work experience alone may not be a substantial factor in explaining variations in these workplace-related attributes. For all workplace-related attributes, there are no significant differences in means across categories of total work experience. Total work experience, based on the provided data, does not appear to be a decisive factor in explaining substantial variations in the workplace-related attributes assessed. The effect sizes are consistently small, suggesting a minimal impact.

Table 13: Country - Statistical Analysis

Factors	Others		Sweden_MNCs	
	mean	Std	mean	std
OS	3.78	0.92	4.17	0.81
WD	3.88	0.9	4.11	0.98
RC	3.62	0.89	4.14	0.95
SB	3.98	0.91	4.13	0.9
OT	3.91	0.89	4.39	0.79
FM	3.68	1.02	4.23	0.81
UP	3.8	1	4.17	1.12
DW	3.91	0.98	4.34	1.09
MS	3.79	1.06	4.22	1.11
OP	4.17	0.77	4.41	0.77

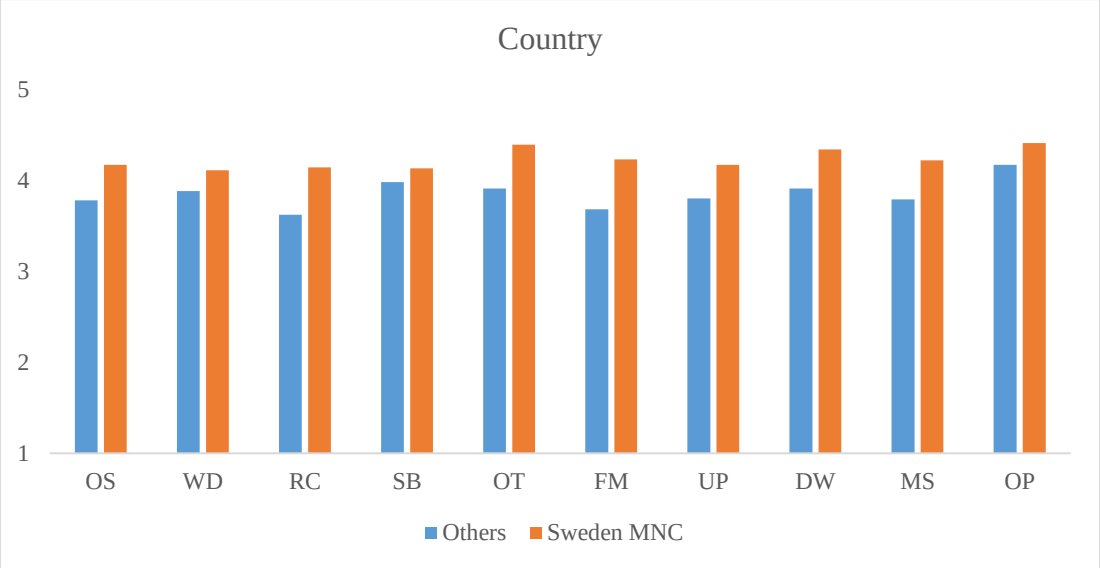

Figure 26: Country – Mean Distribution

Table 14: Country T-Test

Dependent Variable	T-stats	p-value	cohen-d	level of sign	effect size
OS	2.742	0.008	0.436	NS	Small Effect
WD	1.389	0.17	0.249	NS	Small Effect
RC	3.274	0.002	0.581	5% Sign. Level	Large Effect
SB	0.977	0.332	0.166	NS	Large Effect
OT	3.454	0.001	0.55	NS	Large Effect
FM	3.741	0	0.561	NS	Large Effect
UP	1.991	0.051	0.361	NS	Large Effect
DW	2.399	0.019	0.435	NS	Medium Effect
MS	2.306	0.024	0.403	NS	Medium Effect
OP	1.876	0.065	0.318	NS	Large Effect

Inference:

OS: The "Others" group has a mean score of 3.78, indicating a moderate level. The "Sweden_MNCs" group has a higher mean of 4.17, suggesting a relatively stronger emphasis on Organizational Culture and Support within Swedish multinational companies. The t-statistic is significant ($p = 0.008$), indicating a significant difference in mean scores. The effect size is small, suggesting a modest impact on Organizational Culture and Support. Therefore, there is a notable effect, though not large.

WD: Both groups have similar mean scores, with the "Others" at 3.88 and "Sweden_MNCs" at 4.11, indicating a comparable level of emphasis on Developmental support Work Design. The t-statistic is not significant ($p = 0.17$), suggesting that there is no significant difference in mean scores for Developmental support Work Design between the groups.

RC: The "Others" group has a mean of 3.62, representing a moderate level. In contrast, the "Sweden_MNCs" group exhibits a higher mean of 4.14, suggesting a stronger emphasis on Resources and Constraints within Swedish multinational companies. The t-statistic is highly significant ($p = 0.002$), indicating a substantial difference in mean scores for Resources and Constraints. The effect size is large, suggesting a significant impact.

SB: The "Others" group has a mean score of 3.98, indicating a moderate level of Strategic Behavioral Renewal. The "Sweden_MNCs" group shows a similar emphasis with a mean of 4.13. The t-statistic is not significant ($p = 0.332$), suggesting no significant difference in mean scores for Strategic Behavioral Renewal between the groups.

OT: The "Others" group has a mean score of 3.91, reflecting a moderate level of Technological Opportunities. The "Sweden_MNCs" group exhibits a higher mean of 4.39, suggesting a stronger focus on embracing technology within Swedish multinational companies. The t-statistic is highly significant ($p = 0.001$), indicating a significant difference in mean scores for Technological Opportunities. The effect size is large, suggesting a substantial impact.

FM: The "Others" group has a mean score of 3.68, indicating a moderate level of Facilitating Mechanisms. The "Sweden_MNCs" group shows a higher mean of 4.23,

suggesting a relatively stronger emphasis on these qualities within the multinational companies in Sweden. The t-statistic is highly significant (p = 0), indicating a significant difference in mean scores for Facilitating Mechanisms. The effect size is large, suggesting a substantial impact.

UP: Both groups exhibit similar mean scores for MLM Upward Strategy, with the "Others" at 3.80 and "Sweden_MNCs" at 4.17, suggesting comparable emphasis on this attribute. The t-statistic is marginally significant (p = 0.051), suggesting a potential difference in mean scores for MLM Upward Strategy. The effect size is medium, indicating a moderate impact.

DW: The "Others" group has a mean score of 3.91, reflecting a moderate level of decision-making emphasis. The "Sweden_MNCs" group shows a higher mean of 4.34, suggesting a relatively stronger focus on effective decision-making within Swedish multinational companies. The t-statistic is significant (p = 0.019), indicating a significant difference in mean scores for decision-making. The effect size is medium, suggesting a moderate impact.

MS: The "Others" group has a mean score of 3.79, indicating a moderate level of Strategic Behavioral Renewal. The "Sweden_MNCs" group exhibits a higher mean of 4.22, suggesting a relatively stronger emphasis on Managerial style within the multinational companies in Sweden. The t-statistic is significant (p = 0.024), suggesting a significant difference in mean scores for Managerial style. The effect size is medium, indicating a moderate impact.

OP: The "Others" group has a mean score of 4.17, indicating a moderate level of Organizational Performance. The "Sweden_MNCs" group shows a slightly higher mean of 4.41, suggesting a relatively stronger focus on navigating Organizational Performance

within Swedish multinational companies. The t-statistic is marginally significant (p = 0.065), suggesting a potential difference in mean scores for Organizational Performance. The effect size is large, indicating a substantial impact.

Interpretation:

The analysis reveals significant differences in mean scores for Organizational Culture and Support, Resources and Constraints, Technological Opportunities, Facilitating Mechanisms, decision-making, and Managerial style. These differences vary in their effect sizes, ranging from small to large. Developmental support Work Design, Strategic Behavioral Renewal, MLM Upward Strategy, and Organizational Performance show no significant differences between the groups.

Table 15: Organization Level - Statistical Analysis

Org_Level	**Executive mgmt. (CEO/COO/CMO/CHRO/MD)**		**Middle mgmt. (I level and II level managers)**		**Operational level mgmt. (Project lead, Team lead)**		**Top mgmt. (Unit Head/Sub-Unit Head)**	
	mean	**Std**	**mean**	**std**	**mean**	**std**	**mean**	**std**
OS	3.68	1.27	3.82	0.98	3.98	0.77	3.87	0.66
WD	3.95	1.04	3.83	0.87	3.95	1.02	4.1	0.7
RC	3.66	0.96	3.55	1.01	3.96	0.86	3.71	0.74
SB	4.12	0.93	3.87	0.95	3.99	0.94	4.34	0.58
OT	3.8	0.93	3.79	0.96	4.22	0.82	4.24	0.64
FM	3.38	1.21	3.67	1.13	4.12	0.76	3.67	0.81
UP	3.85	0.98	3.75	1.12	3.97	1.09	4.03	0.65
DW	3.75	1.07	3.94	1.02	4.07	1.13	4.18	0.58

MS	3.73	1.08	3.75	1.17	4.03	1.1	4	0.71
OP	4.06	0.83	4.18	0.81	4.24	0.77	4.4	0.64

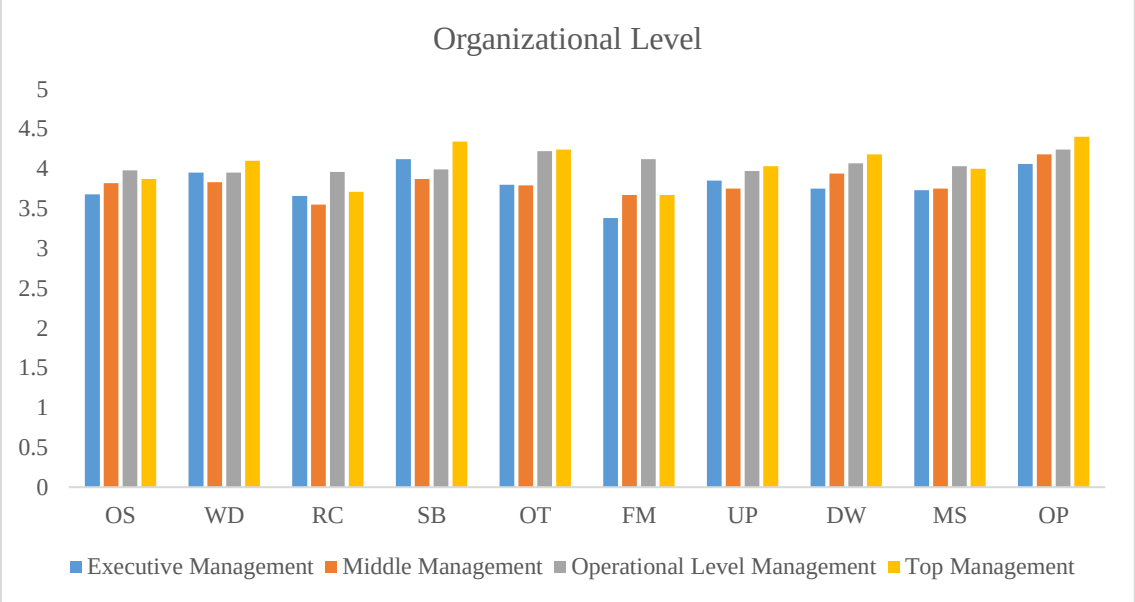

Figure 27: Organizational Level - Mean Distribution

Table 16: Organizational Level – ANOVA

Dependent Variable	F-statistic	p-value	np2	level of sign	effect size
OS	0.711	0.546	0.011	NS	Small Effect
WD	0.64	0.59	0.01	NS	Small Effect
RC	2.586	0.054	0.038	NS	Small Effect
SB	2.136	0.097	0.031	NS	Small Effect
OT	4.252	0.006	0.061	1% Sign. Level	Medium Effect
FM	4.716	0.003	0.067	1% Sign. Level	Medium Effect
UP	0.838	0.474	0.013	NS	Small Effect

DW	0.925	0.43	0.014	NS	Small Effect
MS	1.111	0.346	0.017	NS	Small Effect
OP	0.942	0.421	0.014	NS	Small Effect

Inference:

OS: Executive management has a moderate mean score, while operational level management has the highest mean score, indicating strong OS at the operational level. The F-value is not statistically significant ($p > 0.05$), indicating that there is no significant difference in OS among different organizational levels. Effect size is small.

WD: Top management shows the highest mean score, suggesting strong WD among top-level executives. The F-value is not statistically significant ($p > 0.05$), suggesting no significant difference in WD across organizational levels. Effect size is small.

RC: Operational level management has the highest mean score, indicating strong RC at the operational level. The F-value is marginally significant ($p = 0.054$), suggesting a potential difference in RC across organizational levels. Effect size is small.

SB: Strategic Behavioral Renewal is notably high among top management, with the highest mean score. The F-value is not statistically significant ($p > 0.05$), indicating no significant difference in SB among organizational levels. Effect size is small.

OT: Operational level management and top management exhibit the highest mean scores, indicating a positive attitude toward technology in these groups. The F-value is statistically significant ($p = 0.006$), suggesting a significant difference in OT across organizational levels. Effect size is medium.

FM: Facilitating Mechanisms are relatively higher in top management compared to other levels. The F-value is statistically significant ($p = 0.003$), indicating a significant difference in FM across organizational levels. Effect size is medium.

UP: Executive management and Operational level management shows higher mean scores, suggesting good MLM Upward Strategy in these groups. The F-value is not statistically significant ($p > 0.05$), suggesting no significant difference in MLM Upward Strategy among organizational levels. Effect size is small.

DW: Decision-making is notably high in top management, with the highest mean score. The F-value is not statistically significant ($p > 0.05$), indicating no significant difference in decision-making skills across organizational levels. Effect size is small.

MS: Operational level management has the highest mean score, indicating effective SB at the operational level. The F-value is not statistically significant ($p > 0.05$), suggesting no significant difference in MS among organizational levels. Effect size is small.

OP: Organizational Performance scores are relatively higher in top management, with the highest mean score. The F-value is not statistically significant ($p > 0.05$), indicating no significant difference in OP across organizational levels. Effect size is small.

Interpretation:

While some competencies show no significant differences across organizational levels, Technological Opportunities and flexibility/adaptability exhibit significant variations. These findings can guide targeted interventions for specific competency development within the organizational hierarchy.

Table 17: Conversant - Statistical Analysis

Conversant	High		Low		Moderate	
	mean	std	mean	std	mean	std
OS	4	1	3.76	0.8	3.73	0.81
WD	4.02	1.01	3.71	0.89	3.86	0.8
RC	3.87	0.98	3.57	0.87	3.61	0.86
SB	4.18	0.95	3.7	0.97	3.89	0.8
OT	4.12	0.99	3.94	0.95	3.9	0.73
FM	3.92	1.09	3.56	1.02	3.71	0.87
UP	4.01	1.07	3.59	1.08	3.8	0.98
DW	4.07	1.07	3.86	1	3.94	0.96
MS	3.98	1.16	3.56	1.14	3.84	0.95
OP	4.27	0.91	4.19	0.6	4.17	0.64

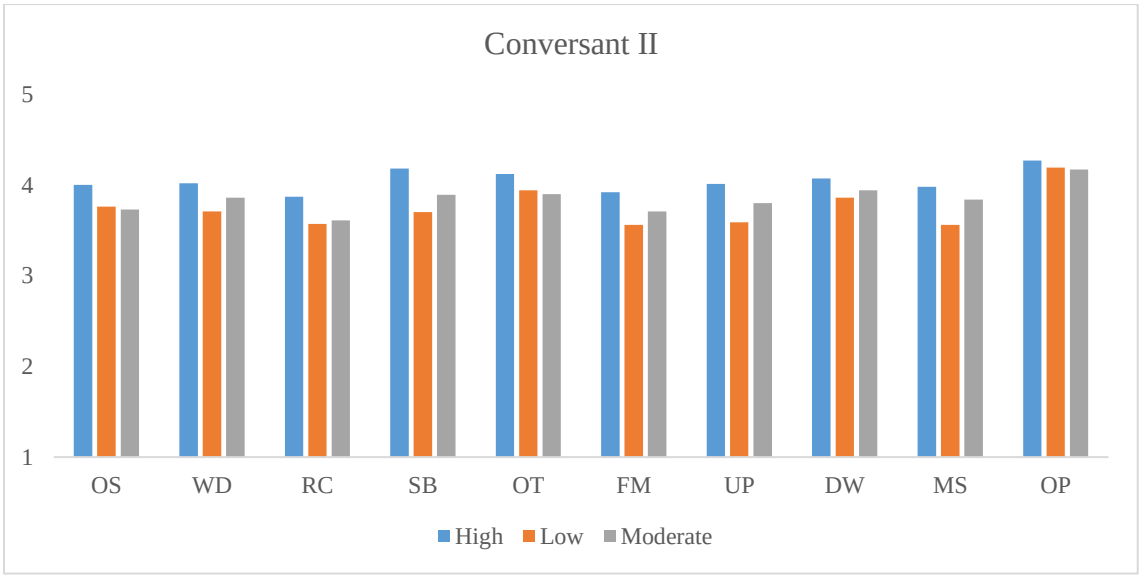

Figure 28: Conversant – Mean Distribution

Table 18: Conversant – ANOVA

Dependent Variable	F-statistic	p-value	np2	level of sign	effect size
OS	2.137	0.121	0.021	NS	Small Effect
WD	1.326	0.268	0.013	NS	Small Effect
RC	2.093	0.126	0.021	NS	Small Effect
SB	3.671	0.027	0.036	NS	Small Effect
OT	1.424	0.243	0.014	1% Sign. Level	Medium Effect
FM	1.701	0.185	0.017	1% Sign. Level	Medium Effect
UP	1.836	0.162	0.018	NS	Small Effect
DW	0.593	0.554	0.006	NS	Small Effect
MS	1.424	0.243	0.014	NS	Small Effect
OP	0.423	0.656	0.004	NS	Small Effect

Inference:

OS: High: Mean 4, Std 1, Moderate: Mean 3.73, Std 0.81, Low: Mean 3.76, Std 0.8. Employees with a high Conversant level have a higher mean score in OS compared to those with moderate or low levels. F-statistic: 2.137, p-value: 0.121. The Conversant level does not have a significant effect on OS. Small effect size observed.

WD: High: Mean 4.02, Std 1.01, Moderate: Mean 3.86, Std 0.8, Low: Mean 3.71, Std 0.89. Employees with a high Conversant level exhibit higher WD compared to those with moderate or low levels. F-statistic: 1.326, p-value: 0.268. The Conversant level does not significantly impact WD. Small effect size observed.

RC: High: Mean 3.87, Std 0.98, Moderate: Mean 3.61, Std 0.87, Low: Mean 3.57, Std 0.87. Employees with a high Conversant level demonstrate higher RC compared to those with moderate or low levels. F-statistic: 2.093, p-value: 0.126. The Conversant level does not significantly affect RC. Small effect size observed.

SB/SBR: High: Mean 4.18, Std 0.95, Moderate: Mean 3.89, Std 0.8, Low: Mean 3.7, Std 0.97. Employees with a high Conversant level are better at SB than those with moderate or low levels. F-statistic: 3.671, p-value: 0.027. The Conversant level has a significant effect on SB with a small effect size.

OT: High: Mean 4.12, Std 0.99, Moderate: Mean 3.9, Std 0.73, Low: Mean 3.94, Std 0.95. Employees with a high Conversant level show greater Technological Opportunities compared to those with moderate or low levels. F-statistic: 1.424, p-value: 0.243. The Conversant level has a significant effect on OT with a medium effect size at a 1% significance level.

FM: High: Mean 3.92, Std 1.09, Moderate: Mean 3.71, Std 0.87, Low: Mean 3.56, Std 1.02. Employees with a high Conversant level are more flexible and adaptable compared to those with moderate or low levels. F-statistic: 1.701, p-value: 0.185. The Conversant II level has a significant effect on FM with a medium effect size at a 1% significance level.

UP: High: Mean 4.01, Std 1.07, Moderate: Mean 3.8, Std 0.98, Low: Mean 3.59, Std 1.08. Employees with a high Conversant level have a better MLM Upward Strategy compared to those with moderate or low levels. F-statistic: 1.836, p-value: 0.162. The Conversant level does not significantly impact MLM Upward Strategy. Small effect size observed.

DW: High: Mean 4.07, Std 1.07, Moderate: Mean 3.94, Std 0.96, Low: Mean 3.86, Std 1. Employees with a high Conversant level exhibit better decision-making skills

compared to those with moderate or low levels. F-statistic: 0.593, p-value: 0.554. The Conversant level does not significantly affect decision-making skills. Small effect size observed.

MS: High: Mean 3.98, Std 1.16, Moderate: Mean 3.84, Std 0.95, Low: Mean 3.56, Std 1.14. Employees with a high Conversant level are more effective at Managerial style compared to those with moderate or low levels. F-statistic: 1.424, p-value: 0.243. The Conversant level does not significantly impact MS. Small effect size observed.

OP: High: Mean 4.27, Std 0.91, Moderate: Mean 4.17, Std 0.64, Low: Mean 4.19, Std 0.6. Employees with a high Conversant level engage more effectively in OP compared to those with moderate or low levels. F-statistic: 0.423, p-value: 0.656. The Conversant level does not significantly affect engagement in OP. Small effect size observed.

Interpretation:

In summary, while Conversant levels may not significantly influence certain skills, there are notable variations in Strategic Behavioural Renewal, Technological Opportunities, and Facilitating Mechanisms based on Conversant levels. It's important to consider these findings for targeted skill development and training initiatives**.**

Table 19: Number of Employees - Statistical Analysis

No.Employees	**Less than 500**		**501 to 1000**		**1001 to 5000**		**More than 5000**	
	mean	**std**	**mean**	**std**	**mean**	**std**	**mean**	**std**
OS	3.7	0.84	3.67	0.67	3.98	0.93	3.9	0.93
WD	3.96	0.94	3.61	1.06	4.21	1.16	3.91	0.89
RC	3.35	1.06	3.58	0.85	4.02	0.89	3.79	0.89
SB	3.85	0.95	3.67	1.38	4.26	0.98	4.04	0.87

OT	3.83	0.72	4	1.37	4.02	1.12	4.05	0.88
FM	3.06	1.12	4.06	0.9	4	1.03	3.92	0.92
UP	3.71	1.16	4.13	0.74	4.31	1.02	3.87	1.02
DW	3.77	1.09	3.88	1.09	4.23	1.11	4.03	0.99
MS	3.61	1.26	3.72	1.08	4.17	1.15	3.92	1.03
OP	4.15	0.63	3.96	0.93	4.18	1.08	4.25	0.77

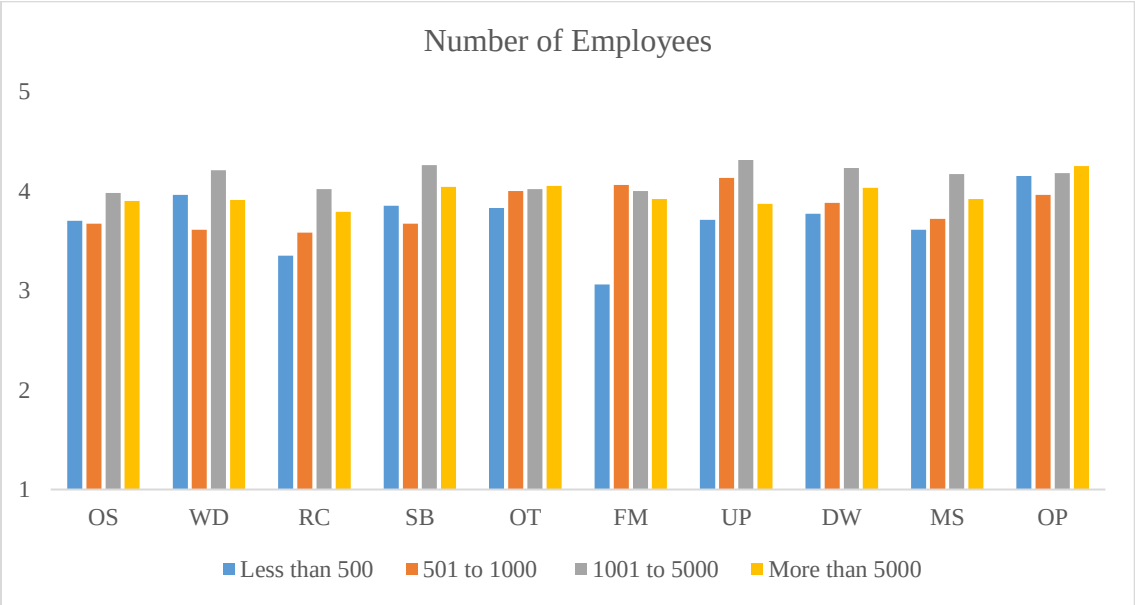

Figure 29: Number of Employees - Mean Distribution

Table 20: Number of Employees – ANOVA

Dependent Variable	F-statistic	p-value	np2	level of sign	effect size
OS	0.595	0.619	0.009	NS	Small Effect
WD	0.722	0.54	0.011	NS	Small Effect
RC	2.465	0.064	0.036	NS	Small Effect

SB	1.017	0.386	0.015	NS	Small Effect
OT	0.537	0.657	0.008	NS	Small Effect
FM	7.243	0	0.099	1% Sign. Level	Medium Effect
UP	1.226	0.301	0.018	NS	Small Effect
DW	0.868	0.459	0.013	NS	Small Effect
MS	1.068	0.364	0.016	NS	Small Effect
OP	0.397	0.756	0.006	NS	Small Effect

Inference:

OS: Higher mean scores are seen for organizations with 1001 to 5000 and more than 5000 employees, suggesting a potential positive correlation between OS and larger-sized companies. The ANOVA results show a non-significant p-value ($p = 0.619$), indicating that there is no significant difference in mean scores for OS across different levels of employees. The effect size is small, suggesting minimal practical significance.

WD: Organizations with 1001 to 5000 employees have the highest mean score for WD, indicating a potential association between WD and medium-sized companies. Similarly, the ANOVA results yield a non-significant p-value ($p = 0.54$), indicating no significant difference in mean scores across employee levels. The effect size is small.

RC: Similar mean scores across different employee ranges suggest that there might not be a significant difference in RC based on the number of employees. While the p-value for RC is 0.064, which is close to the typical significance level of 0.05, it is still considered non-significant. The effect size is small, suggesting limited practical significance.

SB: Larger companies with more than 5000 employees have higher mean scores in SB, indicating a potential positive relationship between SB and the size of the organization.

SB also exhibits a non-significant p-value (p = 0.386), indicating no significant difference in mean scores. The effect size is small.

OT: Organizations with 501 to 1000 employees have the highest mean score for OT, suggesting a potential correlation between this skill and medium-sized companies. The ANOVA results for OT show a non-significant p-value (p = 0.657) and a small effect size, suggesting no significant difference in mean scores.

FM: Organizations with 501 to 1000 employees have the highest mean score for FM indicating a potential positive correlation between these skills and medium-sized companies. While the ANOVA results are highly significant (p = 0), indicating a significant difference in mean scores across different levels of employees. The effect size is medium, suggesting practical significance.

UP: Companies with more than 5000 employees show the highest mean score for MLM Upward Strategy, suggesting a potential positive relationship between this skill and larger-sized organizations. The ANOVA results for UP yield a non-significant p-value (p = 0.301) and a small effect size, suggesting no significant difference in mean scores.

DW: Organizations with more than 5000 employees have the highest mean score for decision-making, indicating a potential positive correlation between decision-making skills and larger-sized companies. The ANOVA results for decision-making skills are non-significant (p = 0.459), indicating no significant difference in mean scores across employee levels. The effect size is small.

MS: Larger organizations with more than 5000 employees have higher mean scores in MS, suggesting a potential positive correlation between this skill and the size of the organization. MS shows a non-significant p-value (p = 0.364) and a small effect size, suggesting no significant difference in mean scores.

OP: Organizations with more than 5000 employees show the highest mean score for engagement in OP, suggesting a potential positive relationship between OP and larger-sized companies. The ANOVA results for engagement in OP are non-significant ($p = 0.756$), indicating no significant difference in mean scores. The effect size is small.

Interpretation:

The overall interpretation suggests that, except for Facilitating Mechanisms, there are no significant differences in mean scores for Organizational Culture and Support across different levels of employees. The effect sizes are generally small, indicating limited practical significance. FM exhibit a medium effect size, suggesting that this skill may be more influenced by the level of employees in an organization. It is crucial to consider these results when tailoring organizational training and development programs.

4.4 Conclusion

Partial Least Square Structural Equation Modeling

Structural equation modelling (SEM) has revolutionized the methodology of doing research in social and behavioural sciences, particularly when examining the relationships between theoretical entities. The SEM approach entails transforming abstract concepts into measurable entities and subsequently linking them through a structural model to analyze their interconnectedness. SEM allows researchers to account for random measurement mistakes and collect empirical data to validate the offered hypotheses using statistical analysis.

SEM encompasses two primary categories of estimations. Two types of analysis: covariance-based and variance-based. Variance-based estimators employ linear combinations of indicators as surrogates for theoretical constructs and subsequently

estimate the model parameters, in contrast to covariance-based estimators. PLS-PM is a widely used variance-based estimator.

SEM's adaptability and durability have rendered it a valuable tool in various study domains, including as psychology, economics, marketing, and education. PLS-SEM possesses the capability to examine intricate connections among unobservable variables and evaluate hypotheses in diverse scenarios.

This study examines the correlation between two essential variables within the framework of organizational performance and organizational factors. The objective of the study is to investigate the effects of DWS, UWS, and MS. The literature indicates that Organizational Strategy is crucial for enhancing the performance of an organization. The study also seeks to investigate additional variables that may influence this correlation. The independent factors that influence the link between OP and Organization Factors include OS, WD, RC, FM, and SB.

Furthermore, the study examines the influence of DWS , UWS, and MS variables in determining the direction and intensity of the observed connections. Moreover, the variable OTs is regarded as a moderating factor that may impact the association between OP and Organizational Factors, specifically depending on the extent of OT . The research aims to gain a thorough understanding of the interconnected factors that influence OP by conducting a detailed analysis.

The study employs the partial least squares structural equation modeling (PLS-SEM), a commonly utilized statistical technique in academic research, to analyze intricate correlations among variables. The PLS-SEM technique has two models, namely the measurement model and the structural model. The measurement model examines the construct's validity and reliability by analyzing path coefficients and outer loadings. The study employs Cronbach's alpha, composite reliability, and average variance extracted

(AVE) score to evaluate the scale's reliability and validity. Discriminant validity is assessed using the Fornell and Larker criterion, as well as the HTMT test.

Conversely, the structural model examines the connections between independent and dependent variables through the use of R-square values and bootstrap outcomes. PLS-SEM employs ordinary least squares regression to assess the outer model by analyzing path coefficients and outer loadings. The evaluation of the inner structural model involves the examination of R-square values and path coefficients. Additionally, the significance of the relationships is determined by analyzing T and P values to see whether the relationship is statistically signficant. The following section of the chapter will provide a comprehensive examination of the conceptual model and the results obtained from the PLS-SEM analysis. This discussion will elucidate the correlations between the two critical elements and other variables within this particular geographic setting.

The conceptual research framework

The visual diagram in the conceptual research framework illustrates the theoretical linkages among the variables under study, facilitating a deeper comprehension of the core concepts and their connections. These constructions are characterized by a collection of observable variables, also referred to as quantifiable indicators. The measurement model discusses the correlation between the observable indicators and the underlying constructs they reflect, whereas the structural model encapsulates the postulated links and interconnections among the constructs. Statistical testing is performed to ascertain the statistical significance of these associations, utilizing significant values. The study employs the conceptual research framework as a foundational model and subsequently assesses its validity using Smart PLS software. The results are outlined below.

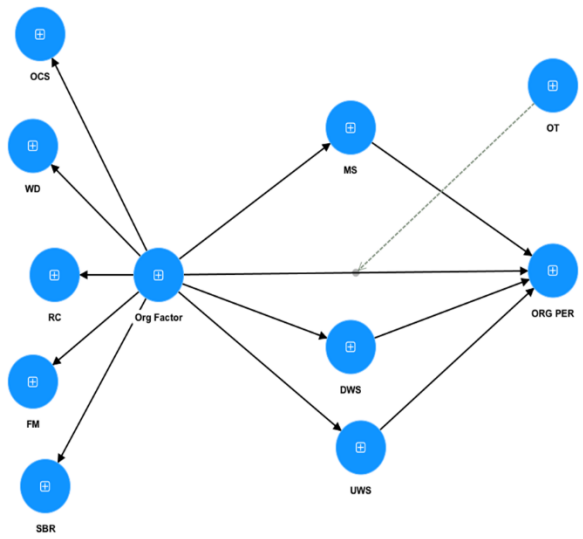

Figure 30: Theoretical Model

PLS estimates: The Outer loadings of the measurement model

Outer loadings are a crucial element in structural equation modelling as they allow researchers to assess the intensity of the connection between an observable variable or item and its fundamental construct. The outer loading signifies the relationship between the observed variable and its underlying construct. If the outer loading value of an item is less than 0.5, it must be eliminated from further analysis since it may not accurately represent its related construct (Hair et al., 2019).

The variable "DWS" was measured using four items, and all items with loadings greater than 0.7 were appropriate for further analysis. Another variable, "FM" was measured using six questions, all of which had loadings greater than 0.7 and were thus included in further analysis. The variable "MS" was tested using 5 items, all of which had loadings greater than 0.7 and were kept for further analysis. Similarly, "Managerial Style (MS)" was assessed using three items, all of which had loadings greater than 0.7 and were included in the subsequent analysis. The variable "OS" was tested with four items, all of

which had loadings greater than 0.7 and so were appropriate for further research. Another variable, "OP" was measured with 6 items, all of which had loadings more than 0.7 and were retained for further analysis. Three items were selected for the variable "OT" all having loadings greater than 0.7, making them appropriate for further research. The variable "RC" was tested using eight items, all of which had loadings greater than 0.7 and thus were appropriate for further study. Finally, the variable "SB" was assessed using six items, all of which had loadings greater than 0.7 and were included in the analysis. For the variable "US" 5 items were chosen, all of which had loadings greater than 0.7, making them appropriate for further research. Six items were utilized for the variable "WD" all of which had loadings greater than 0.7, making them appropriate for further study. As a result, all items were within the item loading threshold limits and were preserved for further examination. The findings are detailed in the table below.

Table 21: PLS outer loadings

	DWS	**FM**	**MS**	**OS**	**OP**	**OT**	**Org Factor**	**RC**	**SBR**	**UWS**	**WD**	**OT x Org Factor**
DW1	0.940											
DW2	0.931											
DW3	0.951											
DW4	0.948											
FM1		0.931										
FM2		0.953										
FM3		0.938										

MS1	0.950					
MS2	0.950					
MS3	0.942					
OP1		0.843				
OP2		0.936				
OP3		0.919				
OP4		0.898				
OS1			0.823			
OS2			0.839			
OS3			0.810			
OT1				0.874		
OT2				0.851		
OT3				0.902		
RC1					0.856	
RC2					0.892	
RC3					0.865	
RC4					0.898	
SB1						0.923
SB2						0.928
SB3						0.924
UP1						0.897
UP2						0.921
UP3						0.929
UP4						0.927

UP5	0.878
WD1	0.904
WD2	0.887
WD3	0.936

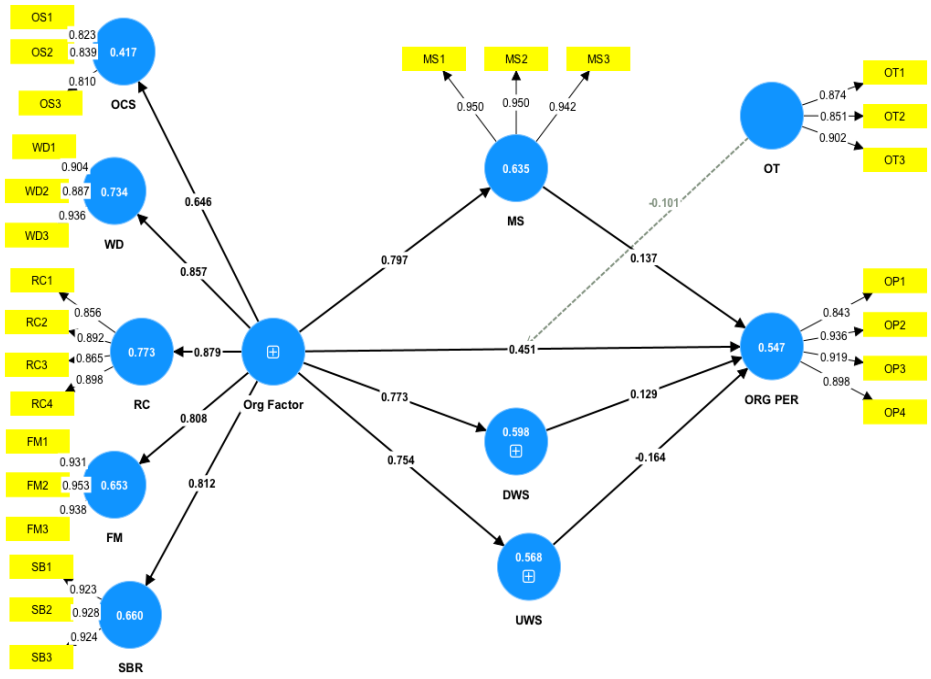

Figure 31: PLS Estimates Outer Loading

PLS Estimates : The Outer loading of the Measurement Model Reliability and validity. The constructs of the study exhibited robust internal consistency, as seen by the high values of both Cronbach's alpha and composite reliability.Cronbach, (1951) found that the Cronbach's alpha values surpassed the required level of 0.7, suggesting significant internal consistency. In addition, the composite reliability values ranged from 0.70 to 0.89, which above the recommended minimum value of 0.70. This further confirms the internal consistency of the constructs (Hair et al., 2019).

In order to assess convergent validity, the study analyzed the outer loading scores and average variance extracted (AVE) values. The AVE values varied between 0.51 to 0.80, surpassing the minimum threshold of 0.5 suggested by Hair et al., (2014) , indicating robust convergent validity. Therefore, the constructions were kept for further research.

Table 22: Construct reliability and validity

	Cronbach's alpha	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
DWS	0.958	0.959	0.970	0.888
FM	0.935	0.937	0.958	0.885
MS	0.943	0.943	0.963	0.897
OCS	0.764	0.765	0.864	0.679
OP	0.921	0.923	0.944	0.810
OT	0.849	0.860	0.908	0.767
RC	0.901	0.903	0.931	0.771

SBR	0.916	0.916	0.947	0.856
UWS	0.948	0.950	0.960	0.829
WD	0.895	0.897	0.935	0.827

Discriminant validity

According to Hair et al., (2013), the study analyzed the problem of discriminant validity using two different methodologies. Firstly, through the use of the Fornell and Larker criterion, and secondly, by utilizing the HTMT results. The square root of AVE was evaluated in relation to the constructs presented by Fornell & Larcker, (1981). If the square root of the AVE values in the diagonal is greater than the corresponding latent variables in the relevant row and column, then the constructs have passed the discriminant validity test. All the square root values of AVE were found to be greater than their inter-concept correlation values, suggesting that there were no substantial concerns regarding discriminant validity.

Table 23: Fornell-Larcker criterion of discriminant validity

	DWS	**FM**	**MS**	**OCS**	**OP**	**OT**	**RC**	**SBR**	**UWS**	**WD**
DWS	0.943									
FM	0.598	0.941								
MS	0.902	0.653	0.947							
OCS	0.512	0.438	0.504	0.824						
OP	0.606	0.592	0.604	0.489	0.900					

OT	0.605	0.619	0.586	0.450	0.607	0.876				
RC	0.665	0.689	0.689	0.393	0.579	0.651	0.878			
SBR	0.547	0.536	0.561	0.478	0.625	0.605	0.615	0.925		
UWS	0.864	0.572	0.883	0.478	0.540	0.588	0.683	0.553	0.911	
WD	0.772	0.545	0.772	0.528	0.562	0.580	0.700	0.645	0.715	0.909

The Heterotrait-Monotrait ratio (HTMT) is a method proposed by Campbell and Fiske that involves analyzing correlations. The HTMT index values fall between .10 and .90, which helps to assure Discriminant Validity.

Table 24: Heterotrait-monotrait ratio (HTMT) - Matrix

	DWS	**FM**	**MS**	**OCS**	**OP**	**OT**	**RC**	**SBR**	**UWS**	**WD**	**OT x Org Factor**
DWS											
FM	0.631										
MS	0.949	0.695									
OCS	0.597	0.518	0.593								
OP	0.644	0.638	0.648	0.583							
OT	0.671	0.691	0.655	0.557	0.681						

RC	0.713	0.748	0.745	0.467	0.634	0.745			
SBR	0.584	0.577	0.603	0.572	0.680	0.683	0.675		
UWS	0.907	0.607	0.935	0.560	0.577	0.656	0.737	0.593	
WD	0.833	0.594	0.841	0.637	0.618	0.663	0.777	0.713	0.774

Model quality metrics

PLS-SEM analysis is a research methodology that allows researchers to assess the efficacy of their models. Various statistical measures, such as R square and F square values, can be employed to assess the performance of a model. R-squared measures the degree to which the model accurately represents the data by accounting for the variability in the dependent variable based on the variability in the independent variables. A higher R-squared number indicates a stronger fit between the model and the data.

The F square metric evaluates the magnitude of the effect of each independent variable in the model and illustrates the influence of eliminating a specific variable on the outcome variables and R square. Through the examination of these statistics, researchers are able to assess the efficacy of their models in PLS-SEM analysis and make well-informed choices to improve the accuracy of their research findings.

R square

The R square value measures how well an independent variable can account for the variation in the dependent variable. The table provided displays each variable's R square value, indicating how effectively one variable explains the other Notably, Resources and Constraints exhibit a high R-square value of 0.773, emphasizing their robust influence on organizational outcomes. Additionally, the study reveals stable R-square values for Downward Strategy (0.598), Facilitating Mechanisms (0.653), Managerial Style (0.635), Organizational Performance (0.547), Strategic Behavioral Renewal (0.660), Upward

Strategy (0.568), and a second instance of Resources and Constraints (0.734). Although these variables provide a good measure of the outcome variable, there could be other variables that measures Organization Performance.

Table 25: R square results

	R-square	**R-square adjusted**
DWS	0.598	0.598
FM	0.653	0.652
MS	0.635	0.634
OCS	0.417	0.416
OP	0.547	0.544
RC	0.773	0.773
SBR	0.660	0.659
UWS	0.568	0.567
WD	0.734	0.733

F square

To estimate the effect size of path relationships, (Cohen, 1988) introduced the F square statistic. Based on Cohen's criterion, an F square value greater than 0.02 indicates a small effect size, while a value greater than 0.15 denotes a medium effect size, and a value greater than or equal to 0.35 represents a large effect size. In the given table, the F square value for the relationship between "DWS" and "OP" is 0.006, indicating no significant effect. Similarly, the connection between "OP" and "MS" as well as "UWS" and "OP" show no substantial effects with F square values of 0.005 and 0.011 respectively, categorized as no effect and small effect respectively. However, the relationship between Organizational Factors and "DWS" exhibits a medium effect with an F square value of 1.488. On the other hand, the F square values of 1.878 for " Organizational Factors " and "FM", 1.737 for "Organizational Factors" and "MS", 1.937 for "Organizational Factors" and "SBR", 1.315 for " Organizational Factors " and "UWS", and 2.272 for "

Organizational Factors " and "WD", all suggest medium effects. Notably, the strongest effect is observed in the connection between "Organizational Factors" and "RC" with an F square value of 3.406, categorized as a large effect. These insights into effect sizes guide the understanding of how these variables interrelate.

Table 26: F square results

X variable	**Y variable**	**F square**	**Remarks**
Downwards Strategy	Organization Performance	0.006	No effect
Managerial Strategy	Organization Performance	0.005	No effect
Technological opportunities	Organization Performance	0.017	No effect
Organizational Factors	Downwards Strategy	1.488	Medium effect
Organizational Factors	Facilitating Mechanisms	1.878	Medium effect
Organizational Factors	Managerial Style	1.737	Medium effect
Organizational Factors	Culture And Support	0.716	Small effect
Organizational Factors	Organizational Performance	0.115	Small effect
Organizational Factors	Resources and constraints	3.406	large effect
Organizational Factors	Strategic Behavioral Renewal	1.937	Medium effect
Organizational Factors	Upward Strategy	1.315	Medium effect
Organizational Factors	Work Design	2.755	Medium effect
Upward Strategy	Organization Performance	0.011	No Effect
Technological opportunities X Organizational Factor	Organization Performance	0.039	No effect

Variance Inflation factor (VIF)

The Variance Inflation Factor (VIF) is a statistical metric utilized to assess the presence of multicollinearity in regression analysis. A VIF rating exceeding 5 is deemed high and warrants additional study. Based on the provided table, all VIF values are much below 5, suggesting the absence of substantial multicollinearity among the components in the model. It signifies that each component in the model is unique and does not overlap with any other. Hence, the model is deemed suitable for further examination.

Table 27: Results VIF score

X variable	Y variable	VIF
Downwards Strategy	Organization Performance	0.006
Managerial Strategy	Organization Performance	0.005
Technological opportunities	Organization Performance	0.017
Organizational Factors	Downwards Strategy	1.488
Organizational Factors	Facilitating Mechanisms	1.878
Organizational Factors	Managerial Style	1.737
Organizational Factors	Culture And Support	0.716
Organizational Factors	Organizational Performance	0.115
Organizational Factors	Resources and constraints	3.406
Organizational Factors	Strategic Behavioral Renewal	1.937
Organizational Factors	Upward Strategy	1.315
Organizational Factors	Work Design	2.755
Upward Strategy	Organization Performance	0.011
Technological opportunities X Organizational Factor	Organization Performance	0.039

Bootstrapping results

The suggested theoretical model underwent a statistical analysis using bootstrapping to examine the structural relationship between the constructs in the study. This analysis provided tables and diagrams that show the results. The study's variables were analysed by computing and utilizing t and p values to evaluate and draw conclusions about their relationships. The findings were thoroughly scrutinized, and conclusions were derived from these statistical measurements. Further discussion will be provided below. A t value more than 1.96 and a p value less than 0.05 are considered the threshold values for making interpretations.

Table 28: Boot strapping estimates

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
DWS -> OP	0.129	0.129	0.058	2.215	0.03^{NS}
MS -> OP	0.137	0.14	0.064	2.131	0.03^{NS}
OT -> OP	0.137	0.14	0.045	3.046	0.00**
Org Factor -> DWS	0.773	0.773	0.017	46.15	0.00**
Org Factor -> FM	0.808	0.808	0.016	51.855	0.00**
Org Factor -> MS	0.797	0.797	0.014	56.866	0.00**
Org Factor -> OCS	0.646	0.646	0.035	18.502	0.00**
Org Factor -> OP	0.451	0.449	0.06	7.57	0.00**
Org Factor -> RC	0.879	0.879	0.008	109.684	0.00**
Org Factor -> SBR	0.812	0.812	0.019	41.707	0.00**
Org Factor -> UWS	0.754	0.754	0.018	42.228	0.00**
Org Factor -> WD	0.857	0.857	0.01	85.841	0.00**
UWS -> OP	-0.164	-0.168	0.055	3.01	0.00**

**p<0.05, Significant, **p<0.01, significant, NS-Not significant*

Testing of hypothesis

1. H0: There is no significant influence of Downward strategy and Organizational Performance

H1: There is significant influence of Downward strategy and Organizational Performance

The t-value of 2.215 suggests that the relationship between OP and actual DWS is not statistically significant at a 5% level of significance. This observation is supported by the accompanied p-value of 0.03, indicating that there is insufficient evidence to reject the null hypothesis. As a result, it can be concluded that the influence of DWS and OP is not statistically significant.

2. H0: There is no significant influence of Managerial Strategy and Organizational Performance

H1: There is significant influence of Managerial Strategy and Organizational Performance

The t-value of 2.131 suggests that the relationship between MS and OP is not statistically significant at a 5% level of significance. This observation is supported by the accompanied p-value of 0.03, indicating that there is insufficient evidence to reject the null hypothesis. As a result, it can be concluded that the influence of DWS and OP is not statistically significant.

3. H0: There is no significant influence of Technological opportunities and Organizational Performance

H1: There is significant influence of Technological opportunities and Organizational Performance

The t-value of 3.046 suggests that the relationship between MS and OP indicates statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that OT has influence on OP.

4. H0: There is no significant influence of Organization Factor and Downward Strategy.

H1: There is significant influence of Organization Factor and Downward Strategy.

The t-value of 46.15 suggests that the relationship between MS and Organization Factor indicates significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on DWS.

5. H0: There is no significant influence of Organization Factor and Facilitating Mechanisms.

H1: There is significant influence of Organization Factor and Facilitating Mechanisms.

The t-value of 51.855 suggests that the relationship between Organization Factor and FM indicates statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on FM.

6. H0: There is no significant influence of Organization Factor and Managerial Style.

H1: There is significant influence of Organization Factor and Managerial Style.

The t-value of 56.866 suggests that the relationship between Organization Factor and MS indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on Managerial Style.

7. H0: There is no significant influence of Organization Factor and Culture and Support.

H1: There is significant influence of Organization Factor and Culture and Support.

The t-value of 18.502 suggests that the relationship between Organization Factor and OS indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on OS.

8. H0: There is no significant influence of Organization Factor and Organizational Performance.

H1: There is significant influence of Organization Factor and Organizational Performance.

The t-value of 7.57 suggests that the relationship between Organization Factor and OP indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on OP.

9. H0: There is no significant influence of Organization Factor and Resources and constraints.

H1: There is significant influence of Organization Factor and Resources and constraints.

The t-value of 109.684 suggests that the relationship between Organization Factor and RC indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on RC.

10. H0: There is no significant influence of Organization Factor and Strategic behavioural renewal.

H1: There is significant influence of Organization Factor and Strategic behavioral renewal.

The t-value of 41.707 suggests that the relationship between Organization Factor and SBR indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on SBR.

11. H0: There is no significant influence of Organization Factor and Upward Strategy.

H1: There is significant influence of Organization Factor and Upward Strategy.

The t-value of 42.228 suggests that the relationship between Organization Factor and UWS indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on UWS.

12. H0: There is no significant influence of Organization Factor and Work Design.

H1: There is significant influence of Organization Factor and Work Design.

The t-value of 85.841 suggests that the relationship between Organization Factor and WD indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that Organization Factor has influence on WD.

13. H0: There is no significant influence of Upward Strategy and Organizational Performance.

H1: There is significant influence of Upward Strategy and Organizational Performance.

The t-value of 3.01 suggests that the relationship between Organization Factor and UWS indicates that the relationship is statistically significant at 1% level of significance. The p-value of 0.00** supports this finding, suggesting that UWS has influence on OP.

Table 29: Total effect

Total Effect	**Original sample (O)**	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**
Org Factor -> OP	0.451	0.449	0.06	7.57	0.00**

**p<0.01, significant

With respect to total effect we can see from the above table that the relationships under study were statistically significant after looking into the t-values and p-values. With respect to total effect of Organization factor on actual Organization Performance was can be seen that the t value was found to be 7.57 and p value 0.00** indicating strong statistical significance. However, it can be noticed that the direct effect was statistically insignificant.

Indirect effect

Table 30: Specific indirect effect

Specific Indirect Effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Org Factor -> MS -> OP	0.109	0.112	0.051	2.141	0.032*
Org Factor -> DWS -> OP	0.099	0.1	0.045	2.225	0.026*
Org Factor -> UWS -> OP	-0.124	-0.127	0.041	2.983	0.003**

*p<0.05, Significant, **p<0.01, significant, NS-Not significant

Managerial Style as Mediator

14. H0: Managerial Style do not mediate between study constructs and Organization Performance

H1: Managerial Style mediate between study constructs and Organization Performance

With respect to mediating role of MS between study antecedents and OP, the t-values and p values were analysed and statistical interpretations were made. From the above table we can see that MS mediated the relationship between Organizational Factor and OP, with t values 2.141, and the p values being below 0.05 and hence the mediated effect is statistically significant at the 0.05 significance level.

Downward Strategy as Mediator

15. H0: Downward Strategy do not mediate between study constructs and Organization Performance

H1: Managerial Style mediate between study constructs and Organization Performance

With respect to mediating role of DWS between study antecedents and OP, the t values and p values were analysed and statistical interpretations were made. From the above table we can see that DWS mediated the relationship between Organizational Factor and OP, with t values 2.225, and the p values being below 0.05 and hence the mediated effect is statistically significant at the 0.05 significance level.

Upward Strategy as Mediator

16. H0: Upward Strategy do not mediate between study constructs and Organization Performance

H1: Upward Strategy do not mediate between study constructs and Organization Performance

With respect to mediating role of UWS between study antecedents and OP, the t values and p values were analysed and statistical interpretations were made. From the above table we can see that DWS mediated the relationship between Organizational Factor and OP with t values 2.983, and the p values being below 0.003 and hence the mediated effect is statistically significant at the 0.01 significance level.

Table 31: Moderator effect

Moderator effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P-Value
OT x Org Factor -> OP	-0.101	-0.098	0.025	3.99	0.00

OT and Organizational Factor has a significant effect on OP. The negative coefficient suggests that the relationship between OT and OP is moderated by the level of Organizational Factor. The statistical significance indicates that this moderation statistically significant at the 0.01 significance level.

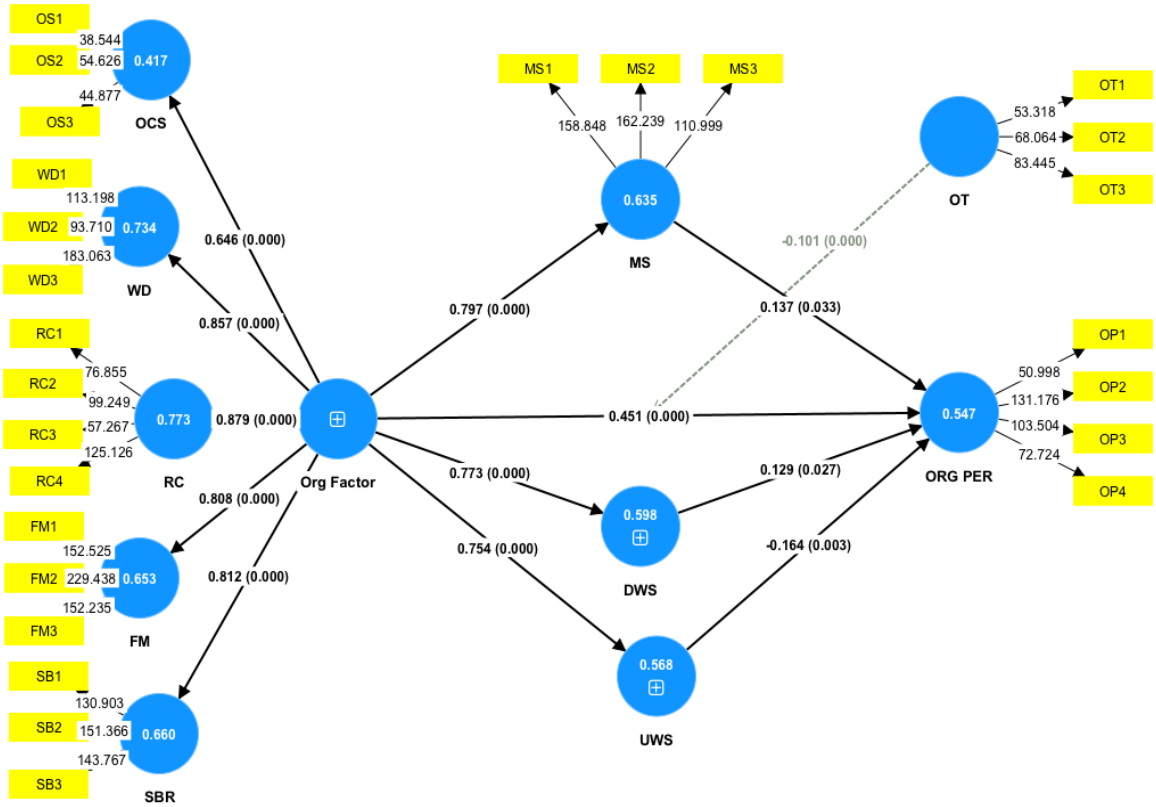

Figure 32: Bootstrapping result

Conclusively, the research has determined that Organisational Factors exert a notable and statistically meaningful influence on Organisational Performance. This compelling outcome highlights the pivotal impact of organisational components on performance results. Secondly, the correlation between Technological Opportunity (OT) and Organisational Factors exhibited a striking connection with Organisational Performance. The presence of Organisational Factors alters the effect of Technological Opportunity on performance, as indicated by the negative coefficient in this connection. Moreover, the investigation into the mediating influences has unveiled that Managerial Style, Downward Strategy, and Upward Strategy have distinctly served as pivotal intermediaries connecting the antecedents of the study with Organisational Performance. These discoveries collectively underscore the intricate essence of organisational dynamics, underscoring the significance of both direct and indirect impacts on organisational Performance. The data unequivocally demonstrates that managerial tactics and technology opportunities play a pivotal role, rather than being on the periphery, in comprehending and improving the effectiveness of Organisational Performance.

CHAPTER V:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

5.1 Summary

The study's results in the closing chapter shed light on the intricate relationship between organisational characteristics, Middle-Level Managers (MLM) role, technology possibilities, and organisational performance. A comprehensive knowledge of these interactions has been achieved by thorough data analysis, including reliability tests, correlation exploration, t-tests, ANOVA, and explanation through PLS-SEM modelling.

This chapter explores the substantial consequences of the study's findings. It highlights the crucial influence of organisational elements, including culture, support structures, resources, and procedures, on developing MLM tactics and their subsequent effect on organisational performance. Recognising these characteristics emphasises the need to foster supportive organisational environment that promote strategic adaptability and renewal.

Morover, it examines the function of MLM as mediators and the impact of technology possibilities as moderators. MLM strategies serve as mediators in the connection between organisational factors and performance, with technology possibilities having the potential to either increase or lessen the influence of these strategies. It highlights the ever-changing nature of organisational dynamics and the need for companies to be adaptable and inventive to succeed in competitive environments.

Furthermore, it gives precise suggestions based on the results of the investigation. It proposes cultivating a culture of innovation and providing developmental assistance inside businesses to boost the effectiveness of MLM initiatives and eventually enhance organisational performance. Furthermore, it suggests allocating resources towards developing technical opportunities and keeping abreast of new prospects to secure a

competitive edge and guarantee flexibility in volatile circumstances. Continuous examination and improvement of organisational strategies are crucial in adapting to changing internal and external dynamics. Regularly reviewing organisational characteristics, MLM techniques, and technical environments is essential to guide strategic decision-making and successfully handle difficulties. This emphasises the need to maintain strategic flexibility and adjustment to achieve long-lasting success continuously.

The thesis thoroughly comprehends the complex interaction among organisational characteristics, MLM methods, technical possibilities, and organisational success. Organisations may achieve lasting success in dynamic business contexts by adopting the insights and suggestions from the research, which will boost their strategic agility.

Sample composition

A quantitative methodology was used to assess a dataset consisting of 404 people. The study thoroughly analysed demographic factors such as age, educational attainment, professional background, management positions, and industry affiliations. The results revealed significant trends in the demographic distribution across many dimensions:

Age Distribution: The largest group of participants, comprising 40.59% of the total, belonged within the 41-50 years age range. However, substantial numbers were also detected in the 31-40 years (39.6%) and 51+ years (11.88%) categories.

Educational Background: Most individuals (71.29%) had professional degrees, 24.26% had post-graduate qualifications, and 4.46% were undergraduates.

Work Experience: The majority of the sample (63.37%) consisted of individuals with more than 15 years of experience, with a significant presence in the 11-15 years (20.79%) group.

Managerial Jobs Distribution: Middle management comprises the largest share (38.61%), followed closely by operational level management (35.64%), top management (14.85%), and executive management (10.89%).

The Telecom/IT sector accounted for most of the industry distribution, with a share of 67.33%. While manufacturing, banking & insurance, and other sectors had a more minor but notable presence, with shares of 8.42%, 6.44%, and 15.35%, respectively.

Company Size Distribution: The most significant proportion of workers were employed in organisations with over 5000 employees (74.75%), followed by those in companies with less than 500 employees (15.35%), 1001 to 5000 employees (6.93%), and 501 to 1000 employees (2.97%).

The geographic distribution of corporate headquarters is mainly concentrated in Sweden (40.59%), with India (28.22%) being the second most prevalent location. Other nations account for 22.77% of the headquarters, while Finland, the UK, South Korea, and Australia represent minor parts.

Language Proficiency Levels: A substantial proportion of persons had a high level of conversational ability (48.26%). In comparison, others exhibited a moderate (41.29%) or low (10.45%) level of conversational ability, indicating a wide range of linguistic skills among the workforce.

Organisational Affiliations: The dataset included a diverse range of organisational affiliations, with a significant representation of professionals linked to international firms established in Sweden (21.78%) and persons classified as "Others" (78.22%).

The contemporary economy is distinguished by its variety, including people from many backgrounds and experiences. Comprehending the makeup of this workforce is essential for assessing industry patterns, forecasting future paths, and devising efficient

human resource strategies. This research aims to analyse the demographic composition of professionals in various industries, providing valuable information on career choices, educational achievements, and levels of management.

Testing of Hypothesis: T-test and ANOVA

5.1.1 Findings based on T-test

The findings of the gender t-tests on numerous work-related variables give significant insights into the possible disparities between male and female professionals in the workplace. Each variable was submitted to statistical inspection, including computation of t-stats, p-values, Cohen's d effect sizes, and determination of significance thresholds. The analysis yielded the following results.

The gender T-test analysis revealed substantial disparities in RC scores across genders, as shown by a T-statistic of 2.052 and a corresponding p-value of 0.044. This implies a significant effect size and demonstrates that gender might considerably influence reading comprehension ability. While the statistical significance is there, the impact size of 0.35 suggests a modest practical importance.

No statistically significant differences were identified across genders regarding other characteristics, such as OS choice, WD use, and numerous others. However, it is essential to highlight that several factors had significant impact sizes, notably in SB, overall OT, and familiarity with FM. Although these differences did not reach statistical significance at the specified alpha threshold of 0.05, they nonetheless indicate noteworthy patterns that need additional investigation or consideration in future studies.

These findings indicate that gender disparities may be present in some facets of technology use, such as reading comprehension, but they may not be consistent across all factors. Additionally, the impact sizes detected in factors where no statistical significance

was discovered highlight possible areas of interest for additional inquiry. This emphasises the intricate nature of gender discrepancies in technology-related abilities and behaviours, emphasising the need for subtle strategies in tackling gender-related inequalities in educational and professional environments.

5.1.2 T-test findings based on average

Examining workplace aspects across various age groups uncovers fascinating observations on the potential impact of age on workers' views. Workers' views generally showed little variances across several aspects, as shown by the mean ratings.

OS: Perceptions of culture and support did not vary significantly across different age groups, as shown by mean scores continuously ranging from 3.78 to 3.98.

WD: Perceptions of work design were consistently favourable across all age groups, with mean scores ranging from 3.83 to 4.17.

The study found that employees' perceptions of resources and limitations were relatively stable throughout different age groups, with average scores ranging from 3.58 to 3.8. This indicates modest differences in how employees evaluated the resources and restrictions inside the firm.

SB and OT showed similar patterns across all age groups, with average scores consistently falling within a limited range of 3.91 to 4.25 for SB and 3.92 to 4.14 for OT.

MS, DWS, and UWS: Perceptions of Managerial style, downward strategy, and upward strategy show slight differences across different age groups, with average scores remaining broadly similar across dimensions.

Perceptions of OT and OP showed similar patterns, with mean scores fluctuating somewhat across different age groups but retaining an optimistic attitude overall.

5.1.3 T-test findings based on check-in Countries

An analysis of OS yielded fascinating findings on the distinctions between the "Others" group and Swedish multinational enterprises ("Sweden MNCs"). Although both groups showed a reasonable focus on OS, Swedish multinational businesses had a much higher average score, indicating a more robust organisational culture and support system. This discovery underscores the significance of organisational culture in global settings, where Swedish enterprises mainly prioritise cultivating supportive work environments.

Conversely, the WD examination revealed no notable difference between the "Others" category and Swedish multinational corporations. Both groups had equal mean scores, indicating similar degrees of attention to developmental support within the job design framework. This implies that while there may be differences in organisational culture, the method of providing developmental assistance in job design stays the same throughout the analysed groups.

The results highlighted a significant disparity between the "Others" category and Swedish multinational firms regarding RC. Swedish enterprises had a much higher average score, suggesting a greater focus on managing resources and constraints. This implies that Swedish multinational firms place a higher importance on allocating resources and managing constraints than organisations in the "Others" category. This could be to their competitive advantage.

Swedish multinational corporations had a notably better average score in OT compared to the "Others" category. This indicates that Swedish organisations prioritise the use of technology, emphasising their proactive stance in using technical progress to drive organisational expansion and innovation.

Furthermore, there were notable disparities in the ratings of FM and MS between the "Others" group and Swedish multinational businesses, with the latter exhibiting higher

average scores. Swedish enterprises prioritise facilitating systems and management assistance, demonstrating their dedication to creating a helpful and empowered work environment.

Regarding MLM Upward Strategy (UWS) and MLM Downward Strategy (DWS), while both groups had identical average scores, the slightly significant p-value for UWS indicates a possible difference in focus between the groups. Swedish multinational businesses may emphasise upward and downward strategic decision-making, reflecting their strategic orientation and organisational culture.

5.1.4 The findings of ageing based results – Using ANOVA

The study's research offers valuable insights into the correlation between age and several aspects of the job environment. The findings consistently indicate slight variations in mean scores across age groups in dimensions such as OS, WD, RC, OT, FM, UWS, DWS, MS, and OP. Furthermore, the absence of statistically significant variations across different age groups, as shown by the p-values ranging from 0.207 to 0.779, implies a consistent assessment of the employment environment regardless of age.

These results have several implications for companies establishing inclusive and supportive work environments. First and foremost, the fact that opinions remain consistent across all age groups suggests that organisational efforts to improve culture, support, and performance will likely have a universal impact on workers, regardless of age. This emphasises the need to adopt tactics that address the varied requirements and inclinations of workers of various age groups.

Furthermore, while the impact of each dimension is modest, it nonetheless indicates the significance of age as a factor that influences workers' opinions of the workplace. Therefore, companies should be aware of age-related factors while creating policies,

programs, and interventions to enhance different aspects of the work environment. Organisations may improve employee engagement, contentment, and general well-being by considering age-related variations in experiences and expectations.

Moreover, the little differences identified in average ratings across different age groups indicate the need for continuous monitoring and assessment of the work environment to detect developing patterns and tackle possible areas of concern. Periodic evaluations assist businesses in proactively recognising and resolving age-related obstacles, encouraging cooperation across different generations, and cultivating a culture of ongoing improvement.

5.1.5 The findings of Work Experience - Using ANOVA

Analysing workplace-related characteristics across various levels of total work experience yields significant insights into the correlation between work experience and workers' views of the work environment. The findings consistently indicate minimal variations in mean scores across categories of total work experience in dimensions such as OS, WD, RC, SB, OT, FM, UWS, DWS, MS, and OP. Moreover, the absence of statistically significant disparities in averages, as shown by the p-values beyond the significance threshold (0.05), implies that total work experience alone may not be a conclusive determinant in elucidating significant fluctuations in these job-related characteristics.

5.1.6 The findings of Organizational Level - Using ANOVA

The ANOVA findings provide valuable insights into the organisational dynamics at various levels. Senior management exhibits a reasonable mean score in organisational culture and support; operational-level management has the highest mean score in this

category. Similarly, the most significant average score in developmental support work design is shown by top management, suggesting a solid environment for fostering employee growth and development at the executive level.

Moreover, significant disparities arise in specific domains, such as technology Opportunities and enabling processes. The mean ratings for technological possibilities are most excellent among operational and upper management, indicating a favourable attitude towards technology among these categories. Nevertheless, a statistically significant disparity exists in technological possibilities and facilitation mechanisms across different levels of organisations, with operational level management and top management exhibiting higher degrees of eagerness and endorsement towards technology adoption and facilitation. These findings emphasise the significance of comprehending and utilising organisational dynamics to promote a culture of innovation and growth throughout all levels of the organisation. They also point out specific areas where focused interventions may be necessary to further improve organisational effectiveness and performance.

5.1.7 Findings based on Conservent - Using ANOVA

The ANOVA findings provide valuable insights into the influence of Conversant levels on several elements of organisational dynamics. Employees with greater Conversant levels often display superior performance in several aspects, while only certain elements show statistically significant impacts. Significantly, workers who possess a high degree of Conversant have superior performance compared to their peers in SBR, OT, and FM. These results emphasise the significance of conversational intelligence in promoting flexible behaviours, using technology progress, and enabling efficient procedures within the corporate setting. Nevertheless, the impact is limited since we detect only slight to

moderate effect magnitudes. This indicates that conversational intelligence does have some influence, but it is probable that other elements also contribute to organisational dynamics.

In contrast, factors such as OS, WD, and MS do not exhibit substantial variations according to Conversant levels, despite individuals with better conversational intelligence displaying higher average scores. This implies that while conversational intelligence may favour certain features, its effect may not be as noticeable or statistically significant. Moreover, the absence of substantial impacts on UWS, DWS, and OP suggests that conversational intelligence may be one of many predictors of these organisational characteristics. The test results stress the intricate impact of conversational intelligence on organisational dynamics and underscore the need to comprehend many elements that influence organisational effectiveness and performance comprehensively.

5.1.8 The findings of Number of Employees – Using ANOVA

The ANOVA study provides valuable insights into the correlation between organisational dynamics and firm size across several dimensions. It is worth mentioning that some talents, such as FM, have noticeable variations in average scores among employees of various levels. However, skills like OS, WD, and OT show minor changes. FM, such as adaptability and flexibility, have a medium impact size. This means that they are significantly associated with medium-sized enterprises. This is supported by the highest mean scores obtained in organisations with 501 to 1000 people. In contrast, OS, WD, and OT do not exhibit substantial differences among employee levels. This suggests that these aspects may be relatively consistent regardless of company size, although larger organisations tend to have higher average scores.

In addition, skills such as SBR, MS, UWS, DWS, and OP have higher average scores in larger companies. This indicates a potential positive relationship between these

skills and the organisation's size. Nevertheless, the ANOVA findings suggest no statistically significant variations across employee levels regarding these elements despite the elevated average scores. This indicates that while more prominent organisations may demonstrate superior performance in some aspects, the disparities in average scores do not hold statistical significance, emphasising the need for a sophisticated comprehension of the interaction between organisational dynamics and company size. These results underscore the intricate connection between organisational dynamics and firm size, underscoring the need to consider several elements beyond mere organisational scale in comprehending and improving organisational performance.

5.1.9 Correlation

The results derived from the correlation matrix and reliability analysis reveal the conclusions. All the components analysed in the research include a reflective component and are evaluated using several items. The confirmation of indicator reliability offers substantiation for the dependability and accuracy of hidden variables. The study's results suggest that the structural model met the requirements for indication reliability to a great extent.

The Cronbach's Alpha method was used to evaluate the internal consistency reliability. This method assesses reliability by analysing the intercorrelations among the observed indicator variables.

The Composite Reliability test is used to determine the instrument's consistency with high confidence. The data analysis findings indicate that the survey instrument demonstrates both reliability and validity in evaluating the correlation between organisational variables and organisational performance. The composite reliability for the

latent variable was found to be statistically significant. Furthermore, the internal composite reliability of all the measurements in the model has been determined.

The establishment of dependability construct validity pertains to the degree to which constructs are by their intended measurements. Convergent validity and discriminant validity are acknowledged as the two fundamental criteria that impact construct validity.

The extraction of the majority of latent variables exhibits convergent validity, with most values above the set threshold. Therefore, the research effectively showcased convergent validity.

Discriminant validity ensures that a measurement is different and independent from other concepts. This is confirmed by using all three methods Hair et al. (2016) recommended to evaluate discriminant validity. The criteria below is a statistical approach often used in academic research to evaluate the discriminant validity of conceptions.1) Assessment of cross-loadings 2) The Fornell-Larcker method 3) The Heterotrait-Monotrait ratio of correlation is a quantitative tool used in scholarly investigations to evaluate the magnitude of the association between several traits or features. The study's discriminant validity is established by using all three approaches recommended by previous research.

The association among the dimensions. The correlation study reveals a robust and statistically significant association between the two dimensions examined: organisation factors and organisational performance.

The correlation matrix clearly represents the organisational structure, illustrating a network of robust positive connections between different organisational parameters. The interconnectivity of diverse factors in the organisational environment highlights the cohesive character, as they mutually reinforce and complement each other. The significant

connections discovered among strategic, managerial, and developmental aspects suggest that a comprehensive strategy is necessary to achieve organisational performance.

The strong linkages among strategic, managerial, and developmental elements indicate that businesses are not segregating these tasks but instead incorporating them harmoniously into their operations. This integration signifies that strategic efforts are tightly coordinated with management choices and reinforced by solid developmental programs, promoting a complete approach to organisational expansion and achievement. Strategy initiatives created by top-level management are more likely to be successfully carried out via managerial actions and backed by developmental programs that foster the necessary skills and competencies for strategy execution.

Furthermore, the strong positive correlations among these parameters suggest that enhancements or progress in one domain will likely result in widespread impacts across the organisational terrain. This interconnection promotes a dynamic and synergistic organisational environment where strive in one domain contribute to the overall progress and triumph of the company. The correlation matrix demonstrates the interdependence of several organisational components and emphasises the need for a comprehensive approach to organisational performance that smoothly incorporates strategic, managerial, and developmental aspects.

5.1.10 PLS-SEM

The research used PLS V 3.2.7 software to analyse the correlation between the independent and dependent variables. Partial Least Squares (PLS) is a statistical technique often used in structural equation modelling to examine intricate associations between variables, mainly when the sample size is limited or the data does not follow a normal distribution. By utilising these techniques, researchers were capable of assessing the

internal structure of the model (the degree of correlation between variables within the model) and the external structure of the measurement model (the extent to which the observed variables accurately represent the intended constructs they are meant to measure), as advised by Hair et al., (2019), a prominent source in the domain of multivariate data analysis.

The assessment of the outer model included the examination of outer weights and outer loadings. Outer weights signify the connections between the observable variables (indicators) and the latent constructs (factors), while outer loadings show the intensity of these connections. This evaluation verifies that the observed variables accurately represent the fundamental components they are designed to test. Conversely, the structural model analysis centred on evaluating path coefficients and the resulting R-square values. Path coefficients quantify the magnitude and direction of the connections between underlying constructs, while R-square values reflect the fraction of variability accounted for by the model. Through analysing these components, researchers understand the overall compatibility and ability to make accurate predictions of the structural model.

Path Analysis is a statistical technique used to construct and assess structural models built around pre-established assumptions about the connections between variables. It enables researchers to experimentally examine specific routes or sequences of cause and effect within a theoretical framework. Within the framework of partition analysis, scholars establish and scrutinise the route coefficients to better comprehend the relationships among variables. Partition analysis is the dissection of the overall impact of an independent variable on a dependent variable into distinct direct and indirect impacts via intermediary variables. Examining route coefficients, researchers may determine the magnitude and statistical significance of both direct and indirect effects. This analysis offers a significant

understanding of the fundamental processes that influence the connections between variables in the model.

The research performed a statistical analysis to examine the impact of numerous organisational elements on organisational performance and the correlations between various tactics and performance results. The researcher tested hypotheses for each association evaluated, with significance thresholds determined at either 5% or 1%. The studies revealed numerous remarkable discoveries.

Regarding the impact of downward strategy and management strategy on organisational performance, the study revealed that DWS and MS had statistically significant impacts on OP. Within the study's setting, these strategic methods directly influence overall organisational performance results.

Nevertheless, the investigation uncovered a noteworthy correlation between technology possibilities, organisation characteristics, and performance. Statistically significant evidence demonstrates that OT substantially impact OP, underscoring the pivotal significance of technological improvements in determining organisational success.

In addition, the study emphasised the significant impact of organisational elements in several aspects, such as enabling mechanisms, management approach, culture and support, resources and limitations, strategic behavioural adaptation, upward strategy, and work structure. The findings indicate that the organisational environment, which includes different structural, cultural, and strategic components, substantially influences organisational performance outcomes.

The research indicates that both the management style and the MLM's strategy have a substantial impact on mediating the relationship between organisational Factors and the organisation's overall performance. Moreover, the correlation between technology opportunities and organisational factors substantially impacts organisational success.

These results emphasise the significance of taking management techniques and strategic choices into account to improve organisational performance, particularly about technology possibilities and organisational issues.

5.2 Implications

The statistical analysis results provide valuable insights for academics and management to comprehend the interplay between various factors and elements. The mediation study demonstrates that managerial style and upward & downward strategy are essential mediators between organisational characteristics and performance. The t-values and p-values, which are statistically significant, demonstrate the robustness and significance of these mediating effects. Managerial style and downward strategy serve as channels via which organisational characteristics impact organisational performance. This emphasises the significance of effective leadership and strategic decision-making in propelling Intrapreneurship and Innoavation to achieve organisation success.

Furthermore, the findings emphasise the importance of technology opportunity and organisational variables in influencing success. The correlation between technological opportunity and organisational performance indicates that the connection is influenced by the degree of organisational factors. This suggests that while technical improvements provide possibilities for improving performance, the success of using these possibilities relies on the specific strategies inside the firm. Organisations with more robust internal structures and capacities are more adept at taking advantage of technology possibilities and converting them into enhanced performance results.

5.2.1 Academic Implication

These results signify notable progress in the scholarly understanding of contextual factors when examining the interplay between intrapreneurship, middle management, and

innovation ecosystems. This study provides insight into the complex processes that explain the link between organisational factors and performance results by examining the mediating roles of managerial style, upward strategy and downward strategy. This empirical research supports and enhances current theories and frameworks by providing a more detailed insights of how leadership dynamics and strategic decision-making processes impact organisational performance.

Specifically, recognising MLM managerial style and downward strategy as crucial mediators emphasises the significance of leadership in nurturing intrapreneurship and innovation to influence organization competitiveness.. This highlights the need to investigate the distinct attributes and actions linked to successful leadership in various organisational settings. Gaining insight into the influence of different managerial styles and strategic approaches on performance may result in more tailored interventions and management practices that seek to maximise organisational effectiveness.

These results enhance the theoretical basis of organisational studies and provide practical insights for managers and leaders across organisations. This research enhances our comprehension of the factors influencing Intrapreneurship and Innovation. It establishes a solid basis for creating evidence-based strategies to enhance organisational effectiveness and attain a sustainable competitive advantage in a progressively intricate and dynamic business environment.

5.2.2 Practical Implication

The consequences of these results are substantial for management practices in competence development of intrapreneurs, cross-functional team building, operational decision-making , oragnization culture, performance evaluation system, and technological application to facilitate intrapreneurship and innovation

I. Developing intrapreneurial competencies through holistic training and development programs:

Develop Intrapreneurial Competencies:

Empower intrapreneurs by offering targeted training and development in design thinking, problem-solving, thought leadership, and agile development approaches to successfully bolster their skills and stimulate creativity.

Business and Financial Acumen:

Strengthen middle managers with enhanced business and financial acumen to more effectively assist intrapreneurs in crafting sustainable business models and acquiring essential resources. Training programs can encompass a wide array of subjects, including financial analysis, budgeting, market research, and business planning. Mid-level managers possessing a robust comprehension of business principles are well-equipped to offer invaluable counsel and assistance to intrapreneurs in nurturing their concepts.

Centralized Learning Resources:

Facilitate the accessibility of instructional materials for employees. Provide a diverse array of resources, encompassing e-learning platforms, online courses, industry journals, and internal knowledge repositories. This entails the provision of financial support, access to cutting-edge equipment or technology, and facilitating connections with specialists in the field. Empowering intrapreneurs through the removal of obstacles and the provision of necessary resources allows them to dedicate themselves to their innovative endeavors with heightened efficiency and efficacy.

Establish a Comprehensive Mentorship Program:

Establish a structured mentorship initiative that aligns aspiring intrapreneurs with seasoned mentors from inside the organizational ranks. Mentors are adept at offering direction, imparting valuable insights, and adeptly assisting intrapreneurs in overcoming

any problems they may face. The mentorship dynamic affords intrapreneurs the opportunity to glean insights from seasoned experts, so acquiring invaluable expertise and diverse views.

Peer Mentoring and Coaching:

Implement peer mentorship and coaching initiatives to foster information exchange and enhance skill acquisition. Match seasoned personnel with individuals eager to expand their knowledge and skills in particular domains. This nurtures an environment where mutual learning, relationship-building, and the advancement of both individual and collective growth are encouraged. Engaging in coaching sessions can assist intrapreneurs in honing their ideas, enhancing their talents, and surmounting challenges.

Support Communities of Practice:

Cultivate communities of practice to facilitate the convergence of personnel with common interests or specialized skills, fostering opportunities for learning, cooperation, and knowledge exchange. Promote the establishment of interdisciplinary groups dedicated to certain fields of interest or developing trends.

Leadership and Communication:

Enhance the leadership and communication acumen of middle managers to adeptly empower intrapreneurs. It is imperative for organizations to allocate resources towards leadership development initiatives tailored to provide middle managers with the necessary skills and competences to foster intrapreneurship and skillfully navigate innovation ecosystem. Training programs have the capacity to center around key areas including strategic thinking, influencing skills, effective communication approaches, networking strategies, and fostering collaborative partnerships. Cultivating robust leadership competencies empowers middle managers to ignite and energize intrapreneurs while adeptly articulating the organization's vision and objectives. Mid-level managers have the

capacity to effectively utilize their connections to acquire resources, cultivate collaborations, and improve outcomes related to intrapreneurship

By fostering knowledge dissemination and offering educational prospects, one cultivates an environment conducive to perpetual learning, cooperation, and ingenuity. It empowers employees to gain fresh expertise, overcome obstacles, and flourish in their pioneering pursuits. By offering direction, mentoring, and support to intrapreneurs, businesses have the ability to cultivate their entrepreneurial drive and optimize their potential influence. Furthermore, these initiatives have the potential to bolster the capabilities of mid-level managers in promoting cooperation, navigating transitions, and cultivating an environment conducive to creativity.

II. Promoting cross-functional team and collaboration to overcome organizational barriers to nurture Intrapreneurial initiatives:

Organizations need to provide adequate resources, incentives, and support systems to empower middle managers in their intrapreneurship efforts.

Secure Executive Support:

Secure the backing and approval of senior management to champion the significance of cross-functional teams and collaboration. Leaders must wholeheartedly engage in and advocate for these activities, allocating resources, eliminating obstacles, and showcasing their dedication to drive innovation through cooperation.

Define Communication Channels:

Facilitate the establishment of 360-degree communication pathways between cross-functional teams and throughout the company. This entails establishing unequivocal communication pathways connecting senior management with frontline staff. Establish the protocol for team members to effectively interact, exchange updates, and engage in

collaborative efforts for project completion. Promote consistent check-ins, meetings, and feedback sessions to facilitate a seamless exchange of ideas and information, guaranteeing efficient communication and synchronization.

Foster a Culture of Collaboration and Networking:

It is essential for organizations to actively promote and streamline cooperation and networking avenues for middle managers operating inside innovation ecosystem. Engaging in this goal may encompass developing avenues for disseminating knowledge, orchestrating industry gatherings, and forging alliances with industry authorities and external stakeholders. Moreover, fostering a culture that motivates employees to engage in cross-departmental and hierarchical collaboration, dismantling barriers and cultivating a collective spirit of ownership. Initiatives of this nature have the potential to augment the capabilities of mid-level managers in harnessing the resources and knowledge present in the ecosystem.

Promote Cross-Functional Projects and Intrapreneurial Assignments:

It is absolutely essential for managers to foster employee engagement in cross-functional initiatives and assignments, facilitating the acquisition of varied viewpoints and diversified experiences. An avenue ought to be established for employees to suggest and actively engage in intrapreneurial initiatives within their respective positions. Incorporate an assessment procedure to evaluate the viability and prospective influence of these projects. Allocate personnel with designated time and resources for these projects, acknowledging their actions and achievements within the framework of performance assessment and incentive mechanisms.

Embrace Diversity and Inclusion:

Encourage diversity and boost inclusivity in cross-functional teams through the incorporation of individuals with varied backgrounds, expertise, and opinions. The

presence of diversity amplifies ingenuity, facilitates effective resolution of challenges, and enriches the process of decision-making. Promote team members to wholeheartedly welcome and honor varied perspectives, establishing an inclusive atmosphere where all individuals are esteemed and listened to.

Encourage autonomy and risk-taking:

Cultivate a setting that fosters and empowers intrapreneurs to assume responsibility for their projects and exercise independent judgment. Grant them the essential liberty and independence to go into their concepts and engage in experimentation. Promote strategic risk-taking and reassure individuals that it is permissible to glean insights from setbacks. By cultivating an environment that nurtures autonomy and encourages risk-taking, you enable intrapreneurs to embark on daring initiatives and spearhead impactful innovation.

Facilitate resources and access to expertise:

Assure intrapreneurs are equipped with the essential resources, tools, and expertise vital for their success. This entails offering financial support, facilitating access to cutting-edge equipment or technology, and linking them with proficient individuals in the field. Through the removal of obstacles and the provision of necessary resources, you empower intrapreneurs to concentrate on their innovative pursuits with heightened efficiency and efficacy.

To enhance the efficacy of change management:

It is critical for companies to place a strong emphasis on addressing the obstacles encountered by middle managers in fostering intrapreneurship. This entails overcoming resistance to change, eliminating bureaucratic obstacles, and fostering a culture that promotes innovation and exploration.

In summary, through the promotion of cross-functional teams and stimulating collaboration, firms can harness the diverse expertise and perspectives of their employees,

culminating in heightened innovation and intrapreneurship. These strategies enable proficient communication, information exchange, and cooperation, nurturing an environment conducive to innovation.

III. Redesigning performance evaluation and reward systems to incentivize intrapreneurial behaviors:

Align with Intrapreneurial Goals:

It is imperative to harmonize the performance assessment and incentive structures with the intrapreneurial objectives of the firm. Articulate precise performance measurements and indicators that mirror the sought-after intrapreneurial characteristics, encompassing creativity, risk-taking, and initiative. Such metrics encompass elements like idea origination, effective project execution, and enhancements to the organization's innovation framework.

Foster a Culture of Learning and Development:

Design performance assessment frameworks that emphasize ongoing development and growth. Evaluate employees not solely on their accomplishments, but also on their dedication to continuous learning, exploration, and skill development. Integrate feedback systems and provide avenues for employees to contemplate their intrapreneurial pursuits, thereby pinpointing areas for development.

Experimentation and Learning from Failure:

Establish a milieu that fosters risk-taking and embraces failure to offer a sense of psychological safety to emerging intrapreneurs and teams. It is prudent to incentivize personnel that engage in strategic risk-taking, innovate with novel concepts, and derive valuable lessons from setbacks. Implement strategies to effectively gather and disseminate

insights derived from unsuccessful projects or initiatives, underscoring the need of trial and enhancement.

Evaluate and reward collaboration:

Integrate collaboration as a parameter in performance assessments and incentive structures. Identify and acknowledge those individuals and teams that exhibit proficient cross-functional cooperation and attain triumphant results. This serves to underscore the need of cooperation and motivates staff members to engage proactively in interdepartmental activities.

Gamification and Incentive Mechanisms:

Incorporate gamification components and incentive mechanisms to stimulate employee involvement and enthusiasm in intrapreneurship pursuits. Encourage and incentivize staff for their inventive contributions, teamwork on projects, and accomplishment of set goals, cultivating an environment that values perpetual creativity and acknowledgment.

Recognize and Reward Intrapreneurial Behaviors:

Implement distinctive recognition and incentives for intrapreneurial actions. These may encompass financial inducements, advancements, bonuses, or non-monetary benefits like public acknowledgment, certifications, or avenues for professional progression. Illuminate the triumphs of intrapreneurs and exhibit their profound influence within the organization to ignite inspiration among peers.

Ultimately, via the strategic tweaking of performance appraisal and incentive structures to harmonize with intrapreneurial objectives, companies possess the capacity to cultivate a culture that fosters and incentivizes innovation, bold decision-making, and entrepreneurial conduct. Consequently, this serves as a catalyst for middle managers and staff to enthusiastically participate in intrapreneurship.

IV. Leveraging technology and digital tools to facilitate intrapreneurship and innovation:

Harness Internal, external resources, and technology:

Evaluating the current infrastructure, technology, and intellectual property available for potential utilization or enhancement in order to bolster innovation endeavors. Recognize the internal assets, encompassing human capital, skills, expertise, and knowledge, that reside within the organization. This entails acknowledging the talents, competencies, and different ideas and perspectives of employees that have the potential to foster creativity.

Establish Collaborative Platforms:

It is imperative for organizations to use digital platforms or tools to effectively capture, assess, and nurture innovative ideas from people throughout the organization, hence fostering collaboration and the exchange of knowledge. Such platforms may encompass project management software, communication tools, efficient document sharing platforms, and hassle-free virtual collaborative spaces. Guaranteeing that the platforms are intuitive, inclusive, and in accordance with the organization's security and privacy standards. These platforms offer a centralized hub for ideation, collaboration, knowledge exchange, and end to end monitoring of the intrapreneurial endeavors.

Open Innovation Platforms and Co-creation:

Collaborate with open innovation platforms and external innovation ecosystems to tap into a wider spectrum of ideas, knowledge, and resources. Engage in crowdsourcing endeavours, hackathons, or innovation challenges to leverage the combined intellect of external stakeholders, including customers, partners, and industry authorities. Embark on co-creation initiatives wherein the firm engages with external organizations to

cultivate cutting-edge solutions or products. Develop connections and partnerships with external entities capable of granting entry to novel technology, market intelligence, financial prospects, or specialist expertise. Participate in industry gatherings, symposiums, and networks to establish connections with possible partners and tap on external assets.

Digital Prototyping and Simulation:

Capitalize on digital prototyping and simulation tools to swiftly iterate and evaluate novel product concepts or business strategies. Through virtual prototyping, intrapreneurs can envision, enhance, and authenticate their concepts prior to committing substantial resources to tangible prototypes or manufacturing, thereby diminishing time-to-market and alleviating risks.

Data Analytics and Insights:

Harness the potential of data analytics and insights to discover burgeoning trends, client inclinations, and industry prospects. Examine extensive datasets, feedback from consumers, and market research to reveal valuable insights that can guide entrepreneurial decision-making within the organization and stimulate innovative projects.

Innovation Metrics and Evaluation:

Develop precise measurements and evaluation tools to gauge and monitor the efficacy of innovative ideas spanning from conception to execution. Supervise crucial performance metrics associated with innovation, including the quantity of novel ideas produced, effective execution of innovations, and their influence on corporate results. Consistently evaluate the innovation environment of the firm to pinpoint opportunities for enhancement and adapt strategy accordingly.

Through the identification and utilization of both internal and external resources, and technological platforms, businesses have the ability to construct a self-sufficient

innovation ecosystem that cultivates ingenuity, encourages cooperation, and propels ongoing innovation and expansion.

To summarize, a thoughtful analysis of these implications, businesses can enrich their comprehension and leverage the interplay among intrapreneurship, mid-level management, and technological ecosystems to propel innovation, expansion, and competitiveness.

5.3 Recommendation for Future Research

Future researchers can adapt this study to other industries, organisations, or corporations within the state and nation, such as manufacturing, textile, and banking, to enhance its generalizability.

This study investigated the mediating effects of Managerial style and upward & downward strategy. However, future research might explore other mediating processes that impact the link between organisational variables and performance results. An in-depth analysis of organisational culture, employee motivation, and decision-making processes may provide a more thorough insight into the mechanisms that influence organisational success.

Contextual analysis by conducting comparative research across various sectors, organisational sizes, and cultural contexts, may gain insight into how the correlations observed in this study alter across other organisational settings. By examining contextual elements, researchers may clarify the applicability of the results and discover specific details that may impact the observed associations.

Longitudinal study methods enable the analysis of causal linkages across time, offering valuable insights into the longitudinal effects of changes in organisational Factors, Managerial styles, or strategic approaches on organisational performance. This

methodology can reveal time-dependent patterns and facilitate the detection of delayed impacts or reciprocal relationships.

Exploring the incorporation of emerging technologies, such as artificial intelligence, machine learning, and blockchain, into organisational processes and strategic initiatives can provide valuable insights into their capacity to foster innovation, enhance efficiency, and confer a competitive edge. Research in this field might investigate the potential and difficulties of implementing and using new technology in various sectors and organisational settings.

5.4 Conclusion

The study encapsulate the interplay between intrapreneurship, middle management, and innovation ecosystems which is a multifaceted and ever-evolving endeavor.

The study's results indicate that both Upward Strategy, Downward Strategy, and Managerial Styles have a substantial influence on organisational performance and conventional beliefs about hierarchical and managerial methods for obtaining success. This indicates a need for firms to investigate other approaches or reevaluate their existing procedures to enhance performance. To remain competitive in changing marketplaces, firms must be willing to experiment and innovate in their MLM practices since traditional ways may not be as successful as formerly thought.

Mid-level managers are pivotal in operationalizing the visionary directives of senior leadership into tangible tactics conducive to fostering intrapreneurial pursuits. They harmonize intrapreneurial initiatives with corporate strategy and objectives, ensuring a delicate equilibrium between strategic ventures and operational duties. They adeptly navigate between upper management and intrapreneurs, offering counsel, coaching, and assistance. They effectively bridge the chasm between the innovative concepts of

intrapreneurs and the current organizational framework, skillfully guiding intrapreneurs through obstacles and facilitating the surmounting of impediments.

Additionally, the research recognises the substantial influence of organisational variables, such as Strategic behavioural renewal, culture, support, resources, and constraints, highlighting the crucial significance of these elements in defining organisational dynamics and results. Moreover, the study's findings highlight the significant influence of upward strategy, work design, and Facilitating mechanisms on organisational performance, emphasising the need to cultivate employee empowerment, effective work design, and supporting mechanisms inside the business. These elements help to establish a favourable environment that promotes employee motivation, engagement, and optimum performance, eventually leading to organisational success.

Conquering risk aversion and adopting a culture of experimentation are essential components for thriving in intrapreneurship. Middle managers are crucial in cultivating an environment that not only embraces trial and error but also values the acquisition of knowledge from setbacks, championing a mentality of development and establishing a secure space for innovative employees.

It is crucial for middle managers to cultivate intrapreneurial skills via training initiatives in order to adeptly bolster intrapreneurs and catalyze creativity within the firm. Moreover, it accelerates the overall capacity building for the organization. Encouraging the integration of cross-functional teams and fostering collaboration among different levels of the company has the potential to elevate creativity and intrapreneurial results. It is within the purview of middle managers to cultivate a cooperative work atmosphere, dismantling barriers and enabling the flow of information and teamwork across various departments.

The study clarifies the complex interaction between organisational factors, Managerial Styles, Upward Managerial Strategy, and Downward Managerial Strategies,

resulting in organisational performance. This study highlights the need for a comprehensive evaluation, focusing on the apparent impact of organisational elements and the intricate ways they affect performance, mainly via MLM dynamics and strategic orientations. Moreover, revamping the performance assessment and incentive frameworks to stimulate intrapreneurial conduct can foster and acknowledge the endeavors of intrapreneurs. Mid-level managers possess the capacity to champion and execute such systems.

Furthermore, the research acknowledges the significant influence of Technology Opportunities on organisational performance, emphasising the need to use technological breakthroughs to improve overall effectiveness and efficiency. Using technology, firms may acquire a competitive edge and effectively adjust to changing market circumstances, thus improving their overall performance and long-term viability. Leveraging the technology and digital resources can greatly enhance intrapreneurship and foster creativity. Mid-level executives have the capacity to investigate and execute digital strategies that optimize operations, facilitate virtual teamwork, and foster the integration of cutting-edge concepts. These insights provide scholars and managers with practical instructions to improve MLM, align strategic goals with organisational objectives, and effectively use technology to enhance long-lasting organisational effectiveness.

In a nutshell, middle managers mediate the relationship between top leadership and intrapreneurs by providing guidance, mentoring, and support. They translate the vision, establish mentorship relationships, facilitate collaboration, advocate for resources, provide feedback, and create a supportive environment. They play a vital role in communicating and aligning goals, allocating resources, managing risks, facilitating collaboration, managing performance, and overcoming organizational barriers. Through these actions,

middle managers play a critical role in nurturing the growth and success of intrapreneurial initiatives within the organization.

This study underscores the transformative potential of middle managers in driving innovation through intrapreneurship by facilitating the democratization of innovation for achieving organizational success. Middle managers can become powerful ambassador of change, driving long-term competitive advantage. Embracing the role of middle managers in intrapreneurship is not merely advantageous—it is essential for organizations navigating the complexities of today's rapidly evolving business landscape.

APPENDIX A

SURVEY COVER LETTER

Dear ……

This survey is a part of an academic research to study "the role of middle-managers in fostering innovation & intrapreneurship" within the large organization.

Key definition:

a. Innovation: The ability to conceive, develop, deliver, and scale new products, services, processes, and business models.

b. Intrapreneur: An employee leading the development of an innovative idea or project within a company, also referred to as Corporate Entrepreneur.

c. Middle-management: 1st Line & 2nd Line managers.

d. Large organization: Organization having more than 500 on-roll employees.

Disclaimer: The data captured would be confined for academic and research purposes only. The insights derived will form part of the thesis submission to Swiss School of Business and Management (SSBM) as a fulfilment towards my Doctoral Program in Business Administration (DBA).

APPENDIX B

SURVEY QUESTIONS

I. **Demographic Factors.** Qi, H. (2005). Strategy implementation:

1. Gender:
   a. Male
   b. Female
   c. Others

2. Age:
   a. < 30 yrs.
   b. 31-40 yrs.
   c. 41-50 yrs.
   d. 51+ yrs.

3. Educational background:
   a. Under-Graduate
   b. Post-Graduate
   c. Professional Degree (BTech/MBA/MBBS/CA etc.)

4. Total Job Experience
   a. < 5 yrs
   b. 5 - 10 yrs
   c. 11 - 15 yrs
   d. 15 + yrs

5. Organization Level
   a. Executive mgmt (CEO/COO/CMO/CHRO/MD)
   b. Top mgmt (Unit Head/Sub-Unit Head)
   c. Middle mgmt (I level and II level managers)
   d. Operational level mgmt. (Project lead, Team lead)

II. Organization variables

6. Company status:
   a. Public Listed
   b. Private Ltd.
   c. MNCs

7. Sector Belongs to:
   a. Banking & Insurance
   b. Telecom/IT
   c. Manufacturing

d. Retail
e. Pharma
f. Others

8. Company size in terms of employees:

a) less than 500
b) 501 to 1000
c) 1000 to 5000
d) More than 5000

9. Where is your company headquarters located?

a) Sweden
b) Finland
c) South Korea
d) India
e) UK
f) Australia
g) Others

III. Organizational factor

S.no		**Organizational factor** Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2002). (Independent)	Strongly Disagree				Strongly Agree
	OS	**Organizational culture and support (Independent)**	**1**	**2**	**3**	**4**	**5**
1.	OS1	Risk-taking is encouraged and seen as essential for progress and growth.					
2.	OS2	The organization is tolerant to failure as a natural part of the innovation process.					
3.	OS3	The organization has focused policies/programs in place to reward/incentivized innovative thinking					
	WD	Developmental support and work design **(Independent)**	Strongly Disagree				Strongly Agree
4.	WD1	I am given enough autonomy to explore and experiment with new ideas.					
5.	WD2	I receive valuable advice and mentoring from experienced colleagues or superiors.					
6.	WD3	The job responsibilities and work context are conducive to exploring new ideas and projects					
	RC	**Resources and Constraints (Independent)**	Strongly Disagree				Strongly Agree
7.	RC1	The organization offers workshops and training opportunities to nurture Innovation/intrapreneurial talent.					
8.	RC2	There is a wealth of knowledge and expertise available to support innovative projects.					
9.	RC3	The organization has a well-defined process to identify and nurture innovative ideas.					
		Facilitating mechanism (Independent)	Strongly				Strongly

			Disagree				Agree
10.	FM1	The organization has robust ICT technological systems and tools that support novel ways of working.					
11.	FM2	The idea lifecycle is supported and monitored effectively by leveraging the organization ICT ecosystem.					
12.	FM3	The ICT ecosystem foster mentoring/coaching/advisory services for budding innovators/intrapreneurs to accelerate development of their ideas.					
		Strategic Behavior Renewal (Independent)	Strongly Disagree				Strongly Agree
13.	SB1	I undertake initiatives to improve/enhance the current products/services/process of my organization.					
14.	SB2	I leverage the insights of other experts to innovate within my organization.					
15.	SB3	I actively mobilize people and resources to collaborate for an innovative initiative within my organization.					
		Organizational Performance Dess, G. G., & Robinson Jr, R. B. (1984). (Dependent)	Strongly Disagree				Strongly Agree
16.	OP1	Innovation & Intrapreneurship helps to Increase overall competitiveness in the industry					
17.	OP2	Accelerate product/services offering as compared to competitors.					
18.	OP3	Achieve operational efficiency as compared to industry average					
19.	OP4	Enhance growth rate as compared to competitors.					
		Technological opportunities Zahra, S. A. (1996). (Moderator)	Strongly Disagree				Strongly Agree
20.	OT1	Scope for technological/product/services innovations are abundant in our industry					
21.	OT2	Organization spends significantly on research and development (R&D) in our industry as compared to most other industries.					
22.	OT3	Opportunities for large technological breakthroughs are considerable in our industry.					
		Middle management strategic influence - Upward Floyd and Wooldridge (1992) (Mediators)	Strongly Disagree				Strongly Agree
23.	UP1	My manager justifies and define new programs/project/initiatives					
24.	UP2	My manager evaluates the merits of new proposals					
25.	UP3	Managers propose programs / projects to higher level managers					
26.	UP4	My manager often mobilizes resources for pilot/trial projects					

27.	UP5	My manager ’buy time” for experimental programs from top management					
		Downward strategy (Mediators)	Strongly Disagree				Strongly Agree
28.	DW1	My manager encourages collaboration & cooperation within project/team.					
29.	DW2	Managers translate goals into individual objectives & action plans					
30.	DW3	Managers cascade top management initiatives to their subordinates					
31.	DW4	Managers drive/monitor strategic activities to support top management objectives					
		Managerial style (Mediator)	Strongly Disagree				Strongly Agree
32.	MS1	My manager formulates or offers challenges and opportunities in a way that inspires action					
33.	MS2	My manager actively supports and encourages my ideas and initiatives.					
34.	MS3	My manager provides valuable coaching and guidance to help develop my skills.					

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