
ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
MASTERS OF BUSINESS ADMINISTRATION PROGRAM



**The Effect of Strategic Orientation on Performance of Plastic
Manufacturing Organizations in Ethiopia: The Moderating Role of
Innovation Culture**

BY:

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A Thesis Submitted to College of Business and Economics
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October, 2024

Statement of Declaration

I the undersigned declare that the thesis entitled “The Effect of Strategic Orientation on Performance of Plastic Manufacturing Organizations in Ethiopia: The Moderating Role of Innovation Culture” is my original work and has not been submitted for any other award degree in any University. It is my original work and has not been presented for a degree in any other University, and that all sources of materials used for the study have been duly acknowledged.

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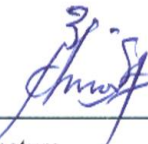
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DEPARTMENT OF MANAGEMENT

MBA PROGRAM

The Effect of Strategic Orientation on Performance of Plastic Manufacturing Organizations in Ethiopia: The Moderating Role of Innovation Culture

By: Assefa Ayalew

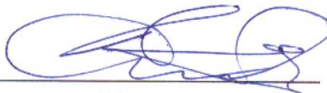
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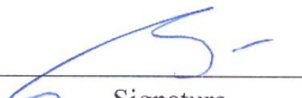
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Abstract

Nowadays manufacturing organizations should be in the position to produce quality products and services at lower cost to stay competitive in the current volatile market. As a result, improving the performance philosophy and being strategically oriented has to be a key strategic concern of the manufacturing sector in general and Ethiopian plastic manufacturing firms in particular. Organizations have to adopt a culture that fosters innovation as a long-term corporate development and competitiveness strategy. The study aims to examine the effect of strategic orientation dimensions on the performance of plastic manufacturing organizations in Ethiopia with innovation culture as a moderating factor. Data was collected through survey questionnaires from 133 top & middle level managers and senior professionals of 20 plastic manufacturing organizations which are members of Ethiopian Plastic and Rubber Association. The analysis was conducted using SPSS v 29 to understand the direct effect of market, entrepreneurial, technology, learning and environmental orientation and the moderating effect of innovation culture on firm performance. The results showed that there is a significant and positive relationship between technology (0.275, $p < 0.001$), entrepreneurial (0.258, $p < 0.001$), market (0.345, $p < 0.001$), and learning (0.185, $p < 0.001$) orientation and performance of plastic manufacturing firms in Ethiopia. However, no significant relationship was found between environmental orientation ($\beta = -0.077$, $p = 0.125$) and firm performance. Moreover, the results showed that innovation culture doesn't moderate the relationship between strategic orientation and firm performance as the interaction effect of innovation culture with market, entrepreneurial, technology, learning and environmental orientation was found to be insignificant ($p = 0.264, 0.451, 0.733, 0.882, 0.408$ respectively). Innovation culture however mediated the relationship between market, entrepreneurial, technology, learning and environmental orientation with firm performance. The Findings of this study help managers of manufacturing firms by highlighting the importance of strategic orientation to improve performance and help managers to understand the importance of fostering an innovative culture in enhancing the impact of strategic decisions

Key Words: Strategic orientation, Innovation culture, Firm performance, Plastic manufacturing, Ethiopia

Chapter One: Introduction

The content of this chapter comprises the background of the study which provides the foundations upon which the research is based and it states the basic ideas and concepts in relation to the specific issue under study, next is the statement of the problem at which reason for selecting the research topic is stated. The other section of this research is a statement of general and specific objectives followed by synthesis of research questions. The last part includes the significance and scope of the study.

1.1. Background of the study

Nowadays manufacturing organizations should be in the position to produce quality products and services at lower cost to stay competitive in the current volatile market (Ishaq et al. 2014). Hakala, (2011) viewed strategic orientation as principles that direct and influence the activities of a firm and generate the behaviors intended to ensure the viability and performance of the firm. In Ethiopia the growth of manufacturing firms has been increasing alarmingly since the government started to incentivize the sector.

Strategic orientation refers to the extent to which a firm aligns its activities with its vision, mission, and goals and it reflects the firm's strategic choices and actions regarding its customers, competitors, markets, products, processes, and resources (Hakala, 2011, Jeyakodeeswari & Jeyanithila, 2013). The strategic orientation of a firm is crucial in determining its ability to align with the environment and secure a competitive advantage and enable it to achieve optimal performance and sustain competitiveness in the market (Narver & Slater, 1990). According to Hakala (2011), the most common strategic orientations that are evidenced by literature are technological orientation, learning orientation, entrepreneurial orientation and market orientation. However, due to the fact that many organizations are introducing the concept of circular economy in their strategic plans (Tu & Wu, 2021, Centobelli et al., 2020, Puglieri et.al, 2022), environmental orientation is becoming a new research topic. Therefore, this research will consider the five dimensions of strategic orientation as a predictor variable on organizational performance.

Market orientation according to Kohli and Jaworski (1990), defined as the organization wide generation, dissemination, and responsiveness to market intelligence. Narver and Slater (1990) view market orientation as an essential element of business culture that effectively shapes

behaviors that create superior value for buyers (customers) and, consequently, drive continuous superior performance for the business. They added that market orientation emphasizes understanding customer needs, staying attuned to competitors, and fostering a culture that supports customer-centric decision-making.

Entrepreneurial Orientation (EO) is defined as the processes, practices, and decision-making activities that lead to new entry which emerges from a strategic-choice perspective, asserting that new-entry opportunities can be successfully undertaken through purposeful enactment (Lumpkin & Dess, 1996). Rauch et al. (2004) defined EO as the strategic decision-making processes employed by key organizational leaders that drive the organization's purpose, uphold its vision, and foster competitive advantages. Technology orientation (TO) refers to the firm's ability and acceptance of new technology so that the firm could utilize it to build various technical solutions to answer and meet the new needs of customers (Gatignon and Xuereb, 1997). According to Calantone, et al., (2002), learning orientation (LO) is defined as a collective effort within a company to acquire and disseminate knowledge that can lead to a competitive edge which includes collecting insights about customers, market dynamics, and competitors, as well as fostering technological advancements aiming to leverage this knowledge to innovate and develop products that outperform those of competitors. Environmental orientation refers to the strategic choice made by enterprises to the extent to which an organization is committed to environmental sustainability and preservation (Zhang and XeTeng, 2023, Liboni, et. al 2023). Innovation culture is an integral part of organizational culture that encompasses the shared common values, beliefs, and assumptions held by organizational members, which facilitate the product innovation process (Martín-de Castro et al. 2013).

Improving the performance philosophy and strategic orientation is a key strategic concern especially in the manufacturing industry. Manufacturing enterprises face stiff competition from rivals and hence have to develop and implement strategies in order to survive. Szymaniec Mlicka, (2016), Valos and Bednall (2010) found that strategy was one of the most important pillars that had major impacts on an organization's structure, activities, investments and relations with the market. Previous studies have suggested that strategic orientation is one of the key determinants of firm performance in various contexts (Gatignon & Xuereb, 1997; Deutscher et al., 2016, Nzioka & Njuguna, 2017, Obeidat et al. 2016, Han & Verma, 2012). Santos-Vijande and Alvarez-

Gonzalez, (2007), discussed that innovation culture is essential for long-term corporate development and competitiveness, suggesting that radical innovations are often necessary to keep pace with rapid market evolution. Balthazard et.al (2006) studied that constructive organizational cultures have positive impact and dysfunctional cultures have negative impact on individual and organizational level performances.

Over the last two decades the Ethiopian manufacturing sector has experienced rapid expansion in terms of the number of foreign direct investment, sales, and employment creation (Mishra, 2018). The plastic manufacturing sector in Ethiopia is one of the emerging and fast-growing sectors in the country. The sector produces various plastic products such as packaging materials, pipes, fittings, hoses, films, bags, seats, and military products that serve different industries such as food and beverage, construction, agriculture, automotive, and defense. Although the contribution of plastic manufacturing business to the country's economic growth, employment generation, import substitution, and export diversification is immense, it faces many challenges such as low productivity, competitiveness, quality, innovation, and environmental sustainability. As explained by Eshete (2018), the sector suffers from high production costs, low value addition, weak linkages with other sectors and markets, and regulatory barriers. In addition, the challenges according to Okbay, Arkebe (2019) are lack of access to finance, inadequate infrastructure, low levels of human capital, and weak institutions. Addressing these issues is crucial for the sector's growth and competitiveness. One effective approach is to focus on strategic orientation, which involves aligning the firm's strategies with market demands, technological advancements, entrepreneurial mind set, human capital development, and corporate social responsibility. It is against this background that the study sought to establish the influence of strategic orientation on performance of plastic manufacturing firms in Ethiopia.

Even though the country is blessed with natural resources, the manufacturing sector hasn't contributed more than 5 percent to GDP due to the lack of strategic orientations attributed to entrepreneurial and managerial skills limitations, obsolete technologies used. This leads to low revenue, low market share and low product quality. Despite efforts in the past decade to develop the manufacturing sector through various initiatives including the grooming of factories in industrial parks, notable investment promotion works, and fiscal incentives to investors, it remains underdeveloped and diminishing. Data by the National Bank of Ethiopia (NBE) and Ministry of

Industry (MoI) show that the sector only had a contribution of 5.1% of GDP in 2020/21, showing a decline of almost 2% from the previous fiscal year. Further, even with high expectations for the sector's capacity to reduce forex shortages, only 11% of Ethiopia's total exports in fiscal year 2020/21—USD 390 million—were attributed to manufactured goods. The highest contribution to exports was in 2011 with 12.8%. When looking at impact towards employment, MoI recently stated that manufacturing's share of total national employment is 5%, with plans to reach 15% by 2030 (Ethiopian business review, 2021).

Therefore, based on previous studies there is indication that different types of strategic orientations have a positive impact on organization performance. Similarly, previous studies showed that organizations that foster innovation culture may facilitate the track to organizational performance. Therefore, this study will try to assess the role of innovation culture in moderating the relationship between strategic orientation and organizational performance.

1.2. Statement of the problem

Many studies have examined the relationship between a particular strategic orientation dimension and performance (Zaharieva et al. 2004, Berthon et al. 2008, Zahra 2008, Wang 2008, Rhee et al. 2010) but overall there are not many studies that have examined the holistic effort of a range of strategic orientations (Rauch et al. 2009, Hakala, 2011). Previous studies mentioned the importance of analyzing the combined effect of strategic orientations over analyzing the effect of single strategic orientation (Grinstein, 2008, Hult et al. 2004). Despite extensive research across various streams of orientation literature, there remains limited understanding regarding the interconnections among market orientation, technology orientation, learning orientation, and entrepreneurial orientation (Grinstein 2008). However, environmental orientation has been a missing link in the examination of the relationship. This study also tried to address the need for empirical research employing multiple SOs suggested by Hakala (2011) and Schweiger et al. (2019).

Though the manufacturing sector is a way out for sustainable economic development, its growth is not without challenges. As explained by Eshete (2018), the sector suffers from high production costs, low value addition, weak linkages with other sectors and markets, and regulatory barriers. To overcome these challenges and enhance the performance of the plastic manufacturing sector in

Ethiopia, there is a need for more research on how the firms in this sector adopt and implement different strategic orientations and how these orientations affect their innovation and performance outcomes (Eshete, 2018). The manufacturing sector in general and plastic manufacturing sector in particular has not been able to live up to expectations owing to limitations in focussing on strategic orientations that enhance productivity. Plastic manufacturing companies are getting more attention globally due the negative environmental impact they generate during supply, production and distribution of their products. Therefore, companies should incorporate environmental orientation as one of their strategic orientation dimensions to challenge environmental pressure from all sides and stay competitive (Zhang and XeTeng, 2023). This concept is new and has not been studied widely to the knowledge of the researcher.

The effect of organization culture (OC) on various situational variables within the framework of organization, has been a popular research subject in management science (Aktas et al. 2011). Although the moderating role of organizational culture in the context of different constructs was studied (Famiyeh et al. 2018, Alhefiti., et al. 2019, Erkutlu, 2011, Thumbi, et al. 2021), innovation culture as one dimension of OC has not been studied much. In addition, prior studies examined various internal and external factors that influence the particular strategic orientation–performance relationship and recommended future research to explore additional moderators for a more nuanced understanding (Wang 2008).

Despite the potential benefits of strategic orientation, there is limited empirical research on how it can specifically address the unique challenges faced by the Ethiopian plastic manufacturing sector. Although there are some studies that have been conducted, these studies have focused on SMEs not large manufacturing firms such as plastic manufacturing and focused on the influence of individual strategic orientations such as innovation (Ayinaddis, 2023, Andaregie and Astatkie 2022, Kassa & Getnet 2022, Daksa et. al.,2018, and Gebreeyesus, 2011). Furthermore, information on how innovation culture influences the relationship between combined strategic orientation dimensions (entrepreneurial, market, learning, technological, and environmental) and the performance of the plastic manufacturing sector in Ethiopia is missing or insufficient. For these reasons, this study investigates the relationship between these orientations and performance aiming to fill these gaps and contribute to theoretical literature.

1.3. Objectives of the study

1.3.1. General Objective

The general objective of the study is to determine the effect of strategic orientation (entrepreneurial, market, technological, learning and environmental orientation) on performance of plastic manufacturing industries in Ethiopia with the moderating role of innovation culture.

1.3.2. Specific Objectives

The specific objective of the study are to:

- I. Determine the effect of entrepreneurial orientation on performance of plastic manufacturing industries in Ethiopia.
- II. Establish the effect of market orientation on performance plastic manufacturing industries in Ethiopia.
- III. Examine the influence of technological orientation on performance of plastic manufacturing industries in Ethiopia.
- IV. Examine the effect of environmental orientation on performance of plastic manufacturing industries in Ethiopia.
- V. Determine the moderating role of innovation culture in the relationship between strategic orientation and performance of plastic manufacturing industries in Ethiopia.

1.4. Research Questions

- 1: What is the influence of entrepreneurial orientation on the performance of plastic manufacturing industries in Ethiopia?
- 2: What is the influence of market orientation on the performance of plastic manufacturing industries in Ethiopia?
- 3: Does learning orientation have a significant impact on plastic manufacturing industries in Ethiopia?
- 4: Do technological orientation have a significant influence on the performance of plastic manufacturing industries in Ethiopia?
- 5: Does Environmental orientation have a significant impact on plastic manufacturing industries in Ethiopia?
- 6: Does innovation culture moderate the relationship between strategic orientation and organizational performance of plastic manufacturing firms in Ethiopia?

1.5. Significance of the study

The study will be valuable to the administration of manufacturing firms. Through the findings of this study, it is hoped that the manufacturing sector in general and plastic manufacturing industries in particular finds relevant information that informs its future policy framework formulation and implementation especially on matters concerning strategic orientation. The findings of this research will help management of plastic manufacturing industries by highlighting the importance of strategic orientation as they are able to plan for the future and be able to improve performance. The study provides recommendations which are applicable to other manufacturing industries which are facing high competition in order for them to improve performance. The Ministry of Industry, Ethiopian Investment commission, Ministry of trade, Ethiopian rubber and plastic association and other relevant agencies can obtain knowledge of the manufacturing industry dynamics and the appropriate orientation strategies which if implemented could move the sector forward. The study will also contribute to knowledge on impact of strategic orientation on performance of manufacturing industries. Future scholars and academicians may use the results of this study as a source of reference. As such, this study will provide new insights to academicians and future researchers on how strategic orientation is a critical driver of organizational performance.

This research also provides a roadmap for Ethiopian manufacturing firms to address their challenges effectively. By aligning their strategies with market demands, technological advancements, entrepreneurial mind set, human capital development, and corporate social responsibility, firms can overcome challenges and build a robust foundation for sustained growth and competitiveness in the global market.

1.6. Scope of the study

This study was limited in gathering views from managers, heads of departments, supervisors and senior officers on the five perspectives of strategic orientation i.e. market, entrepreneurial, technological, learning and environmental orientation influence on performance of their manufacturing industries. The study targetes the managers, departmental heads, supervisors and senior officers of the plastic manufacturing companies registered as active members of Ethiopian Plastic and Rubber Association.

Chapter Two: Literature review

2.1. Introduction

This chapter delves into the existing body of research concerning strategic orientation and organizational performance. It covers both an empirical review and a theoretical framework for the study.

2.2. Theoretical Review

Resource-based view, dynamic capabilities view, contingency theory and natural resource based theories will be the theoretical foundation for this study. They are discussed in the following subsection.

2.2.1. Resource-based view

The Resource-Based Theory (RBT) emerged in the field of strategic management, initially proposed by Wernerfelt in 1984 (Xaio et al.,2018). It aims to explain competitive advantage by focusing on a firm's internal resources. Unlike Porter's theory, which emphasizes external market positioning, RBT highlights the critical role of a firm's unique resources and capabilities (Xaio et al.,2018).

According to Barney (1991), for a firm to achieve sustained competitive advantage, its resources must meet the attributes of valuable, that resources should exploit opportunities in the firm's environment, rare that they must be scarce compared to other firms, inimitable, that competitors should find it challenging to replicate these resources and non-substitutable that no viable substitutes should exist for these resources. RBV theory underscores the importance of leveraging valuable, rare, and difficult-to-imitate resources to achieve long-term success and competitive advantage. Based on (Barney, 1991), firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive and implement strategies that improve its efficiency and effectiveness.

According to Raduan et al., (2009), the RBV is viewed from the system perspective of management theory, which is vital since the interaction and interlinking of internal resources, capabilities and systems explain the dynamism and adaptive nature of organization towards its environment. Based on Raduan et al., (2009), the RBV stipulates that in strategic management the fundamental sources

and drivers to firms' competitive advantage and superior performance are mainly associated with the attributes of their resources and capabilities which are valuable and costly-to-copy.

In the RBV, resources are classified as tangible, intangible, and personnel-based (Grant, 1991). Tangible resources include financial reserves and physical resources such as plant, equipment, and stocks of raw materials. Intangible resources include reputation, technology, and human resources; the latter include culture, the training and expertise of employees, and their commitment and loyalty (Russo and Fouts, 1997).

However, RBV has been criticized along several dimensions. Some suggest that it is only a view and not a theory. Others have argued that the analytical frameworks associated with the resource-based view, in particular, the VRIO (Value, rare, imitability and organization) framework of Barney (1991), are tautological (Priem and Butler 2001). The RBV has been criticized for exhibiting circular reasoning, conceptual rather than an empirical nature, gives less attention to the deployment of capabilities (Fahy, 2000). Despite these criticisms, the resource-based view continues to inform a great deal of research in strategy and related fields.

2.2.2. Dynamic Capability View

According to Teece et al. (1997), the ability to achieve new forms of competitive advantage is called dynamic capabilities, emphasizing two key aspects: dynamic and capability. They claimed that the term 'capabilities' emphasizes the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competencies to match the requirements of a changing environment. Teece et al. (1997) argued that resource-based strategy has not been enough to sustain competitive advantage, rather, firms that can demonstrate timely responsiveness and rapid and flexible product innovation, coupled with the management capability to effectively coordinate and redeploy internal and external competencies, win the competition.

Eisenhardt & Martin (2000) defined dynamic capabilities as specific organizational and strategic processes that enable firms to adapt to changing environments by integrating, building, and reconfiguring internal and external competencies. They extend their definition that dynamic capabilities are the organizational and strategic routines by which firms achieve new resource

configurations depending on market change, arguing that dynamic capabilities exhibit commonalities across firms, suggesting they can be more homogeneous and substitutable than traditionally assumed.

Barreto (2010) posits that dynamic capabilities are instrumental in systematically addressing issues, enabling organizations to make decisions that are both timely and aligned with market demands, as well as to implement innovative modifications to their resource base, as supported by Teece (2014) and Wang and Ahmed (2007). Such capabilities are also seen as a means to continually enhance ordinary capabilities that address current problems which tends to lead to heightened efficiency, according to Zollo and Winter (2002).

Furthermore, Russo and Fouts (1997) contend that resources in isolation do not yield productivity; it is also crucial to evaluate a firm's organizational capabilities, which are the competencies required to compile, integrate, and administer these resource clusters. They view the synergy of resources and capabilities as a fusion of physical assets with the necessary technologies and skills for their utilization, human resources, and organizational capabilities encompassing culture, dedication, and integration and communication skills, along with the intangible resources of reputation and political acumen.

2.2.3. Contingency Theory

Contingency theory suggests that “organizational effectiveness results from fitting characteristics of the organization to contingencies that reflect the situation of the organization” (Donaldson, 2001). From this perspective organizations seek to improve their performance by improving fit and alignment with their defined set of contingency variables and hence the changing external environment (McAdam, 2019). Based on Raduan et al.,(2009), the contingency theory draws the idea that there is no one or single best way or approach to manage organizations. Organizations should then develop managerial strategy based on the situation and condition they are experiencing. The contingency theory states that, in general, there is no single proper performance measurement system that can be used for all types of organizations under all circumstances; instead the system must be adapted based on specific organizational and contextual factors (Dionysus and Arif, 2020).

2.2.4. Natural Resource Based View

Hart, (1995) predicted that strategy and competitive advantage in the coming years could be rooted in capabilities that facilitate environmentally sustainable economic activity called a Natural Resource Based View (NRBV) of the firm. He developed a conceptual framework of NRBV composed of three interconnected strategies namely pollution prevention, product stewardship, and sustainable development. The natural-resource-based view (NRBV) provides the theoretical basis for the significant variability in firms' environmental activities operating in a similar institutional environment (Russo and Fouts, 1997). NRBV view identifies that any firm's competitive advantage depends upon its interaction with its natural environment. Based on Saleem (2021), NRBV, proposes that a firm's environmental commitment can develop unique environmental capabilities that will result in not only a competitive advantage but also a pro-environmental response from the firm.

2.3. Empirical Review

In this section, we will systematically examine and analyze existing research studies, data, and evidence pertaining to strategic orientation and organizational performance. The section focuses on critically assessing and synthesizing previous empirical studies that have explored the relationship between strategic choices and an organization's overall performance.

2.3.1. Market orientation

The concept of market orientation is widely recognized as a critical concern for organizations. Kohli and Jaworski (1990), synthesized the literature and field interviews to provide a clear definition of market orientation as the organizationwide generation, dissemination, and responsiveness to market intelligence. According to Kohli and Jaworski (1990), market orientation involves three elements: intelligence generation, intelligence dissemination, and responsiveness. These elements are not the exclusive responsibility of the marketing department, but require the participation of various departments in an organization. They added that market orientation emphasizes understanding customer needs, staying attuned to competitors, and fostering a culture that supports customer-centric decision-making.

Narver and Slater (1990) view market orientation as an essential element of business culture. It effectively shapes behaviors that create superior value for buyers (customers) and, consequently,

drive continuous superior performance for the business. The three key behavioral components of market orientation are customer orientation, competitor orientation, and inter-functional coordination. They added that market orientation emphasizes understanding customer needs, staying attuned to competitors, and fostering a culture that supports customer-centric decision-making

Zhang & Duan (2010), in their study that examines the impact of responsive and proactive market orientation on product innovation performance among Chinese manufacturers, concluded that Chinese manufacturers should adopt both reactive and proactive MO strategies, but prioritize creative market orientation to gain competitive advantage and enhance product innovation performance. Charles *et al.* (2012) found that market orientation has a positive relationship with firm performance, and that business environment significantly moderates this relationship. The article suggested that marketing managers should pay close attention to their business environment and implement market orientation strategies to achieve superior performance.

Oduro and Haylemariam (2019) in their studies on the interaction of corporate social responsibility and market orientation found out that MO has a positive effect on both financial and marketing performance in Ethiopian and Ghanaian manufacturing firms.

Narver and Slater (1990) tested the construct validity of market orientation by examining its correlations with other management policy variables and its effect on business profitability by using a sample of 140 strategic business units in the forest products industry and found a positive relationship between market orientation and profitability for both commodity and non commodity businesses. They concluded that MO is a key determinant of business performance and suggest that managers should adopt a market-oriented culture and strategy to create superior value for customers and achieve sustainable competitive advantage.

According to a meta-analysis by Cano *et al.* (2004), market orientation and firm performance have a positive and consistent relationship across the world. However, Farley *et al.* (1982) argue that the location of the study affects the relationship between market orientation and firm performance. Selnes *et al.* (1996) also report differences in the relationship between market orientation and firm performance among American and Scandinavian samples. Shoham *et al.* (2005) found that market orientation has a positive and significant impact on behavioral, performance and organizational

commitment. However, It also found that the strength of the market orientation-performance relationship varies depending on the country, the scale, and the type of performance measure used.

Grinstein (2018) studied how companies change when they focus on what customers want. It means that they make better products, keep customers happy, create new things, and do well in business. Market orientation is a way of thinking that helps companies do this. Slater and Narver (2014) also said that market orientation makes companies pay attention to what is happening outside and try new things, which helps them do better and stay ahead.

Bhuian (1998) in his study on the empirical examination of market orientation in Saudi Arabia manufacturing companies, based on the model proposed by Kohli and Jaworski (1990), he tested the properties of the scales, the antecedents and consequences of market orientation, and the moderating effects of environmental factors in Saudi Arabia, using a sample of 115 companies. The results showed that market orientation is positively related to organizational performance, however it is positively influenced by top management emphasis and a market-based reward system, and negatively influenced by centralization and interdepartmental conflict.

Gaur et al. (2011) investigated the link between market orientation and manufacturing performance for small and medium enterprises (SMEs) in India. The article hypothesized that market orientation has a positive effect on manufacturing performance, which is measured by cost, quality, delivery, and flexibility. It also hypothesizes that firm resources and environmental factors moderate this relationship. However, another study showed that market orientation enhances the project impact performance of innovations, measured by their intermediate benefits for the firm, but has little effect on their market success, measured by their sales and profit performance (Atuahene-Gima, 1996).

2.3.2. Entrepreneurial orientation

Lumpkin & Dess, (1996), defined Entrepreneurial Orientation (EO) as the processes, practices, and decision-making activities that lead to new entry which emerges from a strategic-choice perspective, asserting that new-entry opportunities can be successfully undertaken through purposeful enactment. The article suggests that autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness are significant dimensions of EO. It suggests that

the relationship between EO and performance is context-specific, meaning the impact of EO on performance can vary depending on external factors like industry conditions or internal factors like organizational structure.

Rauch et al. (2004) defined EO as the strategic decision-making processes employed by key organizational leaders that drive the organization's purpose, uphold its vision, and foster competitive advantages. The article presents a meta-analysis showing a moderate but robust correlation between EO and business performance. This relationship is consistent across different operationalizations and cultural contexts, indicating that EO positively influences performance. However, the study suggested that internal and environmental factors may moderate the EO-performance relationship. Similarly, Wang (2008), in his study on the relationship between EO and firm performance, highlighted that the direct effect of EO on performance is incomplete without considering Learning Orientation (LO). In essence, the article posits that a firm's commitment to learning and openness to new information are crucial for maximizing the benefits of EO on performance.

Entrepreneurially oriented organizations actively transform and influence their environment (Hakala 2011). Based on this article, organizations allocate resources to seize uncertain opportunities, explore novel and imaginative concepts, and proactively anticipate future market demand that are expected to yield positive effects on overall firm performance. In addition, Hult et al (2004) studied that firms with strong EO are likely to be more innovative and, consequently, perform better. It also found the importance of entrepreneurial qualities in fostering innovation and driving performance.

The EO-performance literature is long-standing, and empirical studies have largely found that firms with a more EO perform better (Wang, 2008). According to Basco, et.al (2020), EO positively impacts firm performance, suggesting that firms with a strong EO tend to perform better. However, contextual influences such as cultural and institutional environments moderate the effect of EO on firm performance. Putniņš, & Sauka. (2020) proposed and tested how the components of EO (risk-taking, innovativeness, proactiveness) combine in driving performance. Accordingly, they suggested that each EO component contributes to performance in different ways. Based on Putnins & Sauka (2020), the relationship between risk-taking and performance is conditional on

the level of innovativeness and thus innovativeness contributes to performance through its effect on the type of risk-taking. Proactiveness contributes to performance through its positive effect on the level of risk-taking. In essence, EO factors like innovativeness and proactiveness impact performance by influencing risk-taking behaviors. These dynamics highlight the intricate relationship between entrepreneurial orientation and organizational performance.

Previous research reveals that there is a direct and positive impact of EO on organizational performance, and this effect is stronger for multi-item measures of performance and for revenue-based performance measures (Soares, et.al, 2019). While theoretical discussions highlight the positive impact of Entrepreneurial Orientation (EO), it's essential to acknowledge that the literature also identifies potential negative consequences. For instance, Naldi et al. (2007) discovered adverse effects on performance due to the risk-taking dimension of EO, particularly in family organizations. In addition, Renko et al. (2009) found that the EO construct does not significantly predict product innovation. Despite these conflicting findings, mainstream literature generally supports the view that EO is positively related to organizational performance (Wong, 2014, Soares, et.al, 2019).

Gupta and Gupta (2015), in their study on the relationship between entrepreneurial orientation and firm performance over time, they concluded that EO has an initial positive effect on firm performance, but this effect gradually declines over time. They argued that EO can be translated into superior performance when it is well aligned with the environment in which the firm competes. Their findings confirmed that understanding how firms can benefit from EO also requires consideration of external factors like competitive intensity and demand volatility. They provided an insight that the performance benefits of EO decline faster over time in highly competitive industries and in environments characterized by high levels of demand volatility.

2.3.3. Technology orientation

Technology Orientation (TO) refers to a firm's inclination to adopt or develop new technologies, products, or innovations (Hakala, 2011, Grinstein 2008). TO refers to the firm's ability and acceptance of new technology so that the firm could utilize it to build various technical solutions to answer and meet the new needs of customers (Gatignon and Xuereb, 1997). Based on Gatignon and Xuereb competitive and innovation led firms aiming at superior firm performance should have

strong technological orientation. Hurley and Hult, (1998) defined TO as the organization's openness to innovative ideas and its tendency to implement new technologies. TO is defined in this study as the technological ability of the firm to adopt new technology as a source of product improvement or development in order to satisfy the target market (Naala, et al., 2017)

It emphasizes that creating customer value and ensuring long-term success are best achieved through novel solutions, technological advancements, and innovative processes (Grinstein, 2008). By investing in new technologies, firms can differentiate themselves from competitors and gain cost advantages. While technology orientation is associated with improved business and new product performance, some studies have found mixed effects. Notably, this focus on new solutions aligns with the concept of market orientation, although commonly used measurement scales for market orientation do not explicitly incorporate technology or innovation dimensions (Hakala, 2011).

Previous research suggests that technology orientation has a direct effect on firm performance (Gao et al., 2007; Gatignon & Xuereb, 1997; Zhou & Li, 2010, Panda 2014, Nugroho et al.,2022). According to Gao et al., (2007), technology-oriented firms can build new technical solutions and offer new and advanced products to meet customer needs due to their strong commitment to R&D and application of latest technologies. However, they found that the value of a technology orientation depends on technological turbulence, which refers to the rate of technological changes within an industry. When the level of technological changes is relatively low, firms can benefit from relying on and making full use of their current technologies. However, when technology changes rapidly, a technology orientation enhances firm performance.

According to Hyung and Dedahanov (2014), technology orientation is an important driver of firm performance. It was found that technology positively affects firm performance. Technology orientation helps managers to devise superior products, processes and ideas. This research suggested that technological orientation should be incorporated as one of the strategic orientation dimensions to achieve improved firm performance. In another study, Hyung et al,(2016) investigated that the relationship between technology orientation and innovation performance is moderated by external networks. When organizations collaborate with external networks, they are more likely to adopt and use modern technologies, enhancing innovation outcomes. They found

that utilizing new technologies and recruiting qualified personnel can lead to greater innovation performance, which in turn contributes to financial profits.

According to Naala et al., (2017), technology orientation has a significant positive relationship with firm performance among Nigeria Small and Medium Enterprises (SMEs) in all sectors. They concluded that adopting and implementing technology orientation can increase SMEs' performance. Despite challenges faced by SMEs (such as lack of innovativeness, limited access to finance, and managerial expertise), technology orientation remains a crucial success factor emphasizing the importance of leveraging technology for sustainable business success.

Panda (2014) in his study on the relationship between managerial networks and strategic orientation on Indian SMES, he found that both business network and political networks in Indian SMEs are significantly and positively related to technology orientation i.e. when SMEs emphasize more on technology orientation, the top managers tend to build more managerial ties. Moreover, a strong focus on technical skills, robust R&D resources, and a solid technological foundation is essential for introducing innovative, well-designed products to the market (Masa'deh et al.,2018).

2.3.4. Learning orientation

According to Calantone, et al., (2002), learning orientation is defined as a collective effort within a company to acquire and disseminate knowledge that can lead to a competitive edge which includes collecting insights about customers, market dynamics, and competitors, as well as fostering technological advancements aiming to leverage this knowledge to innovate and develop products that outperform those of competitors. The organizational learning literature bears a performance-oriented focus and learning orientation (LO) has positive effects on performance. (Wang 2008).

Based on Sinkula et al.,1997 scholars have long recognized the significance of a learning orientation for overall firm performance. A firm with a robust learning orientation doesn't merely accumulate knowledge; it actively processes it. The article emphasized that feedback from customers, channels, and competitors is essential for developing core competencies which are enhanced by learning orientation influences. The literature emphasized that learning-oriented firms exhibit crucial characteristics: they anticipate environmental and market changes, adapt, and even

challenge their existing organizational systems and operating philosophies. Such attitudes, behaviors, and strategies contribute to superior long-term performance.

According to Alerasoul, et al., (2020), OL capabilities and learning orientation are found to improve the performance of the OL process, thereby ultimately affecting innovation performance and organizational performance. In this article Learning orientation which encompasses both the direction and intensity of learning serves as the foundation for organizational learning. The article further emphasizes that HR professionals play a vital role in fostering organization-wide learning orientation through practices that support teamwork, adaptability, and diversity of knowledge which leads to organizational performance.

According to Sawaeen & Ali, (2020), Learning orientation represents a fundamental mindset toward learning within organizations. They mentioned that it underscores the pivotal role of managers and organizations in fostering effective learning processes. The article summarized that management that enhances a learning-oriented culture with the ability to critically assess the validity and impact of existing values, beliefs, and practices contributes to organizational performance. Moreover, learning orientation establishes norms that encourage employees to actively seek new knowledge, thereby enhancing overall organizational capabilities and achieving superior outcomes and it is recognized as a pathway to sustained competitive advantage (Sawaeen & Ali, 2020).

2.3.5. Environmental orientation

Environmental orientation reflects the extent to which employees recognize the legitimacy of environmental issues and the impact that the firm has on those issues Banerjee (2002). It is an essential part of the strategic disposition of any organization that translates into business operations and how operating in an environmentally sustainable way is perceived by different members of the organization. Banerjee (2002) identified two major dimensions of environmental orientation, the internal environmental orientation which reflected managerial perceptions of the importance of environmental issues facing their firm and the external environmental orientation reflected by the need to respond to external stakeholders. Internal environmental orientation can be in mission statements, policies, and procedures, and expressed in corporate cultures through employee norms and behaviors whereas external environmental orientation reflects the need to respond to stakeholders with environmental concerns (Saleem et al, 2021).

Hart (1995), emphasized that a firm pursuing a sustainable development strategy results in both substantial investment and a long-term commitment to market development. He argued that this investment will not result in short term profits; rather, commitment to sustainable development might raise a firm's expectations for future long term performance relative to competitors. Hart (1995), further argued that because the three environmental strategies are rooted in costly-to-copy firm resources and capabilities, such environmental orientation in no way jeopardizes competitive advantage and may reinforce and differentiate the firm's position through the positive effects of a good reputation.

According to Roxas & Chadee (2012) environmental sustainability orientation refers to the overall proactive strategic stance of firms towards the integration of natural environmental concerns in their business operations. They claimed that firms with higher levels of environmental orientation are likely to have institutionalized in its overall strategy, structure, processes and activities a wide range of measures designed to either reduce the firm's negative impact on the natural environment or to positively contribute to environmental protection, preservation or re-generation. They found that environmental sustainability orientation is a multi-dimensional construct with three facets – i.e. awareness of, actions for, and appreciation of environmental sustainability.

A review of the extant literature describes how the investigation of this field has evolved over the past ten years (Keszey, 2020). His study showed that the environmental orientation of the firm is an important driver of environmental marketing, which in turn, has a weak, positive effect on performance. He also argued that stringent environmental regulations and the environmental orientation of competitors reinforce the profit outcomes of environmental marketing.

2.3.6. Organizational Performance

Organizational performance stands as a pivotal factor that captivates the attention of researchers across various management domains. Dionysus and Arif (2020), Explored organizational performance encompass three critical aspects. First individual performance which entails within specific organizational roles, individual performance significantly contributes to overall organizational effectiveness. Second performance of organizational units which explains the collective performance of departments, teams, or functional units directly impacts the organization's overall success. Third, organizational performance is viewed from external factors

where Economic, cultural, and social environments influence an organization's ability to achieve its objectives.

According to the literature there are several performance indicators, such as financial and non financial performance. As per the balanced scorecard (BSC) approach, the first three levels (learning and growth, internal process and customer perspectives) of the BSC are generally considered to be intangible assets or nonfinancial performance measures while the fourth level (financial perspective) is regarded as tangible asset or financial performance measure (Kaplan and Norton, 1992). Orlitzky et al., (2003), confirmed that the performance of business organizations is affected by their strategies and operations in market and non-market environments. One of these nonmarket strategies is corporate social performance, which could be defined as 'a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships' (Wood 1991, as cited in Orlitzky et al., 2003). They suggested that companies that prioritize social and environmental responsibility tend to experience better financial performance although specific contextual factors play a role in shaping this relationship. However, the relationship between corporate social performance (CSP) and corporate financial performance (CFP) is moderated by specific contextual factors such as operationalization of CSP and CFP. According to Orlitzky et al., (2003), the main measurements of corporate financial performance consist of market-based (investor returns), accounting-based (accounting returns), and perceptual (survey) measures and the main corporate social performance construct measurements are corporate social performance disclosures; reputation ratings; social audits, processes, and observable outcomes; and managerial principles and values.

According to Maduekwe & Kamala, (2016) organizations use both financial and non-financial performance measures. Of the financial performance measures, the most popular ones are sales growth, cash flows, operating income and net profit margin. The most popular non-financial measures are mostly customer focused which includes response time, customer' satisfaction, percentage of repeat customers and customers' complaints. They suggested that balancing the measurement of performance of a business by using both financial and non-financial measures provides a holistic view of its operations and dynamic information that enables it to establish its

current performance and to continuously monitor its progress over time. Another researcher argued that business performance is multidimensional in nature and accounting measures may be misleading because of “their inadequate handling of intangibles and improper valuation of sources of competitive advantage” (Bharadwaj et al., 1993).

Organizational performance as defined by (Contu, 2020) is the effective position of an organization as measured in financial and non-financial indicators in the business market. Although there are different views of performance in business context, Folan, et.al. (2007) has highlighted that performance should be analyzed with respect to the external environment in which the business operates, internal environment against objectives and targets established, and performance is focused to relevant features only.

According to Narver and Slater (1990), a firm's strategic orientation reflects the strategic directions implemented by a firm to create the proper behaviors for the continuous superior performance of the business. Similarly, Gatignon & Xuereb (1997) discussed that three strategic orientations called customer, competitive, and technological orientation have positive impact on new product performance through innovation success. They proposed that a firm's strategic orientation has a significant impact on the characteristics of innovations that are introduced to the market. They also suggested that firms should balance their strategic orientations according to market conditions to develop successful products.

This thesis is based on the premise that a combination of constructs of market orientation, entrepreneurial orientation, technology, learning and environmental orientation can be used to reflect the sum of actions and strategies that plastic manufacturing industries can undertake to achieve superior firm performance. There are two types of firm performance. They are perceived firm performance or archival data (Rauch et al. 2009). This study will choose to use perceived indicators to measure performance. This approach is generally accepted in most studies on strategic orientation. A study in this field by (Cano et al., 2004) found that more than 70% of empirical studies used perceived measurement of performance as their scale. Perceived indicators of firm performance can be used for financial and non-financial performance. Therefore, this study adopts perceived financial performance as an indicator of firm performance and will focus on financial performance indicators like increase in sales, market share and profits and non-financial performance indicators like employee satisfaction and customer satisfaction through collection of

data from managers about their perceptions of the comparative improvement brought by strategic orientation in their firms.

2.3.7. Innovation Culture

Organizational culture as defined by (Robbins & Judge, 2013) is a system of shared meaning held by members that distinguishes the organization from other organizations. Companies with strong organizational culture possess the ability to increase their effectiveness towards achieving anticipated organizational performance. In particular, an innovation culture encompasses the collective shared values, beliefs, and assumptions held by organizational members that can foster the process of product innovation. When an organizational climate encourages employees' innovative capacity, embraces risk-taking, and facilitates personal growth and development, it is labeled as an innovation culture (Martín de Castro et al., 2013). Promising prospects await organizations that possess the ability to integrate innovation into their organizational culture (OC) and management processes. Recent research in organizational sciences increasingly recognizes organizational culture (OC) as a fundamental element of an organization's operations and a key determinant of effectiveness (Sadegh & Ataei, 2012). Innovation culture refers to a collective set of beliefs and behaviors that embrace risk-taking and foster an environment open to innovation, change, and future market orientation, along with a continuous learning mindset (Jin et al., 2018).

"Deshpande and Webster (1989) define organizational culture as the collective set of shared values and beliefs that enable individuals to comprehend how an organization operates and guide their behavior within it. While various definitions of organizational culture exist in the literature, researchers universally concur that it primarily revolves around the patterns of beliefs and values reflected in the behaviors, practices, and artifacts shared by an organization's members (Iranmanesh et al., 2020). Previous studies have consistently demonstrated strong correlations between organizational culture and innovation capability (Martín-de Castro et al. 2013). They outlined that corporate culture has been studied as a moderating factor that leads to better performance in general and innovation in particular. Ogbonna and Harris (2000) proposed that organizational culture can confer competitive advantage by delineating organizational boundaries in a manner that facilitates individual interactions or by constraining the scope of information processing to appropriate levels. Additionally, deeply ingrained and widely shared values assist

managers in anticipating employees' responses to specific strategic choices, thereby reducing the likelihood of undesirable outcomes.

Organizational culture represents a valuable resource that is exceptionally challenging to imitate or replicate (Castro et al. 2019) due to its inherent tacit nature, complexity, and specificity (Chan et al. 2004). By reinforcing other organizational resources, culture contributes to creating a competitive edge and ultimately enhancing overall firm performance (Chan et al. 2004). Notably, the innovative culture, as an integral part of organizational culture, has been identified as a key driver of innovation (Carrillat et al. 2004). This innovative culture encompasses the shared common values, beliefs, and assumptions held by organizational members, which facilitate the product innovation process (Martín-de Castro et al. 2013).

2.4. Conceptual Framework and Hypothesis Development

The independent variables of this thesis are market orientation, entrepreneurial orientation, technology orientation, learning orientation and environmental orientation. Whereas, the dependent variable is organization performance. In addition, the moderating variable of this study is innovation culture.

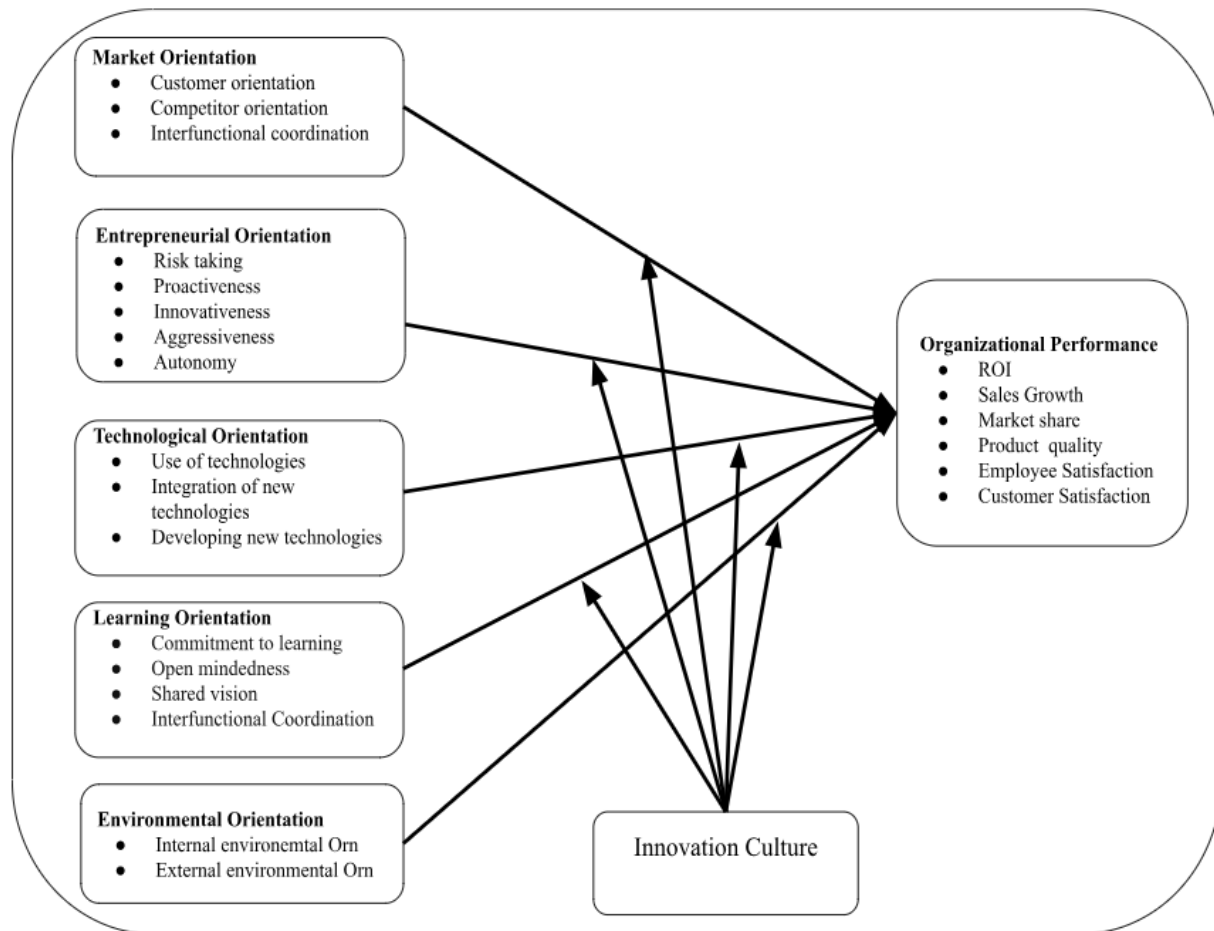


Figure 1: Conceptual Framework

Source: Own model

The research south to analyze the effect of independent variables on the performance of plastic manufacturing firms. The moderator, innovation culture is expected to influence the relationship and strengthen the relationship between the independent and dependent variables.

2.4.1. Market orientation and organizational performance

Market orientation has long been one of the cornerstones of marketing literature and can be viewed as the culture or activities of the organization that effectively create the behaviors required for superior performance (Hakala, 2011). Market orientation emphasizes the significance of buyer value creation by quick response to changing market needs and putting in consideration stakeholder interest (Farrell & Oczkowski, 2012). Frequently studied dimensions of market orientation are related to customer, competitor and market intelligence (Hakala, 2011, Slater and Narver 1998, Jaworski and Kohli 1993). Dionysus & Arifin (2020) in their study on the RBV theory approach of strategic Orientation examined that organizational competitive advantage from the RBV is indeed crucial as it can be used as a conceptual guideline for business organization in particular to enhance their competitive advantage position and performance via application and manipulation of identified internal organizational resources, capabilities and systems. Market orientation is often considered a catalyst for enhancing business performance (Narver and Slater, 1990, Jaworski and Kohli, 1993). The existing theories and the majority of the extant research emphasize the presence of a positive relationship between market orientation and a company's performance. Accordingly, the following hypothesis is proposed.

H1: Market orientation has a positive effect on the performance of plastic manufacturing organizations.

2.4.2. Entrepreneurial orientation and organizational performance

Entrepreneurial orientation (EO) is a strategic orientation which captures the specifically entrepreneurial aspects of firms' strategies (Bhuian et al. 2005; Hult et al. 2004; Lumpkin et al. 2005). Entrepreneurial orientation is also defined as the process, practice and decision-making that lead to new business ventures (Lumpkin and Dess, 1996). It is a set of behaviors including willingness to take risks, innovativeness, proactiveness, autonomy and competitive aggressiveness (Bolton & Lane 2012). Competitive aggressiveness and autonomous action were added by (Lumpkin and Dess, 1996) as important dimensions of entrepreneurship. Entrepreneurial orientation is application of methods, processes, practices and all the decision-making tools that leads to creativity and innovation in an organization (Mehrdad et al 2011). Previous research reveals that there is a direct and positive impact of EO on organizational performance (Hakala 2011, Rauch et al., 2004, Wang 2008, Hult et al., 2004). EO is one of the main dimensions of strategic orientation that has a positive effect on firm performance. Accordingly, the following

hypothesis is proposed.

H2: Entrepreneurial orientation has a positive effect on the performance of plastic manufacturing organizations.

2.4.3. Technological orientation and organizational performance

Technological orientation (TO) refers to a firm's inclination to introduce or use new technologies, products or innovations (Hult et al. 2004). It suggests that customer value and the long-term success of the firm is best created through new innovations, technological solutions, products, services or production processes (Grinstein 2008; Hakala 2011). It is the extent to which companies place emphasis on obtaining and making use of advanced technologies in developing new and existing products (Borodako, 2022). Frequently studied dimensions of technology orientation include product, production and innovation orientation. Technological orientation is a managerial technique that emphasizes using technology in all dimensions of the company's operations concerning both products and procedures (Song and Jing, 2017). Previous research suggests that technology orientation has a direct effect on firm performance (Gao et al., 2007; Gatignon & Xuereb, 1997; Zhou & Li, 2010, Hao and Song, 2016). Firms which have a high level of TO allocate a lot of their funds for enjoying the fruits of novel innovations which play the role of trend-setter, applying new procedures, introducing new services as well as products which lead to firm performance (Yousaf et al., 2020). Therefore, based on the previous arguments the following hypothesis is proposed.

H3: Technology orientation has a positive effect on the performance of plastic manufacturing organizations.

2.4.4. Learning orientation and organizational performance

Learning orientation (LO) is a collective effort within a company to acquire and disseminate knowledge that can lead to a competitive edge. This includes collecting insights about customers, market dynamics, and competitors, as well as fostering technological advancements aiming to leverage this knowledge to innovate and develop products that outperform those of competitors (Calantone, et. al 2002). Sinkula, et.al (1997) defined learning orientation as a set of values that influence an organization's propensity to learn, it's a key driver for acquiring and utilizing knowledge effectively. The key dimensions that collectively form the learning orientation construct are commitment to learning, open mindedness, and shared vision (Sinkula, et.al, 1997).

However, Calantone, et. al (2002) added the fourth factor of intra organizational knowledge sharing claiming that adoption of effective and efficient system of information sharing is antecedent of learning. According to Alerasoul, et al., (2020), learning orientation is found to improve the performance of the OL process, thereby ultimately affecting innovation performance and organizational performance. In addition, learning orientation is recognized as a pathway to sustained competitive advantage (Sawaeen & Ali 2020). Accordingly, the following hypothesis attempts to capture the previous arguments.

H4: Learning orientation has a positive effect on the performance of plastic manufacturing organizations.

2.4.5. Environmental orientation and organizational performance

Environmental orientation refers to the extent to which an organization is committed to environmental sustainability and preservation. Zhang and XeTeng, (2023) studied that environmental orientation is a strategic choice made by enterprises in the face of environmental pressure from all sides. Liboni, et. al (2023) suggests that firms should incorporate sustainability principles into their business models. From the previous studies we can understand that environmental orientation is a strategic choice made by organizations in response to environmental pressure. It is important for firms to incorporate sustainability principles into their business models and seek management capabilities to reach sustainability outcomes. Orlitzky (2003), suggested that companies that prioritize social and environmental responsibility tend to experience better financial performance, although specific contextual factors play a role in shaping this relationship. Hart (1995), argued that environmental strategies rooted in costly to copy firm resources and capabilities, help to sustain competitive advantage which may reinforce and differentiate the firm's position through the positive effects of a good reputation. Therefore, based on the above argument, the following hypothesis is proposed.

H5: Environmental orientation has a positive effect on the performance of plastic manufacturing organizations.

2.4.6. Role of Innovation culture on the relationship between strategic orientation and organization performance

Previous studies have demonstrated strong correlations between organizational culture and innovation capability (Martín-de Castro et al. 2013). According to Ogbonna and Harris (2000), organizational culture can provide a competitive advantage by defining organizational boundaries in ways that enhance individual interactions or by limiting the scope of information processing to suitable levels. They claimed that deeply embedded and widely accepted values enable managers to predict how employees will react to specific strategic decisions, thereby minimizing the risk of unfavorable consequences. Based on Hana (2013), Innovative activity of organizations significantly influences competitiveness which is based on inimitable skills and abilities. She argued that achieving a higher competitiveness by means of innovations means producing less costly products of better quality compared to those manufactured by competitors. According to Martín-de Castro et al. (2013), an appropriate culture that is supported by suitable processes and systems is crucial to the strategic management of innovation. Furthermore, previous studies showed that organizational culture moderates the relationship between strategic orientation and business performance (Borodako et al., 2022). Iranmanesh et al., (2020) explained that when the focus of the formal organization of a firm is on cost-saving, the innovative culture may enable this firm to enhance its innovation capability. Improving the innovative culture of the enterprise is necessary so that all its members search for new products, services or processes that contribute to performance (Skerlavaj et al., 2010).

According to Cano et al., (2004), culture in marketing research is very important because cultural values shape interpretation and facilitate or impede adoption and implementation of the marketing concept which ultimately increase the market orientation and thereby performance of their transnational organizations. In an organization where there is a strong culture, there is cohesiveness, loyalty, and organizational commitment among the members of the organization and enable them to work together, understand each other and work effectively (Aydin and Celyn, 2009). Furthermore, previous studies indicated that innovation culture moderates the impacts of organizational learning on product innovation, process innovation and objective innovation (Ghasemzadeh et al.,2019).

Research indicates that a firm's innovation culture supports its sustainability orientation, primarily because organizational culture can be a significant source of competitive advantage (Jin et al., 2018). Hynes (2009) suggests that the relationship between strategic orientation and business performance is enhanced when there is alignment between corporate culture and the organization's strategic orientation, with corporate culture acting as a moderating variable in achieving better business performance. We propose that innovation culture plays a crucial role in the relationship between strategic orientation and organizational performance by enhancing a firm's ability to leverage its strategic orientation through promoting creativity and agility. In organizations where innovation culture is deeply ingrained, strategic orientations are more likely to result in superior performance, leading to innovative products, services, or processes that provide competitive advantages. Firms with well-defined cultural styles tend to achieve higher performance levels, with organizational behavior being a key driver of innovation (Martín-de Castro et al., 2013). Therefore, based on the above arguments, it is expected that the relationship between the strategic orientation and organizational performance may be moderated by the innovative culture. Accordingly, the following hypothesis is proposed.

H6a: Innovation culture moderates the effect of the relationship between market orientation and organizational performance.

H6b: Innovation culture positively moderates the relationship between entrepreneurial orientation and organizational performance.

H6c: Innovation culture positively moderates the relationship between technology orientation and organizational performance.

H6d: Innovation culture positively moderates the relationship between learning orientation and organizational performance.

H6e: Innovation culture positively moderates the relationship between environmental orientation and organizational performance.

Chapter Three: Methodology

3.1. Research Approach

Creswell (2009, p. 3) defined research approach as the “plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis”. The main research types that define any research are categorized as qualitative and quantitative. A quantitative approach uses numbers and statistics to validate or prove any research hypothesis (Kerlinger and Lee 2000, Denzin and Lincoln 2000). Qualitative research design is a type of research that involves collecting and analyzing non-numerical data such as text, video, or audio to understand concepts, opinions, or experiences (Creswell 2009).

In view of the above concepts, this research has employed the use of quantitative approach in order to examine the effect of strategic orientation on the performance of plastic manufacturing firms with Innovation as a moderator. Quantitative approach is the most popular research approach used to examine relationships between different variables and measure objective theories (Creswell 2009).

3.2. Research Design

According to Kothari (2004), research design serves as a framework for collecting and analyzing data to address research questions and achieve research objectives. It involves making informed decisions about data sources, collection methods, and analysis techniques. There are three primary types of research design (Saunders et al. 2003). Exploratory Design which focuses on discovering new ideas and insights, Descriptive Design, which portrays an accurate profile of persons, events or situations in order to have a clear picture of the phenomena, and Explanatory Design that delves into studying a situation or a problem in order to explain the relationships between variables

According to Kothari 2004 descriptive research design provides a snapshot of the current state of an object, individual, group, or organization to describe relationships. He also stated that in descriptive research design, the researcher has no control over the variables except reporting the occurrence. Furthermore, Saunders et al. (2003), emphasized that a researcher should ask if the required data is cross sectional: a “snapshot” taken at a particular time or longitudinal, a series of snapshots and be a representation of events over a given period.

Therefore, this study has used the descriptive cross-sectional design as it intends to describe the effect of strategic orientation on performance of plastic manufacturing firms.

3.3. Research Method

In order to examine how managers, department heads and supervisors in plastic manufacturing industries view the effect of strategic orientation on firm performance, appropriate research methods should be used to measure their perceptions. The most accurate tool for measuring self-sufficient existing relationships, objects or events as well as self-reported beliefs and behaviors is survey questionnaire (Newman 1997). The main benefits of self-administered questionnaires are their ease of administration, their relative inexpensiveness and their ability to gather a wide variety of data (Newman 1997).

The researcher had developed a survey questionnaire that can address the research questions on the basis of previous studies to get primary data on the topic. Descriptive cross-sectional survey design was found to be appropriate for the study because the information collected about the subjects represents what is going on at one point in time (Cooper & Schindler, 2003). This design involves collecting data through questionnaires to the selected respondents for the study. In order to address the issue of common method bias, Counterbalancing or reversing item order or varying response scales was used to minimize the level of bias. A standardized 5 point Likert scale (where 1 is 'strongly disagree' and 5 is 'strongly agree') was used for most questions in the survey. Likert-type scale is an ordinal scale composed of a set of qualitative variations of a particular attribute or entity ordered sequentially from least to most (Charter 1999) and has been commonly used in business research.

3.4. Target Population

As defined by different researchers, population is defined as elements such as individuals or objects in the study (Cooper & Schindler 2003, Mann 2007). The population of this study consisted of plastic manufacturing firms which are members of Ethiopian Rubber and Plastic Association (Rubber and Plastic Association). The companies were selected based on three factors. 1) Factories that are involved in production of consumer goods, packaging and pipes, 2) active members of Ethiopian Plastic and Rubber Association, and 3) companies with formal organizational structure lead by at least 3 department managers. Plastic manufacturing companies

that couldn't fulfill the above criterias were excluded as they may not clearly understand the relationship between strategic orientation and organizational performance. The target population of this study which was found to be appropriate for data collection were 20 plastic manufacturing companies.

3.4. Sample size and Sampling Technique

In this study, purposive sampling was used to select a sample of respondents from each manufacturing company. Based on the study of Cresswell and Clark (2011), purposive sampling involves individuals who are experienced about the subject matter under study or individuals assumed to handle strategic related issues. Purposive or judgmental sampling uses one's judgment to select cases to answer the research questions and to meet study objectives (Saunders et al., 2003). Therefore, CEOs, general managers, department managers and senior professionals of the 20 plastic manufacturing companies were the sample frame as it is assumed that strategic related issues are handled by these groups of individuals. The sample size was 8 respondents from each factory, and the total sample size was 180.

3.6. Data Collection

Primary data was collected from the respondents by using self-administered questionnaires. The questionnaire was designed in such a way that it addresses the specific objectives and research problems. The questionnaire was distributed by the researcher in person visiting the factories, sending email and google form. The researcher has followed up with respondents to ensure a high response rate. To maintain the validity of the constructs and scale used in this research, the questions were adopted from previous research. The prepared questionnaire had four sections, first it tried to collect demographic data of the respondents such as position, department, age, qualification and working experience. The second section included items to measure market, entrepreneurial, technology, learning and environmental orientation. The third section attempted to collect data on the moderator variable, organizational culture and the last section included items to measure the organizational performance. Furthermore, there was a brief introduction explaining about the intention of the research and confidentiality statement.

3.6. Operationalization and measurement

Measurement of constructs was made in a way it ensures the content validity. As a result, I adopted scales and items that were previously developed and used by other researchers of similar interests. Performance of plastic manufacturing organizations was made using 6 items that are a combination of accounting-based items such as return on investment and sales growth, market-based items such as market share, External stakeholders management based such as customer satisfaction, and human resource related such as employee satisfaction. This synthesized measure was used, consistent with the conceptualization of other researchers (Morgan & Strong, 2003; Akgun et al., 2007; Masa'deh et al. 2018). Respondents were asked to rate their firm's performance against their competitors in the last two years using 5-point Likert scale with, ranging from 5 (very high) to 1 (very low).

Market orientation was measured using 15 items that address the sub constructs of customer orientation, competitor orientation and interfunctional coordination which was adopted from (Narver & Slater 1990, Jaworski and Kohli 1993, Gao, et al. 2007, Masa'deh et al. and 2018). The measurement of entrepreneurial orientation was made by using 16 items addressing five sub constructs namely, risk taking propensity, proactiveness, innovativeness, competitive aggressiveness and autonomy, which was adopted from Lumpkin and Dess, (1996), Wang, (2008). The measurement of technology orientation was made by 6 items adopted from Gatignon and Xuereb (1997), Lee et al., (2015), Do Huyang & Dedahanov (2014). Similarly learning orientation was measured by 17 items that address commitment to learning, open mindedness, shared vision, and intra organizational knowledge sharing adopted from Calantone, et. al 2002. Environmental orientation was measured considering the two sub constructs; internal Environmental orientations and external Environmental orientations by using 9 items adopted from Banerjee (2002) and Chan et al., (2012). The moderating variable innovation culture was measured by 5 items adapted from Skerlavaj et al. (2010) and Castro et al. 2019. All constructs were conceptualized as a one-dimensional construct. The operationalization of the independent variable constructs on the questionnaire was made using 5-point Likert scales, ranging from 1 (strongly disagree) to 5 (strongly agree). Similarly, the moderating variable (Innovation Culture) was operationalized using the same Likert scale.

3.6. Data Analysis

This research has adopted quantitative analysis. The quantitative data was analyzed using descriptive statistics, correlation and multiple regression analysis. Descriptive analysis was used to analyze the respondents' perception on strategic orientations, innovation culture and organizational performance of plastic manufacturing organizations in Ethiopia. Pearson Correlation analysis was used to test the correlation between market, entrepreneurial, technology, learning and environmental orientation, innovation culture and organizational performance. Multiple linear regression was used to test the relationship between independent variable and dependent variable. Similarly, multiple linear regression of interaction variables was made to test the moderation effect of innovation culture and to test hypotheses of the study. Classical linear regression basic assumptions such as Linearity, Normality, Homoscedasticity, Multicollinearity, Autocorrelation and Outliers were tested and assumptions were fulfilled. Graphic analysis was used to analyze the demographic properties of respondents. Data was analyzed using SPSS version 29.0.2.0. Furthermore, the mediation and moderation effects were calculated via the PROCESS macro procedure in SPSS developed by Hayes, 'Model 4' for mediation and 'Model 1' for moderation respectively as detailed in Hayes (2013). We used bootstrapping calculations and mean centering when interaction items were entered. The bootstrap sample size is 5,000 as recommended by Hayes (2013). Results were presented in tables, graphs and charts.

3.7. Validity and reliability

Reliability and validity are ways to demonstrate the trustworthiness of a research. Reliability is the measure of the consistency of results (Fitzner, 2007). Another researcher describes reliability as a measure of how far a research tool demonstrates similarity in different circumstances (Roberts & Priest, 2006). Validity is a measure of the closeness of what we believe we are measuring to what we intended to measure (Roberts & Priest, 2006).

Accordingly, to ensure the content validity of this study, the researcher has adopted scales and items that were previously developed and used by other researchers with similar interests. A preliminary questionnaire was prepared and subsequently reviewed by the thesis advisor to ensure that each item is measuring what is intended to be measured, and to avoid ambiguity and complexity in the phrasing of the questions. The reliability of the instrument was measured by Cronbach's α coefficient with cut-off value 0.7 (Hair et al., 2010). In this study, the entire

measurement of constructs namely, market orientation, entrepreneurial orientation, technology orientation, learning orientation, environmental orientation, innovation culture and organizational performance were analyzed against Cronbach's alpha and the results showed that all measures display reasonable Cronbach alpha levels of above 0.7. The reliability or the inter-item consistency is within the acceptable limits specified by as specified by (Hair et al. 2010).

Reliability Statistics		
Construct	Cronbach's Alpha	N of Items
Market Orientation	0.88	15
Entrepreneurial Orientation	0.78	16
Technology Orientation	0.74	6
Learning Orientation	0.89	17
Environmental Orientation	0.82	9
Innovation Culture	0.78	5
Organizational performance	0.73	6

Table 1: Reliability of main constructs

Source own survey, 2024

In this thesis, Pearson's correlation was employed to assess both discriminant validity and the strength and direction of the correlational relationship (Hair et al., 2006). According to (scribbr 2024), a general rule of thumb when conceptualizing discriminant validity is that values starting at $r = 0.85$ are considered high which imply a lack of conceptual differentiation. The Pearson correlation demonstrated that all constructs have correlation coefficients below 0.8, supporting the discriminant validity between the constructs.

3.8. Ethical Consideration

Ethics are norms guiding human interactions and it involves differentiating between wrong and right behavior. According to Bryman (2007), it is the duty of the researcher to avoid any possible harm that may be generated from the research process. The researcher duly understands the business secrets of the firms under study are sensitive and has followed strict confidentiality and reporting in general terms without mentioning the name of the respondent. The researcher also indicated in the questioner that the respondents' response is confidential and meant for academic purpose only.

Chapter Four: Results and Discussion

4.1. Introduction

In this part of the document, the results of measurement and the model are discussed in detail. It includes descriptive, inferential and regression analysis. The first part of this section is data presentation followed by analysis and discussion. The data was analyzed using MS excel and Statistical Packages for Social Science (SPSS) version. It consists of the response rate, the results of demographic characteristics of the respondents, reliability analysis, descriptive analysis and regression analysis and hypothesis testing.

4.2. Response rate

Based on the sampling method of the study discussed in the methodology part, a total of 180 questionnaires were distributed to the respondents who are working in the study area. From these 143 were returned. As a result, the response rate was found to be 79.4%. However, 10 responses were found incomplete and rejected. As a result, only 133 of them were found to be workable and analyzed by using SPSS version 29.0.2.0

4.3. Demographic Characteristics of the Respondents

The purpose of this section is to gather demographic information from respondents, including their department, position, education level, gender, age, and years worked in the industry. Collecting primary data ensures that the sample is representative, which allows generalization of findings to the population. It also assists in future research comparisons by guiding researchers on the composition of study respondents for meaningful statistical analyses. Additionally, the information is important to have some general insights about the collected data

4.3.1. Working department of the respondents

The study analyzed the distribution of the department where the respondents work and found that 39.2 % are working in the production and technique department, 16.8% are top management, 10.4% are working in the sales and marketing department. In addition, the remaining respondents are working in Quality Assurance (QA), Human Resource (HR), Supplies & Procurement, Finance and Commercial (import export) accounting for 8.8, 7.2, 6.4, 5.6, and 5.6% respectively. As per this result all departments including the top management are included in the list of respondents in order to get reasonable representation. However, the respondents from production and technique

were found to be higher than the others due to the fact that those professionals are working in the factories where the questionnaires were distributed. In the plastic manufacturing organizations, the majority of the employees belong to this department.

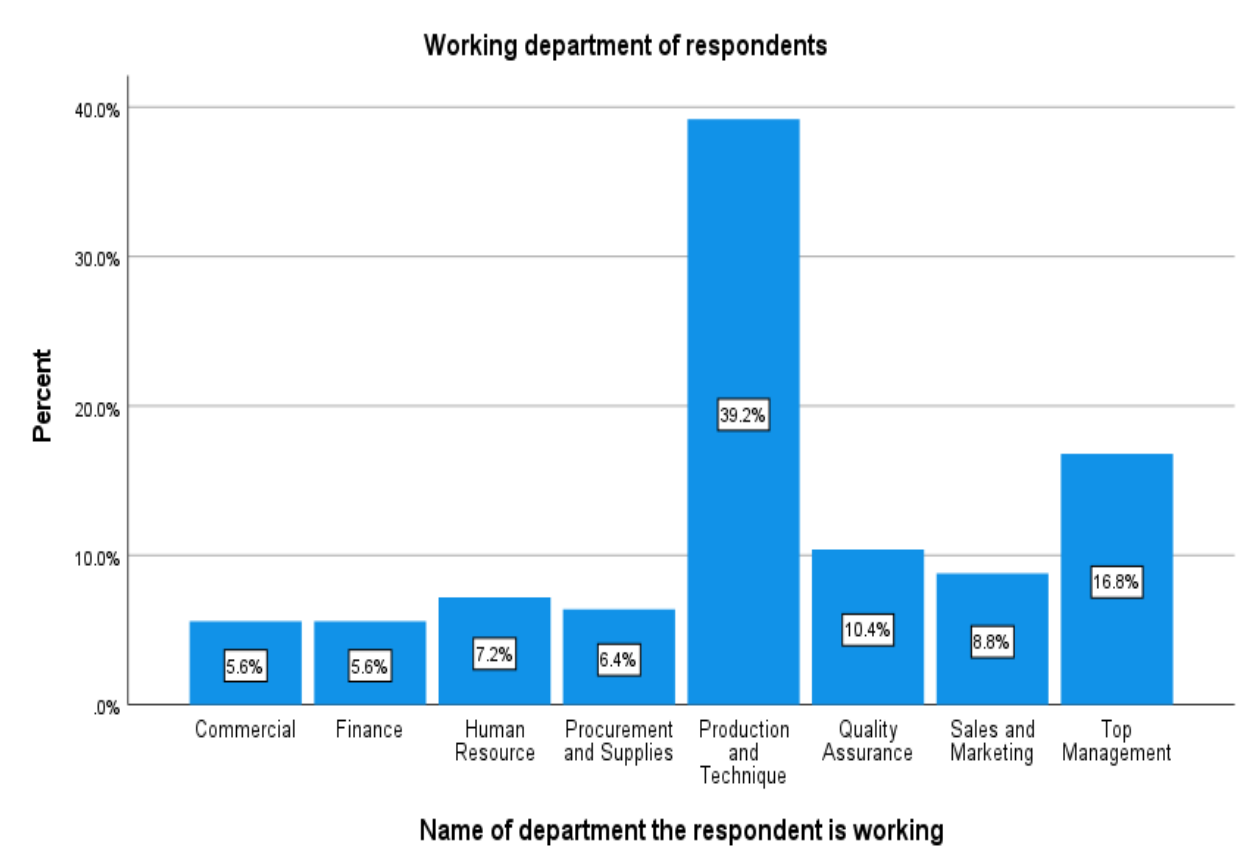


Figure 2: department of respondents

Source: own survey, SPSS output 2024

4.3.2. Position of the respondents

As shown in figure 2 below, the position of the respondents ranges from the very top position, CEO to the senior professional position which is the supervisor. In terms of response, 19.53% of the respondents were supervisors, 14.84% were production managers, 11.72% were production and technique managers, 8.59% sales & marketing managers, and 7.8% were plant managers and human resource managers. Similarly, 7.03% were quality assurance managers followed by procurement and supplies (5.47%), commercial managers and finance managers (3.13%) each. In addition, CEOs, General Manager and Deputy General Managers share was 1.56, 4.69, and 4.69%

respectively. From the result, the reason for high percentages of respondents working as a supervisor is due to the presence of the position in all departments. As mentioned earlier, production managers and production & technique managers consist of a higher share of respondents.

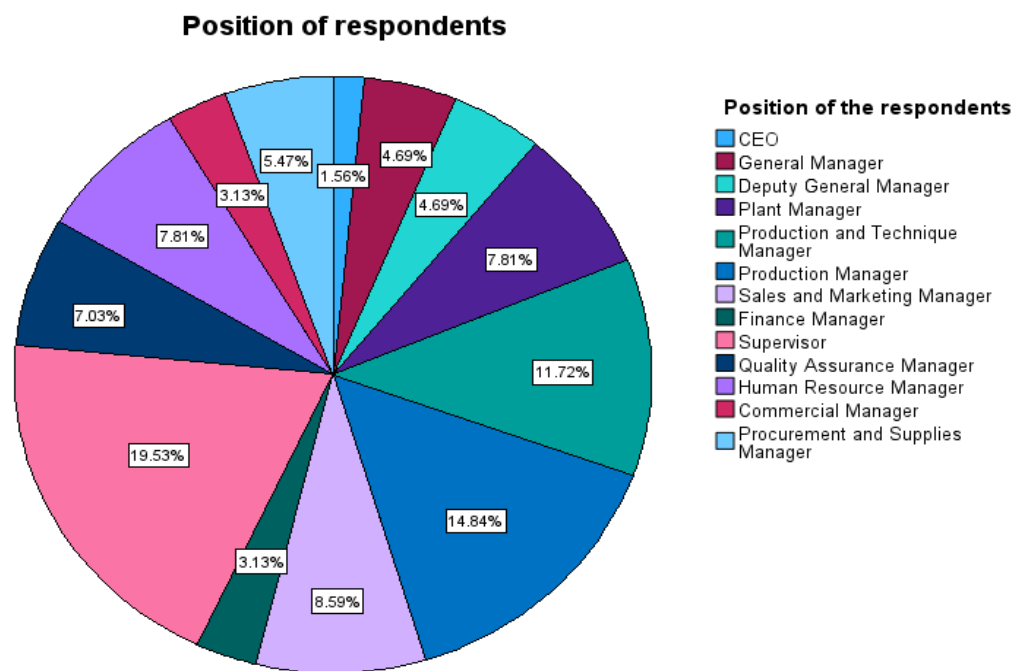


Figure 3: Position of the respondents

Source: own survey, SPSS output 2024

4.3.3. Gender of Respondents

The gender analysis of the respondents is presented in Figure 5.3. The majority (89.5%) were male while 10.5% were female. It is evident that the difference between male and female respondents was very high implying that the plastic manufacturing companies were not gender responsive in hiring the managers. This agrees with the findings of a study conducted by UNDP on women in manufacturing in Ethiopia. The study revealed that the percentage of companies with a female in senior positions is lower (4.5 percent) in Ethiopia than in Sub-Saharan Africa (15.9 percent) (UNDP)

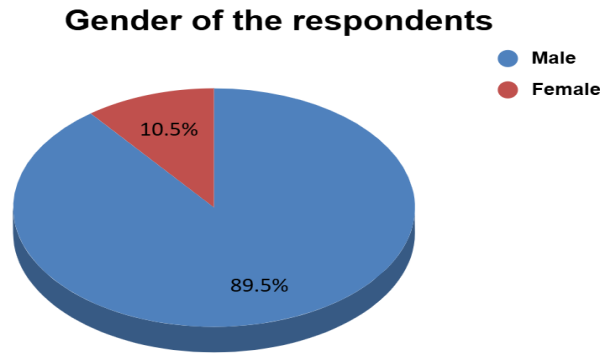


Figure 4: Gender of the respondents

Source: own survey, SPSS output 2024

4.3.4. Highest Level of Education

In terms of the level of education, Figure 5.4 shows that most (64.7%) were university degree holders, 8.3%, had college diplomas while 27.1 % had Masters Degree and above. The findings show that the respondents had high levels of education to be able to respond appropriately to the questions sought by this study. The respondents were therefore in a position to provide information on the effect of strategic orientation on plastic manufacturing firms in Ethiopia.

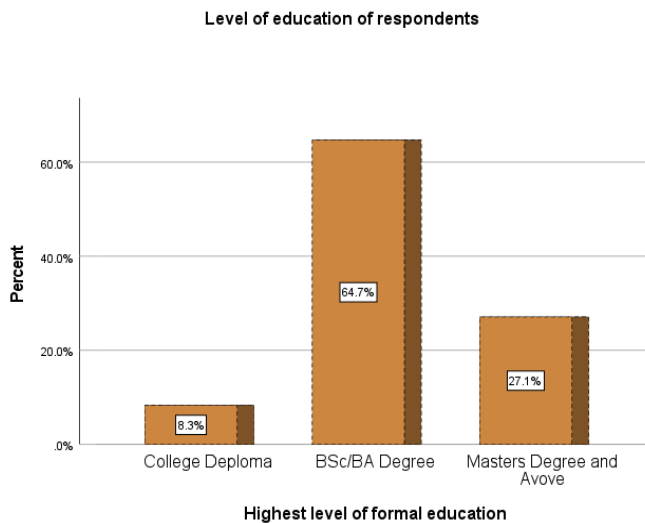


Figure 5: Highest level of education

Source: own survey, SPSS output 2024

4.3.5. Age of Respondents

In terms of age of the respondents, figure 5.5 below shows that the majority of the respondents were between the age of 31 and 40 years with the share of 40.8%. In addition, the result indicates that 36% were found to be in the age group of over 40 years. Similarly, the study shows that 21.6% of the respondents are between 25 and 30 years while only 1.6% were below 25 years. This indicates that the study selected respondents of varied ages. The findings also suggest there is age diversity of respondents among plastic manufacturing firms. It is also evident that the number of respondents in the age group of below 25 years old is very low due to the fact that the target respondents are mainly senior professionals with age above 25 years old.

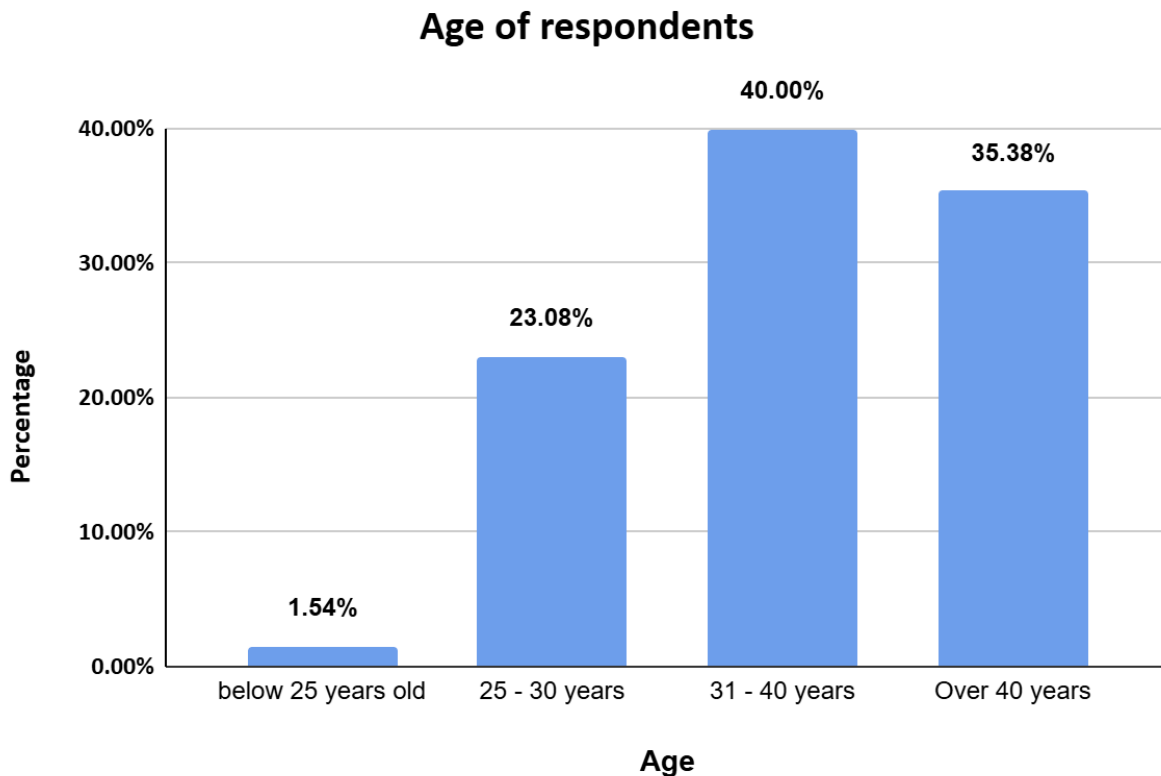


Figure 6: Age of the respondents

Source: own survey, SPSS output 2024

4.3.6. Work experience of Respondents

In terms of the years worked in the plastic manufacturing company, Figure 5.6 shows the findings of this study. The result shows that 48.87% of the respondents have been in the plastic

manufacturing organization between 6 and 10 years. Whereas 27.07% worked for 1 - 5 years and 14.29% of them have worked in the range of 11 - 15 years. In addition, the remaining 9.77% of the respondents had worked for over 15 years. The findings imply that the respondents had enough experience in the hotel industry to be able to provide information on the effect of strategic orientation on the performance of plastic manufacturing firms in Ethiopia.

Working Experience of Respondents

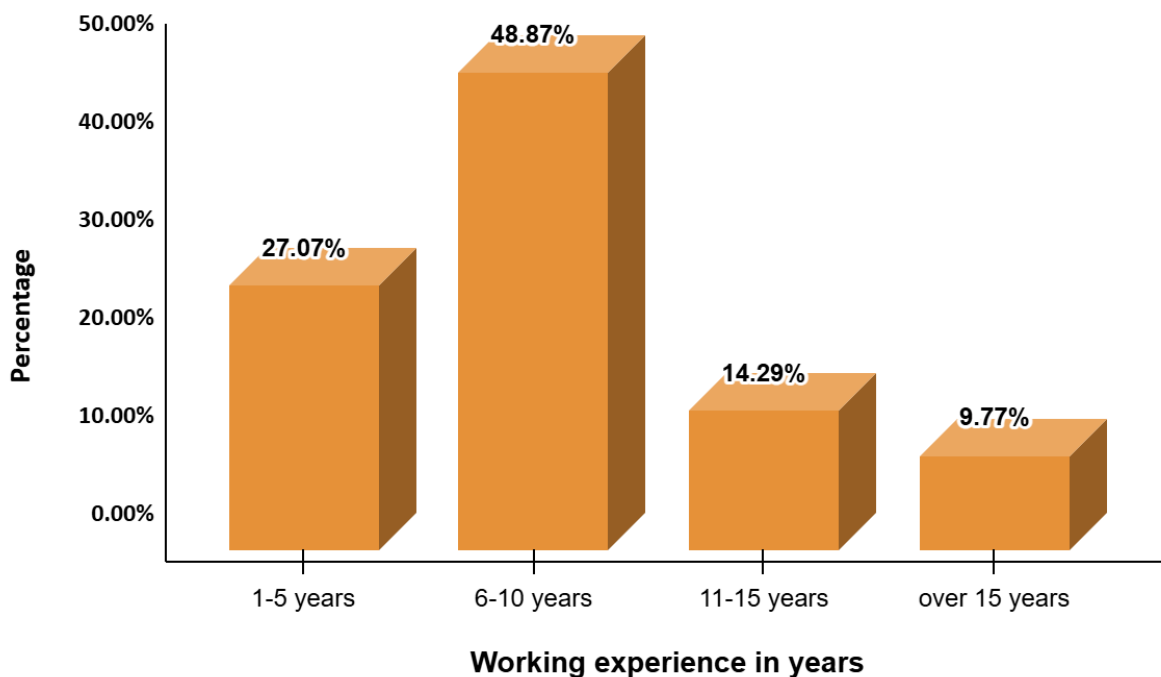


Figure 7: Work experience of the respondents

Source: own survey, SPSS output 2024

4.4. Descriptive Statistics

The first objective of the study was to examine the effect of strategic orientation on the performance of plastic manufacturing firms. The respondents were requested to show their level of agreement in the effect of strategic orientation on their plastic manufacturing organization's performance and the role of innovation culture in the relationship between strategic orientation and performance of plastic manufacturing organizations. The strategic orientation dimensions were market, entrepreneurial, technological, learning and environmental orientations. A five-point

Likert scale with 1 - strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and 5 - strongly agree were used to examine the relationship dependent and independent variables.

4.4.1. Descriptive statistics of strategic orientation dimensions

The descriptive analysis has been made using the mean score of each independent variable for the aim of achieving partial research objectives of the study. Therefore, according to Zaidatol & Bagheri (2009), the mean score below 3.39 is considered as low; the mean score from 3.40 up to 3.79 is considered as moderate and mean score above 3.8 is considered as high.

Descriptive Statistics					
Constructs	N	Min.	Max.	Mean	Std. Deviation
Market Orientation	133	2.73	4.93	3.7352	0.46753
Entrepreneurial orientation	133	2.81	4.75	3.7931	0.40587
Technology Orientation	133	2.83	5.00	3.8458	0.51633
Learning Orientation	133	2.50	5.00	3.7326	0.51721
Environmental orientation	133	2.25	5.00	3.7612	0.57187
Innovation Culture	133	2.20	5.00	3.5714	0.52232
Organizational performance	133	2.83	5.00	3.8644	0.48583
Valid N (listwise)	133				

Table 2: Deceptive statistics of strategic orientation dimensions

Source: own survey, 2024

As observed in the above table 2 , the mean scores of all strategic orientation dimensions except technology orientation were in the range of moderate scale based on Zaidatol & Bagheri(2009). However, the mean score of technology orientation is 3.85 which is in the range of high score. These mean scores and standard deviation of strategic orientation dimensions show the strategic orientation practices observed in the plastic manufacturing organizations. Technological orientation has the highest mean score ($M = 3.85$, $SD = 0.52$) followed by Entrepreneurial orientation ($M = 3.79$, $SD = 0.41$), Environmental orientation ($M = 3.76$, $SD = 0.57$), Market orientation ($M = 3.74$, $SD = 0.45$), Learning orientation ($M = 3.73$, $SD = 0.52$) respectively.

4.4.2. Descriptive Statistics of Market Orientation

The first objective of this study was to determine the effect of market orientation on the performance of plastic manufacturing firms in Ethiopia. The top, middle level managers and senior professionals were asked to rate on a scale of 1 to 5 the extent to which their plastic manufacturing organization focused on the three dimensions of market orientation called customer orientation, competitor orientation and interfunctional coordination using a five-point Likert scale with a value of one (1) representing ‘strongly disagree’ and a value of five (5) representing ‘strongly agree’. The responses were then analyzed using descriptive statistics and the results are as presented in Table 3 below

Descriptive Statistics			
Variables	N	Mean	Std. Deviation
Customer Orientation	133	3.787	0.54059
Systematic collection of information about customers’ needs and wants.	133	3.82	0.705
Using customer feedback to improve products/services.	133	3.88	0.708
Prioritizing customer satisfaction over other goals.	133	3.71	0.736
Actively seek input from customers.	133	3.77	0.737
Tailor Offerings to meet specific customer needs.	133	3.71	0.744
Focusing on building long-term relationships with customers.	133	3.83	0.809
Competitor Orientation	133	3.6553	0.57811
Close monitoring of competitors’ actions and strategies.	132	3.67	0.843
Analyzing competitors’ strengths and weaknesses.	133	3.62	0.795
Adapt strategies based on competitive dynamics.	133	3.75	0.732
Benchmarking against industry leaders.	133	3.72	0.801
We proactively respond to competitive threats.	133	3.52	0.784
Interfunctional Coordination	133	3.7688	0.60273
Effective collaboration between departments within the organization	133	3.76	0.760
Sharing market information across functions	133	3.77	0.775
Teamwork to achieve market-oriented goals.	133	3.95	0.810

Aligning activities to support overall market objectives.	133	3.59	0.853
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Table 3: Descriptive Statistics of Market Orientation

Source: Own survey, 2024

As shown in the above table, the respondents have agreed with high extent on, organization focuses on systematic collection information about customers' needs and wants ($M=3.82$, $SD=0.71$), using customer feedback to improve products/services ($M=3.88$, $SD=0.71$), and that focusing on building long-term relationships with customers ($M=3.88$, $SD=0.81$). It was noted that the respondents agreed to the moderate extent, in prioritizing customer satisfaction over other goals ($M=3.71$, $SD=0.74$), actively seek input from customers ($M=3.77$, $SD=0.737$), and tailor offerings to meet specific customer needs ($M=3.71$, $SD=0.74$). As a result, the overall score of customer orientation was found to be moderate ($M=3.79$, $SD=0.54$). This implies that top, middle and senior professionals of plastic manufacturing organizations have given moderate emphasis for their customers, implying plastic manufacturing firms need to take corrective measures in prioritizing customer satisfaction, get regular inputs from customers and tailor their offerings based on customer requirement in order to enhance their customer orientation focus.

In addition, the respondents have moderately agreed on close monitoring of competitors' actions and strategies ($M=3.67$, $SD=0.84$), analyzing competitors' strengths and weaknesses ($M=3.62$, $SD=0.80$), adapting their strategies based on competitive dynamics ($M=3.75$, $SD=0.73$), benchmarking against industry leaders ($M=3.72$, $SD=0.80$), and proactively responding to competitive threats ($M=3.52$, $SD=0.78$). The overall mean score of competitor orientation was found to be moderate ($M=3.66$, $SD=0.58$). This implies that plastic manufacturing firms in Ethiopia need to focus on competitor orientation to ensure a company stays aware of its competitive landscape and adapts strategically to maintain an edge.

In terms of inter-functional coordination, the overall mean result showed that there is a moderate agreement on the focus of inter-functional coordination dimension of market orientation. Plastic manufacturing organizations have moderately agreed on effective collaboration between departments within the organization ($M=3.76$, $SD=0.76$), sharing market information across functions ($M=3.77$, $SD=0.78$), aligning activities to support overall market objectives ($M=3.59$, $SD=0.85$). However, managers and supervisors of plastic manufacturing organizations have

agreed to a high extent on the level of their teamwork to achieve market-oriented goals ($M=3.95$, $SD=0.81$). These dimensions of market orientation have contributed to the overall result of market orientation ($M=3.74$, $SD= 0.47$) and fall under moderate score. This shows that plastic manufacturing organizations have to give more focus on market orientation in order to enhance their organization performance.

4.4.3. Descriptive statistics Entrepreneurial Orientation

The second objective of this study was to determine the effect of entrepreneurial orientation on the performance of plastic manufacturing firms in Ethiopia. The top, middle level managers and senior professionals were asked to rate on a scale of 1 to 5 the extent to which their plastic manufacturing organization focused on the five dimensions of entrepreneurial orientation called proactiveness, aggressiveness, risk taking, innovativeness and autonomy using a five-point Likert scale with a value of one (1) representing ‘strongly disagree’ and a value of five (5) representing ‘strongly agree’. The responses were then analyzed using descriptive statistics and the results are as presented in Table 4 below

Descriptive Statistics			
Variables	N	Mean	Std. Deviation
Proactiveness	133	3.55	0.6694
Our organization favors a strong emphasis on R & D, technological leadership, and innovations.	133	3.63	0.8830
Over the past 2 years, our organization has marketed a large variety of new lines of products or services	133	3.37	0.8920
Over the past 2 years, the modifications to our product and service lines have been predominantly minor	133	3.65	0.7800
Aggressiveness	133	3.83	0.6515
In dealing with competitors, our organization often leads the competition, initiating actions to which our competitors have to respond.	133	3.76	0.7400
In dealing with competitors, our organization typically adopts a very competitive posture aiming at overtaking the competitors.	132	3.89	0.8260
Risk Taking	133	3.90	0.6222
The top managers of my organization have a strong propensity for high-risk projects (with chances of very high return).	133	3.95	0.7370
The top managers believe, owing to the nature of the environment, that bold, wide-ranging acts are necessary to achieve our organization	133	3.83	0.8090

objectives.			
When there is uncertainty, our organization typically adopts a “wait-and-see” posture in order to minimize the probability of making costly decisions.	133	3.91	0.8210
Innovativeness	133	3.89	0.6035
Management actively responds to the adoption of “new ways of doing things” by main competitors.	133	3.87	0.7830
We are willing to try new ways of doing things and seek unusual, novel solutions.	133	3.96	0.7730
We encourage people to think and behave in original and novel ways.	133	3.85	0.8210
Autonomy	133	3.80	0.6398
Our organization encourages employees to take independent actions.	133	3.79	0.8350
Employees in our organization have the authority to make decisions related to their work.	133	3.92	0.9130
Our organization allows employees to be creative and innovative in their work	133	3.84	0.8060
Employees in our organization have the freedom to choose how they perform their tasks	133	3.72	0.9480
Our organization discourages employees from taking independent actions.	133	3.72	0.9480
Valid N (listwise)	132		

Table 4: Descriptive Statistics of Entrepreneurial Orientation

Source: Own survey, 2024

As shown in the above table, the respondents have agreed to a moderate extent that organization favors a strong emphasis on R & D, technological leadership, and innovations ($M=3.63$, $SD=0.88$). However, they perceived that their organization has marketed a large variety of new lines of products or services ($M=3.37$, $SD=0.89$), implying that the modifications made to product and service lines were minor using customer feedback to improve products/services. In general, the result showed that the proactiveness dimension of entrepreneurship as perceived by top, middle level managers and supervisors of plastic manufacturing organizations was moderate. It was noted that the respondents agreed to the moderate extent, on the organization's ability leading the competition, initiating actions to which their competitors have to respond ($M=3.76$, $SD=0.74$). However, they have agreed to a high extent on the ability of their firm in adopting a very

competitive posture aiming at overtaking the competitors ($M=3.89$, $SD=0.83$). The mean score of aggressiveness dimension as evidenced in the two variables was found to be high ($M=3.83$, $SD=0.65$). Therefore, aggressiveness as perceived by managers of plastic manufacturing organizations in Ethiopia has got a high mean score.

In addition, the respondents have agreed to a high extent on the strong propensity of their top managers in taking high-risk projects with chances of very high return ($M=3.95$, $SD=0.74$), the belief of their top managers in taking bold actions to achieve their organization objectives owing to the nature of the environment ($M=3.83$, $SD=0.81$). As indicated above, the plastic manufacturing organizations practice in risk taking is high as perceived by the top and middle level managers. The overall mean score of risk-taking propensity was high ($M=3.90$, $SD=0.62$). This implies that plastic manufacturing firms in Ethiopia need to focus on competitor orientation to ensure a company stays aware of its competitive landscape and adapts strategically to maintain an edge.

In terms of innovativeness which is represented by three items, the respondents have agreed in a high extent on management's response to the adoption of "new ways of doing things" by main competitors ($M=3.87$, $SD=0.78$), willingness to try new ways of doing things and seek unusual, novel solutions ($M=3.96$, $SD=0.77$), and the focus of an organization to encourage people to think and behave in original and novel ways ($M=3.85$, $SD=0.82$). As indicated in the above table, innovativeness as one dimension of entrepreneurial orientation had a mean score of 3.89. This shows that the plastic manufacturing firms have high innovativeness resulting from managers' inclination in adoption and trying new things.

Autonomy is the fifth dimension of entrepreneurial orientation with a mean score of 3.8 which falls under high score. The respondents agreed to a high extent that employees have the authority to make decisions related to their work ($M=3.92$, $SD=0.91$), their organization allows employees to be creative and innovative in their work ($M=3.84$, $SD=0.81$). However, the respondents had a moderate opinion that their organization encourages employees to take independent actions ($M=3.79$, $SD=0.83$), and employees have the freedom to choose how they perform their tasks ($M=3.72$, $SD=0.95$). The reverse item was found to be similar to the positive item indicating the consistency of the responses.

4.4.4. Descriptive statistics of Technology Orientation

The third objective of this study was to determine the effect of technology orientation on the performance of plastic manufacturing firms in Ethiopia. The top, middle level managers and senior professionals were asked to rate on a scale of 1 to 5 the extent to which their plastic manufacturing organization focused on technology orientation using a five-point Likert scale with a value of one (1) representing ‘strongly disagree’ and a value of five (5) representing ‘strongly agree’. The responses were then analyzed using descriptive statistics and the results are as presented in Table 5 below

Descriptive Statistics			
	N	Mean	Std. Deviation
The policy of this firm has been to always consider the most up-to-date production technology available.	133	3.89	0.8500
Our new products are always at the state of the art of the technology.	133	3.86	0.8360
Technological innovation, based on research results, is readily accepted in our organization.	133	3.84	0.7670
New technologies are integrated to our firm rapidly	133	3.82	0.8420
Our firm initiates development of new technologies and products	133	3.94	0.8050
R&D activities are very important in our firms	133	3.95	0.8990

Table 5: Descriptive Statistics of technology orientation

Source: Own Survey, 2024.

In the above table, the respondents have agreed that the policy of their firm always consider the most up-to-date production technology available ($M=3.89$, $SD=0.85$), their new products are always at the state of the art of the technology ($M=3.86$, $SD=0.84$), and technological innovation, based on research results, is readily accepted in their organization ($M=3.84$, $SD=0.77$). Similarly, the respondents have agreed that new technologies are integrated to their firm rapidly ($M=3.82$, $SD=0.84$), their firm initiates development of new technologies and products ($M=3.94$, $SD=0.81$) and R&D activities are very important in their firms ($M=3.95$, $SD=0.90$). Overall mean score of technology orientation was found to be 3.85. This implies that there is a high-level agreement

among plastic manufacturing managers and senior professionals that technology orientation has an important role in enhancing the performance of their organization.

4.4.5. Descriptive Analysis of Learning Orientation

The fourth objective of this study was to determine the effect of learning orientation on the performance of plastic manufacturing firms in Ethiopia. The top, middle level managers and senior professionals were asked to rate on a scale of 1 to 5 the extent to which their plastic manufacturing organization focused on learning orientation using a five-point Likert scale with a value of one (1) representing ‘strongly disagree’ and a value of five (5) representing ‘strongly agree’. Learning orientation was analyzed using mean and standard deviation of four dimensions; namely, commitment to learning, shared vision, open mindedness and interorganizational knowledge sharing and the results are as presented in Table 6 below.

Descriptive Statistics			
Variables	N	Mean	Std. dv
Commitment to learning	133	3.95	0.7050
We agree that our organization’s ability to learn is the key to our competitive advantage.	133	4.02	0.7730
One of the values of our organization includes learning as a key to improvement.	133	3.92	0.9340
We believe that employee learning is an investment, not an expense.	133	4.05	0.8560
In my organization, learning is regarded as a vital asset essential for ensuring the organization's survival.	133	3.82	0.8330
Shared vision	133	3.74	0.6439
There is a collective purpose that binds us together in my organization.	132	3.98	0.7150
There is total agreement on our organizational vision across all levels, functions, and divisions.	133	3.77	0.8870
All employees are committed to the goals of this organization.	133	3.65	0.8890
Employees perceive themselves as partners in shaping the direction of organization	133	3.57	0.9480
Open Mindedness	133	3.66	0.5923

We are not afraid to reflect critically on the shared assumptions about our customers.	133	3.73	0.6980
Our employees recognize the need to continually question their understanding of the market.	133	3.57	0.8190
We rarely collectively question our own bias about the way we interpret customer information.	133	3.53	0.7740
We continually judge the quality of our decisions and activities taken over time.	132	3.80	0.7660
Interorganizational knowledge sharing	133	3.57	0.6303
There is a good deal of organizational conversation that keeps alive the lessons learned from history.	133	3.62	0.8410
We always analyze unsuccessful organizational endeavors and communicate the lessons learned widely.	133	3.53	0.8220
We have specific mechanisms for sharing lessons learned in organizational activities from department to department	133	3.55	0.8390
Top management repeatedly emphasizes the importance of knowledge sharing in our company.	133	3.78	0.9870
We put little effort in sharing lessons and experiences.	133	3.40	1.0290
Valid N (listwise)	131		

Table 6: Descriptive Statistics of learning orientation

Source: Own Survey

As shown in the above table the respondents have agreed that their organization's ability to learn is the key to their competitive advantage ($M=4.02$, $SD=0.77$), their organizations included learning as a key to improvement ($M=3.92$, $SD=0.93$), they believe that employee learning is an investment, not an expense ($M=4.05$, $SD=0.86$), and learning is regarded as a vital asset essential for ensuring the organization's survival ($M=3.82$, $SD=0.83$). The cumulative mean score showed that managers and senior professionals of plastic manufacturing organizations in Ethiopia have high opinion for commitment to learning as evidenced by high score mean of 3.95. In addition, the respondents have agreed on the availability of collective purpose that binds them together in the organization ($M=3.98$, $SD=0.72$). But they have moderately agreed on the availability of total agreement on their organizational vision across all levels, functions, and divisions ($M=3.77$, $SD=0.89$), the commitment of employees to the goals of their organization ($M=3.65$, $SD=0.89$) and the level employees perceive themselves as partners in shaping the direction of organization ($M=3.57$,

SD=0.95). The cumulative mean score showed that managers and senior professionals of plastic manufacturing organizations in Ethiopia have agreed to a moderate extent on the importance of the availability of shared vision across all organizational members (M=3.74, SD=0.64).

Similarly, the mean and standard deviation analysis showed that managers and supervisors of plastic manufacturing organizations in Ethiopia had moderate perception on the open mindedness dimension of learning orientation (M=3.66, SD=0.59). The respondents have agreed to the moderate extent that they are not afraid to reflect critically on the shared assumptions about their customers (M=3.73, SD=0.67), recognizing employees need to continually question their understanding of the market (M=3.57, SD=0.82). But they have highly agreed on their continuous judgment of the quality of their decisions and activities taken over time (M=3.8, SD=0.77).

Finally, in terms of interorganizational knowledge sharing, the descriptive analysis showed that there is moderate agreement among the managers and supervisors of plastic manufacturing firms in Ethiopia. Accordingly they have moderately agreed on presence of a good deal of organizational conversation that keeps alive the lessons learned from history (M=3.62, SD=0.84), the practice of analyzing unsuccessful organizational endeavors and communicate the lessons learned widely (M=3.53, SD=0.82), the availability of specific mechanisms for sharing lessons learned in organizational activities from department to department (M=3.55, SD=0.84) and the emphasis paid by the top management on the importance of knowledge sharing in their company (M=3.78, SD=0.99). The variable we put little effort in sharing lessons and experiences was meant for measuring responses consistency and reverse coded. It has fallen under the moderate range showing the consistency of the responses. Overall mean score of learning orientation was found to be 3.73. This implies that there is moderate agreement among plastic manufacturing managers and senior professionals that learning orientation plays an important role in enhancing the performance of their organization.

4.4.6. Descriptive Statistics of Environmental Orientation

The fifth objective of this study was to determine the effect of environmental orientation on the performance of plastic manufacturing firms in Ethiopia. The top, middle level managers and senior professionals were asked to rate on a scale of 1 to 5 the extent to which their plastic manufacturing organization focused on environmental orientation using a Five-point Likert scale with a value of

one (1) representing ‘strongly disagree’ and a value of five (5) representing ‘strongly agree’. Environmental orientation was analyzed using mean and standard deviation of two dimensions; namely, internal environmental orientation and external environmental orientation and the results are as presented in Table 7 below.

Descriptive Statistics			
	N	Mean	Std. Dev
Internal environmental orientation	133	3.76	0.7422
Our firm makes concerted efforts to let every employee understand the importance of environmental preservation.	133	3.80	0.8390
Our firm has clear policy statements urging environmental awareness in every area of operations.	133	3.76	0.8970
Environmental preservation is highly valued by our firm members.	132	3.79	0.8200
We try to promote environmental preservation as a major goal across all departments	133	3.71	0.9030
External environmental orientation	133	3.77	0.5838
The developments in the natural environment affect our firm's business activities.	133	3.50	0.9100
The financial well-being of our firm depends on the state of the natural environment.	133	3.53	0.9660
Environmental preservation is vital to our firm's survival	133	3.83	0.9170
Various external stakeholders expect our firm to preserve the environment.	131	3.96	0.7380
Our company do not give value to environmental protection	133	4.02	0.9920
Valid N (listwise)	130		

Table 7: Descriptive Statistics of Environmental Orientation

Source: Own Survey, 2024

The descriptive analysis showed that managers and supervisors of plastic manufacturing firms have moderate agreement on the practice of internal environmental orientation in their organization as evidenced by the mean score (M=3.76, SD=0.74). They have moderate opinion that their firms have clear policy statements urging environmental awareness in every area of operations (M=3.76, SD=0.89), high value given to environmental preservation by their firm members (M=3.79, SD=0.82), and on the efforts of their firms to promote environmental

preservation as a major goal across all departments ($M=3.71$, $SD=0.9$). But, there is a high agreement on the concerted efforts made by their organization to let every employee understand the importance of environmental preservation ($M=3.8$, $SD=0.84$).

In terms of external environmental orientation, the respondents have agreed to a high extent that environmental preservation is vital to their firm's survival ($M=3.83$, $SD=0.92$), and there is expectation of external stakeholders to preserve the environment ($M=3.96$, $SD=0.73$). The respondents disagreed with the reverse variable: their company does not give value to environmental protection, which implies that their respective organizations have given value to environmental protection ($M=4.02$, $SD=0.99$). The overall mean score of external environmental orientation showed that there is moderate agreement among managers and supervisors of plastic manufacturing organizations on the attitude of external stakeholders towards environmental practices of their organization. Overall mean score of environmental orientation was found to be 3.76. This implies that there is moderate agreement among plastic manufacturing managers and senior professionals that environmental orientation plays an important role in enhancing the performance of their organization.

4.4.7. Descriptive Statistics of Innovation Culture

The Sixth objective of this study was to analyze the moderating effect of innovation culture on the relationship between strategic orientation and performance of plastic manufacturing firms in Ethiopia. Managers and senior professionals were asked to rate on a scale of 1 to 5 the extent to which their plastic manufacturing organization focused on innovation culture using a Five-point Likert scale with a value of one (1) representing 'strongly disagree' and a value of five (5) representing 'strongly agree'. Innovation culture was analyzed using mean and standard deviation and the results are as presented in Table 8 below.

Descriptive Statistics			
Variables	N	Mean	Std. Dev
Innovation Culture	133	3.57	0.5223
My company encourages creativity, innovation and/or the development of new ideas, as cultural values.	133	3.57	0.5410

A common system of values, beliefs and objectives exists in my company, directed towards innovation.	133	3.62	0.7450
People are not penalized for new ideas that do not work	133	3.56	0.7620
Our managers promote and support innovative ideas, experimentation and creative processes	133	3.57	0.7620
Innovation is perceived as too risky and is resisted	133	3.53	0.744
Valid N (listwise)	133		

Table 8: Descriptive Analysis of Innovation Culture

Source: Own Survey, 2024

The descriptive analysis showed that managers and supervisors of plastic manufacturing firms have moderate agreement on the availability of innovation culture in their organization as evidenced by the mean score ($M=3.57$, $SD=0.52$). The respondents have agreed moderately that their companies encourages creativity, innovation and the development of new ideas, as cultural values ($M=3.57$, $SD=0.52$), the presence of a common system of values, beliefs and objectives in their organization directed towards innovation ($M=3.62$, $SD=0.75$), people are not penalized for new ideas that do not work ($M=3.56$, $SD=0.76$) and, Our managers promote and support innovative ideas, experimentation and creative processes ($M=3.57$, $SD=0.76$). In addition, the respondents were asked if innovation is perceived risky and resisted in their organization, and they had an opinion that ranged from neutral to strongly disagree. As a result, it was reverse coded and they have moderately agreed that there is a culture that encourages innovation in their organization ($M=3.53$, $SD=0.74$).

4.4.8. Descriptive Statistics Organizational Performance

The descriptive analysis of organizational performance, which the dependent variable of the study was conducted and the results are shown in table 9. Managers and senior professionals of plastic manufacturing firms were asked to rate on a scale of 1 to 5 the level of their plastic manufacturing organization performance using a Five-point Likert scale with a value of one (1) representing ‘very low’ and a value of five (5) representing ‘very high’.

Descriptive Statistics			
Variable	N	Mean	Std. Deviation
Performance	133	3.86	0.4860
Return on investment	133	3.82	0.7160
Sales growth	133	3.92	0.6750
Market share	133	3.85	0.7230
Employee satisfaction	133	3.48	0.8760
Customer satisfaction	133	3.88	0.7180
Product quality	133	4.24	0.7600
Valid N (listwise)	133		

Table 9: Descriptive Analysis Organizational Performance

Source: own survey

From the above table, it is shown that the managers and senior professionals of plastic manufacturing firms had perceived that their organizations had performed greatly in terms of financial performance measures such as return on investment ($M=3.82$, $SD=0.72$), sales growth ($M=3.92$, $SD=0.68$), market share ($M=3.85$, $SD=0.72$). Similarly, they had performed to a high extent in customer satisfaction ($M=3.85$, $SD=0.72$). However, the plastic manufacturing organizations performed moderately in terms of Employee satisfaction ($M=3.48$, $SD=0.88$). The respondents also agreed that their organization had performed to a very high extent in product quality ($M=4.24$, $SD=0.76$). The overall performance score shows that plastic manufacturing firms have performed greatly ($M=3.86$, $SD=0.49$) as a result of high financial and non-financial measurement indicators.

4.5. Correlation Analysis

Correlation analysis helps to explore the strength as well as the direction of the relationship among the dependent and independent variables. Accordingly, the Pearson correlation analysis of the dependent variables market orientation, entrepreneurial orientation, technology orientation, learning orientation, environmental orientation, innovation culture and organizational performance with $N=133$. The results are summarized in the table below

Correlations								
Variables		MO	EO	TO	LO	ENVO	INNC	OP
Market Orientation (MO)	Pearson Correlation	1						
	Sig. (2-tailed)							
Entrepreneurial Orientation (EO)	Pearson Correlation	.655**	1					
	Sig. (2-tailed)	<.001						
Technology Orientation (TO)	Pearson Correlation	.626**	.606**	1				
	Sig. (2-tailed)	<.001	<.001					
Learning Orientation (LO)	Pearson Correlation	.655**	.618**	.665**	1			
	Sig. (2-tailed)	<.001	<.001	<.001				
Environmental Orientation (ENVO)	Pearson Correlation	.458**	.341**	.366**	.455**	1		
	Sig. (2-tailed)	<.001	<.001	<.001	<.001			
Innovation Culture (INNC)	Pearson Correlation	.486**	.379**	.485**	.583**	.506**	1	
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001		
Organizational performance (OP)	Pearson Correlation	.745**	.735**	.767**	.718**	.347**	.552**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	

** Correlation is significant at the 0.01 level (2-tailed). N=133

Table 10: Pearson correlation analysis of dependent and independent variables.

Source: Own survey, 2024

According to Cohen (1988), the correlation coefficient (r) ranging from 0.10 to 0.29 shows low degree of correlation, from 0.30 to 0.49 is a moderate degree of correlation, and from 0.50 to 1.00 regarded as a high degree of correlation. Accordingly, as shown in the above Table (10), there was significant and high degree of correlation between market orientation and organizational performance ($r=0.745$, $p<0.01$), entrepreneurial orientation and organization performance ($r=0.735$, $p<0.01$), technology orientation and organization performance ($r=0.767$, $p<0.01$), learning orientation and organization performance ($r=0.718$, $p<0.01$), innovation and culture organization performance ($r=0.552$, $p<0.01$). This showed that the independent variables were expected to influence organizational performance. However, there is a moderate degree of correlation between environmental orientation and performance of plastic manufacturing organizations.

4.6. Regression Analysis

4.6.1. Assumptions of Regression Analysis

Violations of assumptions of linear regression models can lead to biased or inefficient estimates, and it is important to assess and address these violations for accurate and reliable regression results. The following main assumptions of linear regression which are going to be checked against in this study before conducting the linear multiple regression.

4.6.1.1. Test of Linearity

According to Darlington (1968) to conduct linear regression analysis, the relationship between dependent variables and explanatory variables must be linear. In this study, a normal P-P plot was used to assess the linearity of the relationship between the dependent variable and the independent variables.

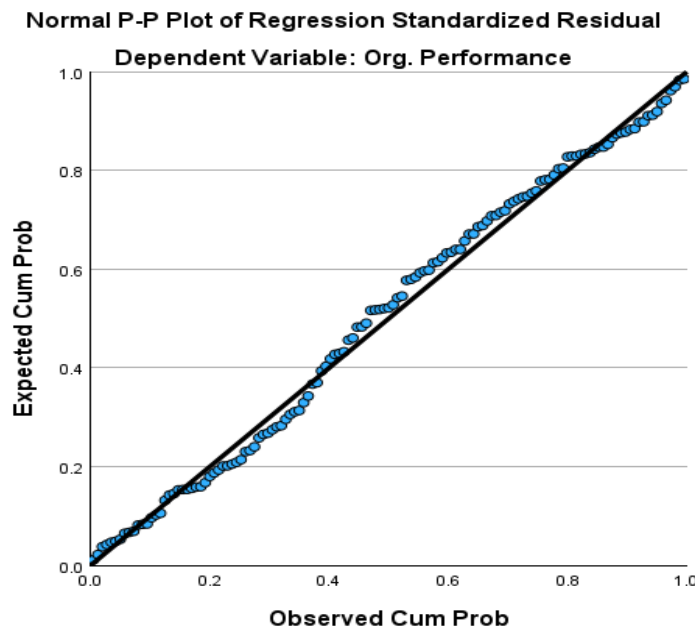


Figure 8: P-P plot of standardized residual

Source: Own Survey, 2024

When we look at the Normal Probability plot produced it can be concluded that the relationship between each independent variable and the dependent variable is found to be linear as shown in figure 4.7 above. Hence the linearity assumption was not violated.

4.6.1.2. Test of Normality

Normality is used to describe a symmetrical, bell-shaped curve, which has the greatest frequency of scores in the middle combined with smaller frequencies towards the extremes. A multiple regression assumes that variables have normal distributions. This means that errors are normally distributed and the values of the residuals will approximate a normal curve. The common method to check normality assumption is a histogram, normal P-P plot and normality test methods such as Shapiro-Wilk and Kolomogorov-Smirnov. In this thesis both histograms and Shapiro-Wilk normality tests were used to test normality of the samples.

Graphical test

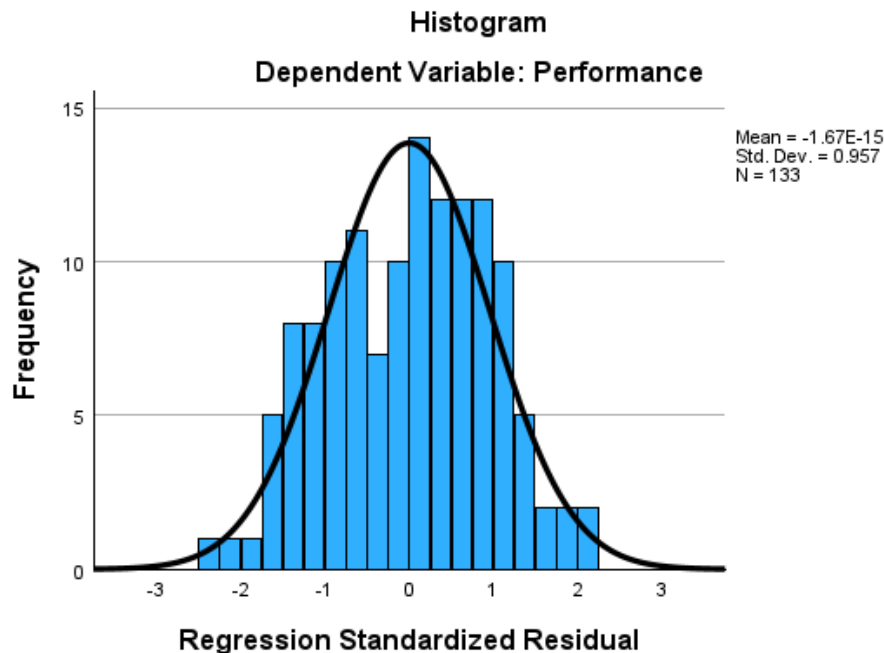


Figure 9: Histogram of standardized residuals

Source Own Survey, 2024

As it can be observed in the above figure, the plot is symmetrical, bell-shaped curve, high frequency of scores is in the middle, and with smaller frequencies towards the extremes which indicates that the requirement is satisfied and there is no major deviation from normality. indicates that error terms are normally distributed. Therefore, it can be concluded that normality is fulfilled as evidenced by the above histogram plot.

Shapiro-Wilk Test

In addition to testing the normality using histograms, Shapiro-Wilk Test was conducted to further assure the normality test. Based on the Shapiro-Wilk test, the null hypothesis (H_0) is errors are normally distributed and the alternate hypothesis (H_a) is errors are not normally distributed.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Studentized Residual	0.061	133	.200*	0.986	133	0.203
* This is a lower bound of the true significance.						
^a Lilliefors Significance Correction						

Table 11: Test of normality

Source: Own survey, 2024

As observed in the above table, the results obtained from Shapiro-Wilk test indicate that all the variables have ($p > 0.05$), implying that the null hypothesis is not rejected and hence the variables involved in this study follow a normal distribution and the residuals are normally distributed so that the regression analysis procedures have been fulfilled.

4.6.1.3. Test of Multicollinearity

Brooks (2014) highlights that multicollinearity occurs when independent variables are highly correlated with each other. This situation complicates the regression model's ability to identify which independent variables influence the dependent variable. To assess multicollinearity, one can examine correlation coefficients or check the Tolerance and Variance Inflation Factor (VIF). In this study, both correlation coefficient and VIF were used for collinearity diagnostic tests.

In the table 12 below, it observed that the VIF value of market orientation was found to be 2.47, entrepreneurial orientation 2.27, technology orientation 2.21, learning orientation 2.78, environmental orientation 1.56 and innovation culture was 1.8. This shows that the VIF values of dependent and moderator variables was less than 3.0. Similarly, the interaction effect variables have VIF value of less than 3 except interaction 1 and 4 which are approximately 3.0

Table: Collinearity Statistics		
Variables	Tolerance	VIF
Market Orientation	0.404	2.474
Entrepreneurial Orientation	0.441	2.269
Technology Orientation	0.453	2.209
Learning Orientation	0.360	2.777
Environmental Orientation	0.639	1.564
Innovation Culture	0.554	1.804
Interaction1 - mrkt_x_innc	0.318	3.148
Interaction2 - ent_x_innc	0.386	2.588
Interaction3 - tech_x_innc	0.482	2.076
Interaction4 - learn_x_innc	0.308	3.245
Interaction5 - env_x_innc	0.656	1.525
Dependent Variable: Organizational performance		

Table 12: Collinearity Statistics of Independent Variables
Source: Own data analysis survey, 2024.

According to Sekaran and Bougie (2016), acceptable values for tolerance and VIF are above 0.10 and below 10, respectively. VIF results for variables in our model showed that multicollinearity was not a potential problem. Since the VIF values in this study fall below the threshold of 10, we can conclude that there is no multicollinearity issue among the independent variables. In addition, Pearson correlation coefficient analysis showed in table 10 that the correlation between the independent variables was found to be less than 0.7.

4.6.1.4. Test of Autocorrelation

Based on Brooks, (2014) it is assumed that the errors are uncorrelated with one another. If the errors are correlated with one another, it would be stated that they are ‘autocorrelated’ or that they are ‘serially correlated’. A test of this assumption is therefore required. In this study, a Durbin-Watson (DW) test was used to diagnose autocorrelation between standardized errors. Based on this test, if DW statistics is close to 2.0, the null hypothesis (no evidence of autocorrelation) would not be rejected if DW is near 2. Therefore, the DW statistics of this study was found to be 1.703 as seen in table 13 below. This implies that errors are independent of each other and that we can

not reject the null hypothesis. Therefore, we can conclude that autocorrelation was not an issue and there was not relationship between residuals and the independent variables.

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.887 ^a	.787	.768	.23411	1.703

a. Predictors: (Constant), MRKT_ORN, ENT_ORN, TECH_ORN, LEAR_ORN, ENV_ORN, INNVC, MRKT_x_INNC, TECH_x_INNC, ENT_x_INNC, LEARN_x_INNC, ENV_x_INNC

b. Dependent Variable: PERFROMANCE

Table 13: Durbin Watson Test

Source: Own survey SPSS output, 2024

4.6.1.5. Test of Heteroscedasticity

Based on Brooks (2014), if the variance of the errors is constant, this is known as the assumption of homoscedasticity, and if the errors do not have a constant variance, they are said to be heteroscedastic.

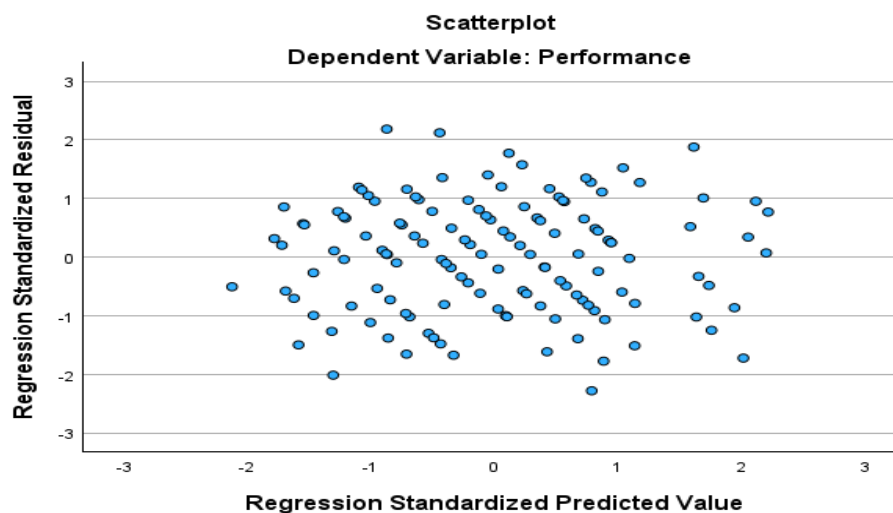


Figure 10: Scatter plot of residuals

Source: Own survey SPSS output 2024.

Based on the scatter plot output above, it appears that the spots are diffused and do not form a clear specific pattern. Therefore, It can be concluded that heteroscedasticity was not a problem.

4.6.1.6. Test of Outliers

As can be seen in the below box plot, there are not any circles or asterisks in either end of the box plot. This is an indication of no outliers present in the data.

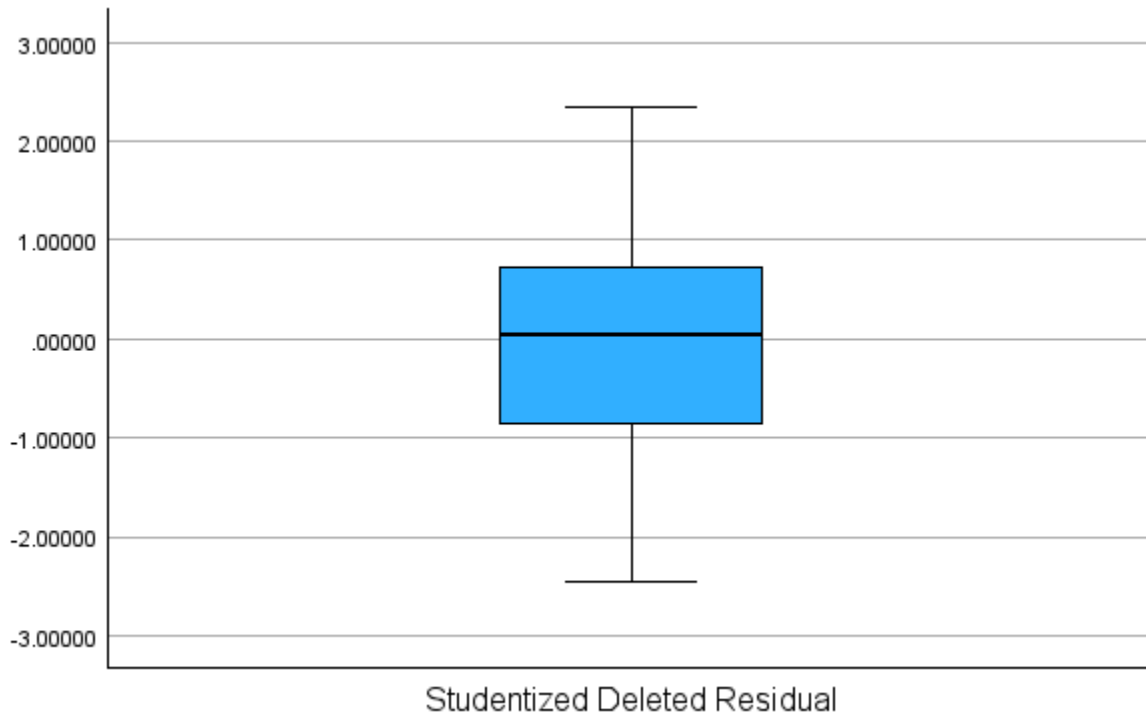


Figure 11: Box plot of residuals

Source: Own survey SPSS output, 2024.

4.6.2. Multiple Regression Analysis

Based on the analysis of the diagnostics tests conducted in the previous section, it can be inferred that there are no significant data issues that would seriously violate the assumptions of multiple regressions. Multiple linear regression was conducted to analyze the relationship between strategic orientation and plastic manufacturing firms performance. In addition, interaction regression was conducted in order to examine the moderating effect of innovation culture between five strategic management dimensions of strategic orientation namely market, entrepreneurial, technology, learning and environmental orientation and organizational performance. In order to analyze the change of variance due the introduction of the interaction effect, hierarchical regression analysis was made.

4.6.2.1. Effect of strategic orientation on organizational performance

Model Summary

From the model summary (Table 14), it can be seen that the R square of model 1 is 0.755. This indicates that 75.5% of the variance in organizational performance can be explained by strategic orientation dimensions called market, entrepreneurial, technology, learning, and environmental orientation. The remaining 24.5% of the variance is explained by other variables that are not included in this model

Model Summary ^c							
Model	R	R Square	Adj. R Square	Std. Error	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	0.874 ^a	0.765	0.755	0.24032	0.765	82.494	<.001
2	0.882 ^b	0.777	0.759	0.23411	0.023	2.384	0.054

a Predictors: (Constant), MRKT_ORN, ENT_ORN, TECH_ORN, LEAR_ORN, ENV_ORN

b Predictors: (Constant), MRKT_ORN, ENT_ORN, TECH_ORN, LEAR_ORN, ENV_ORN, INNVC, MRKT_x_INNC, TECH_x_INNC, ENT_x_INNC, LEARN_x_INNC, ENV_x_INNC

c Dependent Variable: Performance

Table 14: Model Summary

Source: Own Survey SPSS output, 2024

On the other hand, the introduction of interaction terms as observed in the model 2 have contributed only 2.30% of the R square change, eventually the value became 75.9%. However, the significance of F change (0.054) is above 0.05, which entails that the addition of interaction effects had no significant effect on the overall model.

Anova Model fit

ANOVA is used to develop an explanation for the observed data. It helps assess the overall significance of the regression model and provides insights into how well the model fits the data. It's a valuable tool for understanding the relationship between predictor variables and the response variable.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.821	5	4.764	82.494	<.001 ^b
	Residual	7.335	127	0.058		
	Total	31.156	132			
2	Regression	24.524	11	2.229	40.68	<.001 ^c
	Residual	6.631	121	0.055		
	Total	31.156	132			

a - Dependent Variable: Performance

b - Predictors: (Constant), MRKT_ORN, ENT_ORN, TECH_ORN, LEAR_ORN, ENV_ORN

c - Predictors: (Constant), MRKT_ORN, ENT_ORN, TECH_ORN, LEAR_ORN, ENV_ORN, INNC, MRKT_x_INNC, TECH_x_INNC, ENT_x_INNC, LEARN_x_INNC, ENV_x_INNC

Table 15: ANOVA of the Model

Source: Own Survey SPSS output, 2024

In Table 15, the sum of squares of the regression was 23.8, degree of freedom (5), F test (82.49) and significance level ($p < .001$). From the total variability in the observation (31.16%), 7.34 % was not explained by the model 1. Since the p-value was less than 0.05, the F test was significant and the model is fit and could be concluded that the strategic orientation influences performance of plastic manufacturing organizations in Ethiopia. Similarly, the model 2 above was found to be significant showing that the model is fit. From the total variability in the observation (31.16%), 6.63% was not explained by the model 2. This implies that the model was not much improved as a result of interaction terms.

Coefficients

The direction of the association between each predictor and the outcome variable is denoted by the sign of the regression coefficients. The p-values associated with these coefficients determine the statistical significance of the relationships.

Coefficients ^a									
Model	Unstandardized		Standardized		95.0% Confidence			Collinearity	
	Coefficients		Coefficients		Interval for β			Statistics	
	β	Std. Error	β	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	3.865	0.021		185.477	<.001	3.824	3.906		
1 Market Orientation	0.285	0.069	0.275	4.156	<.001	0.149	0.421	0.425	2.353
Entrepreneurial Orn	0.309	0.074	0.258	4.17	<.001	0.162	0.455	0.484	2.067
Technology Orn	0.324	0.059	0.345	5.494	<.001	0.207	0.441	0.471	2.124
Learning Orn	0.174	0.062	0.185	2.795	0.006	0.051	0.296	0.424	2.36
Environmental Orn	-0.065	0.042	-0.077	-1.544	0.125	-0.149	0.018	0.748	1.338

a - Dependent Variable: Performance

Table 16: Coefficients of Strategic orientation dimensions

Source: Own Survey SPSS output, 2024

Therefore, Table 16 shows that there is evidence of a significant and positive relationship between market orientation and organizational performance ($\beta = 0.275$, CI = 0.149,0.421, $p < 0.001$). The VIF value (2.35) of market orientation also shows that multicollinearity was not a problem. Furthermore, the t- test also show that the t-statistic of market orientation is greater than the t-critical (2.57) at 2-tailed and 0.05 level of significant; the confidence of interval value also shows that 0 is not falling between the lower and the upper bound confirming the significant effect of market orientation on organizational performance. Also, entrepreneurial orientation has a significant and positive effect on organizational performance ($\beta = 0.258$, CI = 0.162,0.455, $p < 0.001$). The t-statistics (4.17) and confidence interval values also support the significant and positive relationship. Similarly, technology orientation has positive and significant effect on organizational performance ($\beta = 0.345$, CI = 0.207,0.441, $p < 0.001$, $t = 5.49 > t$ critical). In addition, learning orientation has positive and significant effect on organizational performance ($\beta = 0.185$, CI = 0.051,0.296, $p < 0.001$, $t = 2.795 > t$ critical). However, the above result shows that the relationship of environmental orientation ($\beta = -0.077$, CI = -0.149,0.018, $p = 0.125$) with organizational performance is not significant as p-value is greater than 0.05 and the coefficients are negative which shows that effect tend to be negative although it was not significant. Based on

the standardized β -coefficient value we can understand that technology orientation has highest effect on predicting organizational performance followed by market, entrepreneurial and learning orientation. The effect of learning orientation was even very low compared to the other predictors.

Therefore, the four hypotheses that market orientation has positive and significant influence on organizational performance, entrepreneurial orientation has positive and significant influence on organizational performance, technology orientation has positive and significant influence on organizational performance and learning orientation has positive and significant influence on organizational performance have been supported. However, the other hypothesis that environmental orientation has a positive influence on organizational performance have not been supported.

4.6.2.2. The moderation effect of innovation culture

The second model was conducted using hierarchical regression to analyze the moderation effect. Accordingly, the interaction terms namely interaction of market orientation and innovation culture, entrepreneurial orientation and innovation culture, technology orientation and innovation culture, learning orientation and innovation culture, and environmental orientation and innovation culture. Accordingly, the result of hierarchical regression in table 17 below shows that the inclusion of all interaction variables that market orientation_x_innovation culture ($p=0.264$), entrepreneurial orientation_x_innovation culture ($p=0.451$), technology orientation_x_innovation culture ($p=0.733$), learning orientation_x_innovation culture ($p=0.882$), and environmental orientation_x_innovation culture ($p=0.408$), were not significant as their p values were greater than 0.05 ($p>0.05$). The VIF value of all the interaction terms range from 1.52 - 3.24 and the tolerance ranges from 0.31 - 0.66 implying that their value is far from the threshold 10 and 0.1 respectively for VIF and tolerance. This indicates that there was no issue of multicollinearity.

In general, we can conclude that innovation culture does not have an interaction effect with any of the strategic orientation dimensions as perceived by the managers and senior professionals of plastic manufacturing organizations in Ethiopia. The t -test also shows that the t -statistic of the interaction terms is less than the table t -critical at 2-tailed and 0.05 level of significance, which shows the interaction of innovation culture with the other predictor variables was not significant.

Model	Unstandardized		Std.Coe					Collinearity	
	Coefficients		fficients		95.0% CI for β			Statistics	
	β	Std. Error	β	t	Sig	Lower Bound	Upper Bound	Tole.	VIF
(Constant)	3.850	0.024		157.676	<0.001	3.801	3.898		
Market Orientation	0.258	0.069	0.248	3.762	<0.001	0.122	0.394	0.404	2.474
Entrepreneurial Orn	0.347	0.076	0.290	4.594	<0.001	0.197	0.497	0.441	2.269
Technology Orn	0.288	0.059	0.307	4.917	<0.001	0.172	0.404	0.453	2.209
Learning Orn	0.162	0.066	0.172	2.465	0.015	0.032	0.292	0.360	2.777
2 Environmetal Orn	-0.119	0.045	-0.140	-2.678	0.008	-0.208	-0.031	0.639	1.564
Innovation Culture	0.125	0.052	0.134	2.376	0.019	0.021	0.228	0.554	1.804
Int1 - MRKT_x_INNC	0.152	0.135	0.083	1.122	0.264	-0.116	0.419	0.318	3.148
Int2 - ENT_x_INNC	0.119	0.158	0.051	0.755	0.451	-0.193	0.432	0.386	2.588
Int3 - TECH_x_INNC	-0.040	0.117	-0.021	-0.342	0.733	-0.271	0.191	0.482	2.076
Int4 - LEARN_x_INNC	0.019	0.130	0.011	0.149	0.882	-0.238	0.277	0.308	3.245
Int5 - ENV_x_INNC	-0.066	0.079	-0.043	-0.830	0.408	-0.222	0.091	0.656	1.525

a Dependent Variable: Performance

Table 17: Coefficients with moderation effects

Source: Own Survey SPSS output, 2024

4.6.2.3. Moderator as main effect

As shown in the above regression analysis (model 2), the moderation effect of innovation culture was not significant. However, as shown in the model summary above (Table 17), innovation culture was significant ($\beta = 0.134$, $CI = 0.021, 0.228$, $p < 0.019$). This implies that innovation culture has significant and positive influence in organizational performance as a main effect. The VIF value (1.804) also shows that multicollinearity was not a problem. The t-test also shows that the observed t-statistics (2.376) is greater than the t-critical, which further strengthens the argument. However, learning orientation became insignificant due to the inclusion of innovation culture in the model.

If the main moderator variable is significant and the interaction term is not, it suggests that the moderator has a significant main effect on the dependent variable, but the strength of the relationship between the independent variable and dependent variable does not depend on the level of the moderator. In other words, while the moderator itself influences the outcome, it does not significantly alter how the independent variable affects the outcome.

4.6.3. Hypothesis Testing

In this study six hypotheses were formulated. The statistical tests run for these hypotheses are briefly presented below.

H1: Market orientation has a positive and significant effect on the performance of plastic manufacturing organizations.

From table 16, the significant value of market orientation is $p < 0.001$ which is less than p value of 0.05, which indicates that market orientation has a statistically significant influence on the organizational performance of Plastic manufacturing organizations in Ethiopia. Besides, the value of standardized coefficient of market orientation is ($\beta = 0.275$) and this shows that market orientation has a positive and significant influence on organizational performance of plastic manufacturing organizations in Ethiopia. Therefore, hypothesis H1 is accepted.

H2: Entrepreneurial orientation has a positive and significant effect on the performance of plastic manufacturing organizations

As shown in table 16, the significant value of entrepreneurial orientation is $p < 0.001$ which is less than p value of 0.05, which indicates that entrepreneurial orientation has a statistically significant influence on the organizational performance of Plastic manufacturing organizations in Ethiopia. Besides, the value of standardized coefficient of entrepreneurial orientation is ($\beta = 0.258$) and this shows that entrepreneurial orientation has a positive and significant influence on organizational performance of plastic manufacturing organizations in Ethiopia. Therefore, hypothesis H2 is accepted.

H3: Technology orientation has a positive effect on the performance of plastic manufacturing organizations.

As shown in table 16, the significant value of technology orientation is $p < 0.001$ which is less than p value of 0.05, which indicates that technology orientation has a statistically significant influence on the organizational performance of Plastic manufacturing organizations in Ethiopia. Besides, the value of standardized coefficient of technology orientation is ($\beta = 0.345$) and this shows that

technology orientation has a positive and significant influence on organizational performance of plastic manufacturing organizations in Ethiopia. Therefore, hypothesis H3 is accepted.

H4: Learning orientation has a positive effect on the performance of plastic manufacturing organizations.

As shown in table 16, the significant value of learning orientation is $p = 0.006$ which is less than p value of 0.05, which indicates that learning orientation has a statistically significant influence on the organizational performance of Plastic manufacturing organizations in Ethiopia. Besides, the value of standardized coefficient of learning orientation is ($\beta = 0.185$) and this shows that learning orientation has a positive and significant influence on organizational performance of plastic manufacturing organizations in Ethiopia. Therefore, hypothesis H4 is accepted.

H5: Environmental orientation has a positive effect on the performance of plastic manufacturing organizations.

As shown in table 16, the significant value of environmental orientation is $p = 0.125$ which is greater than p value of 0.05, which indicates that environmental orientation has no statistically significant influence on the organizational performance of Plastic manufacturing organizations in Ethiopia. Therefore, hypothesis H5 is rejected.

H6: Innovation culture moderates the effect of (a) market orientation, (b) entrepreneurial orientation, (c) technology orientation, (d) learning orientation, (e) environmental orientation such that the higher the organization's innovation culture the higher the influence of market, entrepreneurial, technology, learning, and environmental orientation on the performance of plastic manufacturing organizations in Ethiopia.

As shown in table 17, the significant value of all interaction variables that market Orientation_x_innovation culture ($p=0.16$), entrepreneurial orientation_x_innovation culture ($p=0.428$), technology orientation_x_innovation culture ($p=0.558$), learning orientation_x_innovation culture ($p=0.926$), and environmental orientation_x_innovation culture ($p=0.388$), were not significant as their p values were greater than 0.05 ($p>0.05$). Therefore, hypothesis 6 H6a-H6e is rejected.

Summary of Hypothesis

Den	Hypotheses	t stat.	Sig.	Conclusion
H1	<i>Market orientation has a positive and significant effect on the performance of plastic manufacturing organizations.</i>	4.156	<.001	Accepted
H2	<i>Entrepreneurial orientation has a positive and significant effect on the performance of plastic manufacturing organizations</i>	4.17	<.001	Accepted
H3	<i>Technology orientation has a positive and significant effect on the performance of plastic manufacturing organizations.</i>	5.494	<.001	Accepted
H4	<i>Learning orientation has a positive and significant effect on the performance of plastic manufacturing organizations.</i>	2.795	0.006	Accepted
H5	<i>Environmental orientation has a positive and significant effect on the performance of plastic manufacturing organizations</i>	-1.544	0.125	Rejected
H6 (a) - H6 (e)	<i>Innovation culture moderates the effect of (a) market orientation, (b) entrepreneurial orientation, (c) technology orientation, (d) learning orientation, (e) environmental orientation such that the higher the organization's innovation culture the higher the influence of market, entrepreneurial, technology, learning, and environmental orientation on the performance of plastic manufacturing organizations in Ethiopia.</i>	1.122 0.755 -0.342 0.149 -0.830	0.264 0.451 0.733 0.882 0.408	Rejected

Table 18: Summary of Hypotheses Testing

Source: Own Survey SPSS output, 2024

4.7. Post Hoc Analysis

The results of this study showed that innovation culture does not moderate the relationship between strategic orientation dimensions namely market, entrepreneurial, technology, learning and environmental orientation. Although it was not the objective of this study, the researcher found it appropriate to test if innovation culture mediated the relationship between organizational performance and strategic orientation of Ethiopian plastic manufacturing firms. Previous research showed that innovation as an independent construct has a mediation effect between strategic orientation and organizational performance (Obeidat,2016). Previous studies showed that innovativeness acts as a mediator in the EO-business performance relationship (Hult et al., 2004). It is believed that innovation performance mediates this relationship between technology orientation and financial performance implying that when organizations spend more than their competitors for new equipment to make new products and use up-to-date technology, they are more likely to increase the number and the quality of new goods and services, which enhances profitability and market share (Lee et al.,2015). Internal innovation direction will help organizational members use their creative ideas and send a message to the members that their new ideas are treasured for constant creativity and change (Ghasemzadeh et al, 2019). Thus, innovation performance is the crucial underlying mechanism that explains the link between strategic orientation and organizational performance. Accordingly, the following sections outline the mediation test results that was conducted by PROCESS Macro in SPSS developed by Hayes (Hayes, 2012).

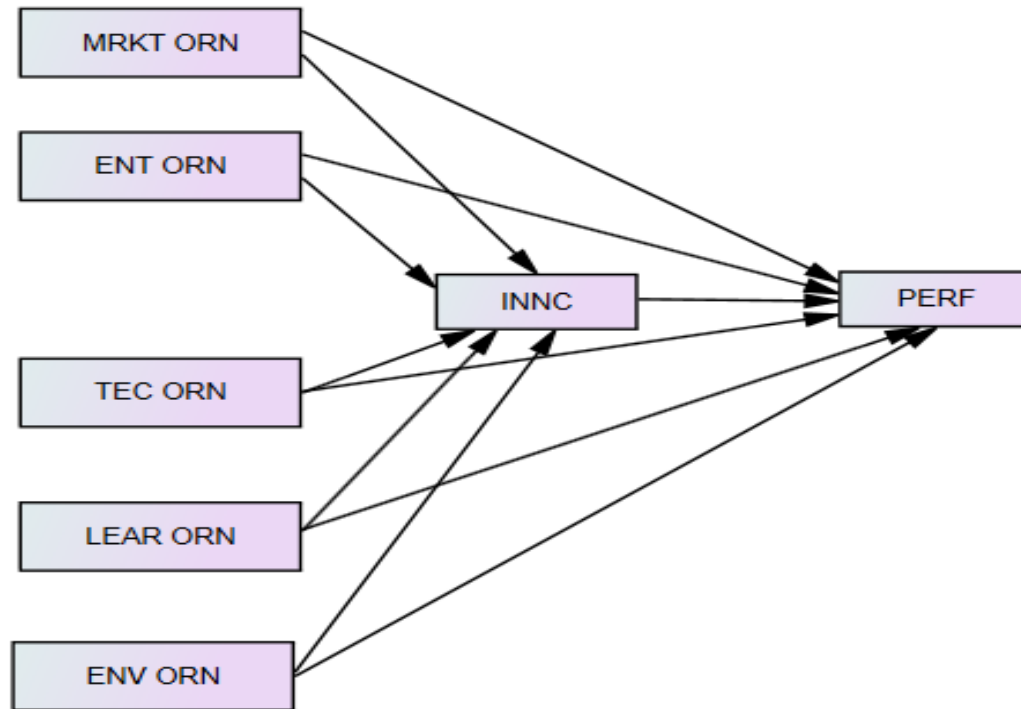


Figure 12: Path Diagram of the model

Path	Model	Effect size/ β	p-value	BootLLCI	BootULCI	R2
MO $\rightarrow$ INNC $\rightarrow$ PERF	Total Effect	0.774	.000	0.655	0.894	0.555
	Direct Effect	0.649	.000	0.519	0.779	0.602
	Indirect Effect	0.125		0.062	0.201	

Table 19: Effect of Innovation culture on the relationship between MO and PERF

Source: SPSS, PROCESS Macro v4.2 output, own survey, 2024

Mediation analysis was conducted using model 4 of PROCESS Macro for SPSS to examine the relationship between market orientation (MO), organizational performance (PERF) and innovation culture (INNC) and to determine if the effect of market orientation on organizational performance was mediated by innovation culture. The results showed that market orientation, positively predicted innovation culture ($\beta = 0.543$, $p = 0.000$). In turn, innovation culture had positive effect on organizational performance ($\beta = 0.231$, $p = 0.000$).

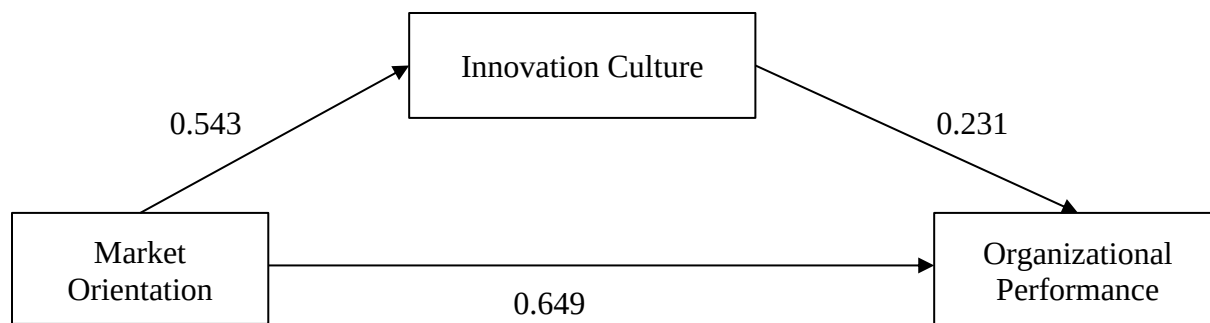


Figure 13: Mediation model design of MO and organizational performance

The indirect effect of market orientation on organizational performance through innovation culture was found to be significant as the confidence intervals based on 5000 bootstrap samples did not contain zero, 0 ($\beta = 0.125$, 95% CI 0.062, 0.201). Moreover, market orientation ($\beta = 0.649$, $p = 0.000$) had a significant direct effect on organizational performance with the inclusion of the mediator (innovation culture) in the model, which means that **partial mediation** was observed. The model accounted for 60.2% the variance in the dependent variable. The result suggested that improving market orientation can lead to improved innovation culture, which in turn results in increased organization performance.

In addition, the meditation analysis between entrepreneurial orientation (EO) and organization performance showed that entrepreneurial orientation positively predicted innovation culture ($\beta = 0.488$, $p = 0.000$). In turn, innovation culture had positive effect on organizational performance ($\beta = 0.297$, $p = 0.000$).

Path	Model	Effect size/ β	p-value	BootLLCI	BootULCI	R-sq
EO → INNC → PERF	Total Effect	0.880	.000	0.739	1.020	0.540
	Direct Effect	0.735	.000	0.598	0.872	0.627
	Indirect Effect	0.145		0.078	0.231	

Table 20: Effect of Innovation culture on the relationship between EO and PERF

Source: SPSS, PROCESS Macro v4.2 output, own survey, 2024

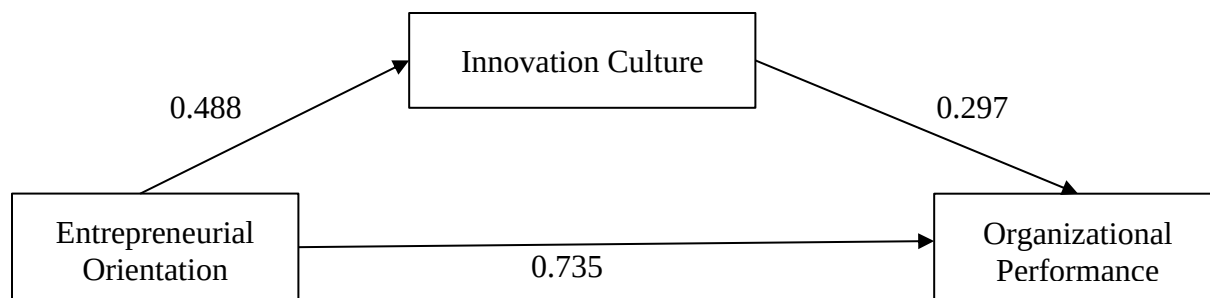


Figure 14: Mediation model design of EO and organizational performance

The indirect effect of entrepreneurial orientation on organizational performance through innovation culture was found to be significant as the confidence intervals based on 5000 bootstrap samples did not contain zero, 0 ($\beta = 0.145$, 95% CI 0.078,0.231). Moreover, entrepreneurial orientation ($\beta = 0.735$, $p=0.000$) had a significant direct effect on organizational performance with the inclusion of the mediator (innovation culture) in the model, which means that **partial mediation** was observed. The model accounted for 62.7% the variance in the dependent variable. The result suggested that improving entrepreneurial orientation can lead to improved innovation culture, which in turn results in increased organization performance.

Also, the meditation analysis between technology orientation (TO) and organization performance showed that entrepreneurial orientation positively predicted innovation culture ($\beta= 0.491$, $p=0.000$). In turn, innovation culture had positive effect on organizational performance ($\beta= 0.219$, $p=0.000$).

Path	Model	Effect size/ β	p-value	BootLLCI	BootULCI	R-sq
TO $\rightarrow$ INNC $\rightarrow$ PERF	Total Effect	0.721	.000	.617	.826	.588
	Direct Effect	0.614	.000	.501	.728	.630
	Indirect Effect	0.107		0.051	0.178	

Table 21: Effect of Innovation culture on the relationship between TO and PERF

Source: SPSS, PROCESS Macro v4.2 output, own survey, 2024

The indirect effect of technology orientation on organizational performance through innovation culture was found to be significant as the confidence intervals based on 5000 bootstrap samples did not contain zero, 0 ($\beta= 0.107$, 95% CI 0.051,0.178). Moreover, technology $\beta= 0.614$, $p=0.000$) had a significant direct effect on organizational performance with the inclusion of the mediator (innovation culture) in the model, which means that **partial mediation** was observed. The model

accounted for 63.0% the variance in the dependent variable. The result suggested that improving technologically oriented firms tend to improve their culture for innovation, which in turn results in increased organization performance.

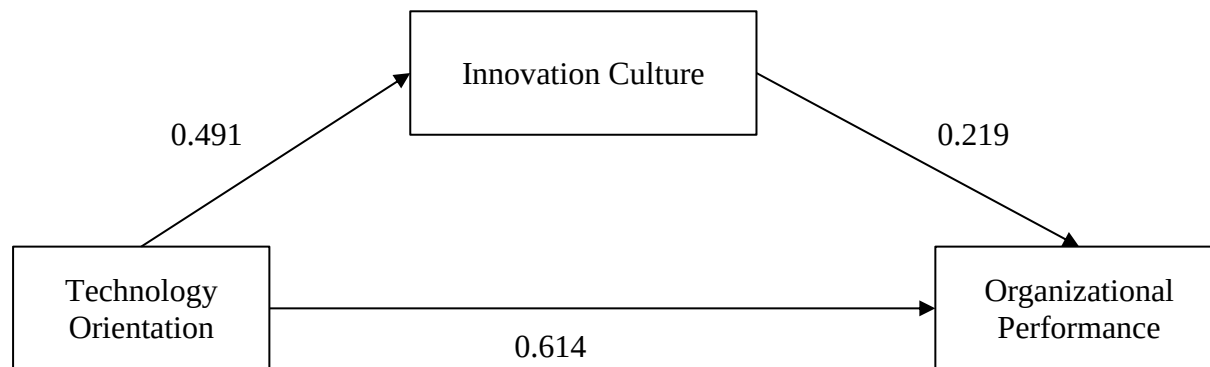


Figure 15: Mediation model design of TO and organizational performance.

Moreover, the meditation analysis between learning orientation and organization performance showed that entrepreneurial orientation positively predicted innovation culture ($\beta = 0.589$, $p=0.000$). In turn, innovation culture had positive effect on organizational performance ($\beta = 0.187$, $p=0.000$).

Description	Model	Effect size/ β	p-value	BootLLCI	BootULCI	R-sq
LO $\rightarrow$ INNC $\rightarrow$ PERF	Total Effect	0.675	.000	.562	.788	.516
	Direct Effect	0.564	.000	.429	.700	.543
	Indirect Effect	0.110		0.035	0.195	

Table 22: Effect of Innovation culture on the relationship between LO and PERF

Source: SPSS, PROCESS Macro v4.2 output, own survey, 2024

The indirect effect of learning orientation on organizational performance through innovation culture was found to be significant as the confidence intervals based on 5000 bootstrap samples did not contain zero, 0 ($\beta = 0.110$, 95% CI 0.035,0.195). Moreover, learning orientation ($\beta = 0.564$, $p=0.000$) had a significant direct effect on organizational performance with the inclusion of the mediator (innovation culture) in the model, which means that **partial mediation** was observed. The model accounted for 54.3% the variance in the dependent variable. The result suggested that

improving technologically oriented firms tend to improve their culture for innovation, which in turn results in increased organization performance.

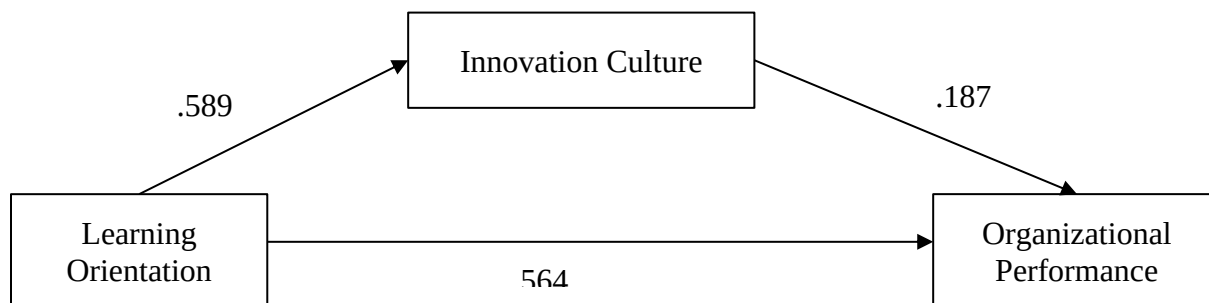


Figure 16: Mediation model design of LO and organizational performance.

Finally, the meditation analysis between environmental orientation (ENO) and organization performance (PERF) showed that entrepreneurial orientation positively predicted innovation culture ($\beta = 0.462$, $p = 0.000$). In turn, innovation culture had positive effect on organizational performance ($\beta = 0.470$, $p = 0.000$).

Description	Model	Effect size/ β	p-value	BootLLCI	BootULCI	R-sq
ENO $\rightarrow$ INNC $\rightarrow$ PERF	Total Effect	0.295	.000	.157	.433	.121
	Direct Effect	0.078	.280	-.064	.220	.311
	Indirect Effect	0.256		0.153	0.373	

Table 23: Effect of Innovation culture on the relationship between ENO and PERF

Source: SPSS, PROCESS Macro v4.2 output, own survey, 2024

Research indicates that fostering an innovation culture is essential for enhancing the impact of various strategic orientations. By nurturing a dynamic environment that promotes creativity, risk-taking, and the application of knowledge, firms can significantly improve their performance. For instance, market-oriented firms benefit from being innovative, enabling them to better anticipate and respond to market changes with new products or services (Gupta and Gupta, 2019). Similarly, entrepreneurial and technology orientations thrive in a culture that supports experimentation and technological advancements, driving firm growth and adaptability (Ibarra et al., 2024; Soares & Perin, 2020). Additionally, a learning orientation, which emphasizes continuous improvement and knowledge acquisition, results in superior performance when combined with a culture that values

innovation. This ensures that the acquired knowledge is transformed into actionable and innovative business practices (Abdul-Halim et al., 2019; Ibarra et al., 2024). Furthermore, firms with a strong external environmental orientation indirectly enhance their performance through green product and process innovation, suggesting that fostering an innovation culture can lead to significant performance gains (Zehir & Ozgul, 2020). Evidence supports that a firm's innovation culture also facilitates its sustainability orientation, providing a competitive advantage and leading to superior performance (Jin et al., 2019).

4.8. Discussion of Results

4.8.1. Effect of Market Orientation on Performance

The descriptive and inferential analysis of market orientation, revealed that the majority of respondents indicated that the various dimensions of market orientation when applied adequately would go a long way in enhancing plastic manufacturing organizations performance. The test of hypothesis also revealed that market orientation significantly influenced the performance of plastic manufacturing organizations in Ethiopia. This is because market orientation emphasizes on the significance of buyer value creation and therefore ensures that the company changes with the change in market needs and focuses mainly on the needs of its customers. Any company that is market oriented is committed to understanding the needs of its customers, sharing any information that relates to the customer across the entire organization and building coordination in all the functional areas to create best values for its clients. This finding agrees with Gaur et al. (2011) who hypothesized that market orientation has a positive effect on manufacturing performance, which is measured by cost, quality, delivery, and flexibility. The finding of this study also agrees with Bhuian (1998), that analyzed market orientation is positively related to organizational performance, however it is positively influenced by top management emphasis and a market-based reward system, and negatively influenced by centralization and interdepartmental conflict.

Talaja et al. (2017) posit that market orientation would result in a competitive advantage that would improve firm performance consequently. In addition, Deshpande et al., (2013), the emphasis on behaviors to create and maintain customer value while staying mindful of other stakeholders' interests help market orientation in improving firm performance. The findings of this thesis is also

in line with the study by Oduro and Hailemariam (2019) that found out MO has a positive effect on both financial and marketing performance in Ethiopian and Ghanaian manufacturing firms.

4.8.2. Effect of Entrepreneurial Orientation on Performance

The results of descriptive analysis revealed that respondents agreed to a high extent on competitive aggressiveness, risk taking, innovativeness and autonomy. However, the respondents have a moderate attitude on the proactiveness dimension of entrepreneurial orientation. The test of hypothesis also revealed that entrepreneurial orientation significantly influenced the performance of plastic manufacturing organizations in Ethiopia. These results concur with various previous studies (Baker & Sinkula, 2009; Hakala, 2011; Wiklund & Shepherd, 2005) supporting that the entrepreneurial activities improve organization performance. Entrepreneurially oriented organizations actively transform and influence their environment (Hakala 2011). In addition, Hult et al (2004) studied that firms with strong EO are likely to be more innovative and, consequently, perform better. It also found the importance of entrepreneurial qualities in fostering innovation and driving performance. Furthermore, the findings of this study agree with other EO–performance empirical studies that have largely found that firms with a more EO perform better (Wang, 2008, Basco, et.al 2020, Putniņš & Sauka, 2020).

4.8.3. Effect of Technology Orientation on Performance

The results of descriptive analysis revealed that most respondents have agreed to a high extent that technological orientation had an influence on the performance of plastic manufacturing organizations in Ethiopia. The regression result of this study also revealed that technology orientation ($\beta=.345$, $p<.001$) had a significant influence on the organizational performance of plastic manufacturing organizations in Ethiopia. This finding is proved to be consistent with previous studies (Gatignon & Xuereb, 1997; Zhou & Li, 2010). These results indicate that technology orientation is a crucial factor for encouraging firm performance. That is, the greater technology orientation of a firm, the more the firm performance is emphasized and fostered within the organization. The findings of this thesis also align with Gao et al., (2007) who studied that technology-oriented firms can build new technical solutions and offer new and advanced products to meet customer needs due to their strong commitment to R&D and application of latest technologies. The results of this study also agree with the study by Hyung and Dedahanov (2014), that found technology orientation positively affects firm performance which also suggested that technological orientation should be incorporated as one of the strategic orientation dimensions to

achieve improved firm performance. The result also shows that plastic manufacturing firms are paying great attention the research and development activities which agrees with other study that founds firms' managers with higher TO would have better commitments to invest and allocate resources to research and development in search of new technological solutions which ultimately lead to performance (Deshpande et al., 2013; Gao et al., 2007).

4.8.4. Effect of Learning Orientation on Performance

The descriptive analysis of learning orientation shows that there is moderate agreement among plastic manufacturing managers and senior professionals that learning orientation plays an important role in enhancing the performance of their organization. The linear regression analysis revealed that learning orientation has a statistically significant influence on the organizational performance of Plastic manufacturing organizations in Ethiopia. Besides, the value of standardized coefficient of learning orientation is ($\beta = 0.185$, $p=0.001$) and this shows that learning orientation has a positive and significant influence on organizational performance of plastic manufacturing organizations in Ethiopia. The finding of this study agrees with a research by (Wang 2008, Sinkula et al.,1997), who found a positive relationship between learning orientation and firm performance. Another research supported this finding is Sawaeen & Ali, (2020), who found the direct and positive relationship between learning orientation and organizational performance. The research findings indicate that fostering a learning orientation can enhance business performance. Specifically, higher levels of learning orientation correlate with increased growth and profitability (Nikraftar & Momeni, 2017).

4.8.5. Effect Environmental Orientation on Performance

The descriptive analysis showed that managers and supervisors of plastic manufacturing firms have moderate agreement on the practice of environmental orientation in their organization. The correlation of environmental orientation with organization performance was found to be the smallest (0.347) as compared to other predictors. This implies that the managers have perceived that environmental orientation has not much impact on their firm's performance. As can be seen in table 16 above environmental orientation when considered with other strategic orientation dimensions has no significant impact on organization performance. The result of this study is different from previous research. This may be attributed to the timing of environmental orientation adoption by plastic manufacturing companies. It's important to note that this study provides a snapshot in time, and respondents may have recently shifted their focus toward environmental

activities. Another possible justification for this result might be, Firstly, previous research may have been conducted in industries where environmental orientation is more tightly linked to performance, in contrast, plastic manufacturing in Ethiopia may face less direct pressure from consumers or regulators to adopt environmentally sustainable practices, secondly, Ethiopian plastic manufacturers may prioritize short-term economic survival over long-term sustainability as environmental investments may be seen as non-essential, Thirdly, the fact that environmental regulation enforcements in Ethiopia are less, meaning firms face little pressure to adopt environmental practices. Finally, the level of understanding and attitude of firm managers might have affected the result, due to the fact that managers who are not aware of the benefits of environmental orientation are not willing to invest in sustainable practices that are translated to performance. However, the inclusion of moderating variables (Table 17) showed environmental orientation has statistically significant but negative influence on the organizational performance of plastic manufacturing organizations in Ethiopia ($\beta = -0.14$, $p = 0.008$). The research findings align with Jaggi and Freedman (1992), who discovered a negative correlation between environmental performance and short-term financial performance. This negative relationship may be attributed to the timing of environmental orientation adoption by plastic manufacturing companies. It's important to note that this study provides a snapshot in time, and respondents may have recently shifted their focus toward environmental activities. Additionally, Hunt and Auster (1990) propose that firms often disregard environmental management schemes due to potential short-run negative effects on the bottom line. Similarly, Menguca and Ozanne (2003) observed a negative association between environmental orientation and sales growth.

4.8.6. Moderating role of Innovation culture

The regression analysis results show that innovation culture does not have an interaction effect ($p = 0.264, 0.451, 0.733, 0.882, 0.408$) with market, entrepreneurial, technology, learning and environmental orientation respectively as perceived by the managers and senior professionals of plastic manufacturing organizations in Ethiopia. This implies that innovation culture does not moderate the relationship between strategic orientation and organizational performance. However, other studies showed that innovation culture moderates the association between organizational learning and innovation performance (Ghasemzadeh et al, 2019), brand equity and firm performance and both types of innovation (Li et al, 2022), knowledge assets and product innovation (Martín-de Castro et al. 2013), and organizational structure on operational performance

(Iranmanesh et al., 2019). In contrast to previous studies, the hypothesis of this thesis regarding the moderating effect of innovation culture on the relationship between strategic orientation and performance was not supported. This discrepancy may be attributed to several factors. Firstly, our study was conducted in a different geographical context, where cultural and economic conditions differ significantly from those in prior research (Ghasemzadeh et al, 2019). Second, the complex nature of the relationship between innovation culture and organizational performance might explain the findings. Tian, et. al., (2017) studied that different dimensions of culture have a general or overall impact on innovation. Various cultural factors can either facilitate or restrict innovation performance. Furthermore, studies found that there was a limited systematic study in investigating the relationship between specific cultural dimensions and innovation (Tian, et. al., 2017). Third, the sample size may not be sufficient which might lead to inconclusive results and the respondents have different positions and work experiences in the companies which have different levels of understanding in strategic orientation, innovation culture and organizational performance relationship. This might contribute to measurement errors in the data collection process. Fourth, the nature of plastic manufacturing is less innovation driven than high tech industries, meaning firms priority might be diverted to process improvements over innovation. Plastic manufacturing firms in Ethiopia are operating in a highly competitive and price sensitive market and are obliged to focus on cost reduction. In cases where firms focus on cost reduction, innovation might be viewed as risky or costly, thus limiting its moderating role of innovation culture in driving performance. Sixth, plastic manufacturing firms in Ethiopia may lack necessary resources to increase their innovation capability. Previous studies found that strategic orientation could have a more direct impact on performance through operational efficiencies rather than through innovation in resource constrained environments (Gupta and Gupta, 2019). Finally, plastic manufacturing firms might face internal cultural resistance to innovation, where employees and management are more focused on maintaining the status quo rather than exploring new ideas. This can weaken the potential moderating effect of innovation culture on strategic orientation and performance.

Although the regression analysis shows the moderation effect of innovation culture was not significant, innovation culture as a main predictor was found to be significant. This implies that innovation culture has significant and positive influence in organizational performance. This result

agrees with previous research by Khan et al., (2020) who found that the mechanism used to enhance the innovative culture in the organization contributes to the introduction, adoption and diffusion of innovations that ultimately contribute to increased performance and achievement in the near future.

Chapter Five: Summary of findings, conclusion and recommendation

5.1. Summary of findings

The general objective of the study was to determine the influence of strategic orientation (entrepreneurial, market, technological, learning and environmental orientation) on performance of plastic manufacturing organizations in Ethiopia with the moderating role of innovation culture. In order to achieve the study objective data was collected from 30 plastic manufacturing organizations registered as members of the Ethiopian Rubber and Plastic association. Survey questionnaires were designed from existing literature to measure the research variables. The questionnaire was distributed and collected in both organizations. Accordingly, 180 questionnaires were distributed and 143 (79.4% response rate). After refining the data 133 of them were found to be workable and analyzed by using SPSS version 29. Prior to regression analysis, descriptive statistics, measurement reliability & validity, Pearson correlation and basic classical linear regression assumptions were also checked. Consequently, regression analyses were done to check the model fit and testing the hypotheses.

Accordingly, the descriptive statistics of this study showed that the respondents have agreed moderately on the practices of their plastic manufacturing organizations in implementing strategic orientation dimensions namely market orientation, entrepreneurial orientation, learning orientation and environmental orientation as evidenced by their mean score of 3.74, 3.79, 3.73, and 3.76 respectively. However, the mean score of technology orientation was found to be 3.85 which indicates that the respondents have agreed to a high extent on the influence of technology orientation on their firm's performance. The mean score of innovation culture (3.57) showed that there is moderate agreement among the respondents that their respective manufacturing firms give emphasis on the culture that fosters innovation. In addition, managers and senior professionals of plastic manufacturing firms in Ethiopia perceived that their firms have performed to a high extent as compared to their competitors as evidenced by its high mean score (3.86).

The measurement properties and reliability of the constructs shows that all measures display reasonable Cronbach alpha levels of above 0.7 implying that the inter-item consistency is within

the acceptable limits. The results of correlation analysis also showed that all constructs have correlation coefficients below 0.8, supporting the discriminant validity between the constructs. The Pearson correlation (r) analysis result shows that there was a significant and high degree of correlation between market, entrepreneurial, technology & learning orientation and organizational performance ($r=0.71-0.7675$, $p<0.01$) and Innovation and culture organization performance ($r=0.552$, $p<0.01$). However, there was a moderate degree of correlation between environmental orientation ($r=0.347$, $p<0.01$) and performance of plastic manufacturing organizations.

Before conducting the linear regression, diagnostics tests were conducted to check if the assumptions are fulfilled. Accordingly, basic linear regression assumptions such as linearity, normality, homoscedasticity, multicollinearity, autocorrelation and outliers were tested. The results confirmed that residuals are linear and normally distributed, the variance of the errors is constant implying assumption of homoscedasticity was fulfilled, the VIF ($VIF<3$) and pearson correlation ($r<0.7$) values shows that multicollinearity was not an issue. Similarly, the Durbin Watson ($DW = 1.703$) test statistics showed that errors are uncorrelated with one another, implying there was no autocorrelation. Studentized deleted residual box plot shows that there are no outliers present in the data.

The multiple linear regression result showed that the level of significance (p -value) of market orientation, entrepreneurial orientation, technology orientation, and learning orientation was found to be less than ($p=0.001$) and their standard coefficient was positive indicating that there was significant and positive relationship between these strategic dimensions and organizational performance. On the other hand, the levels of significance of environmental orientation was ($p=0.125$) implying that there was significant and negative relationship with and organizational performance but the level of very small effect. The regression analysis results showed that innovation culture does not have an interaction effect ($p=0.264$, 0.451 , 0.733 , 0.882 , 0.408) with market, entrepreneurial, technology, learning and environmental orientation respectively which implies that innovation culture does not moderate the relationship between strategic orientation and plastic manufacturing organizations performance. However, innovation culture found to have significant and positive effect on organizational performance ($\beta= 0.134$, $CI = 0.021, 0.228$, $p<0.019$) when regressed as main effect, implying that the assumed moderator variable itself

influences the outcome but did not significantly alter how the independent variable affects the outcome.

5.2. Conclusions

From the analysis of objectives and tests of hypotheses the following six conclusions were drawn from this study.

First, the findings revealed that market orientation has a significant and positive effect on the performance of plastic manufacturing organizations in Ethiopia. This implies that market-oriented firms are usually able to respond appropriately to changing market needs and therefore act as a source of competitive advantage. Second, entrepreneurial orientation was found to have a significant and positive influence on performance plastic manufacturing organizations in Ethiopia. Entrepreneurial orientation was the second-best predictor of performance among other predictor variables. This is because entrepreneurially oriented organizations allocate resources to capture uncertain opportunities, explore innovative concepts, and proactively anticipate future market demand to enhance overall firm performance.

Third, the findings also revealed a significant effect of technology orientation on performance. Among the five variables studied, technology orientation emerged as the most influential predictor of performance. Firms that prioritize technology combine customer values with technological innovations, leading to higher returns and overall performance. Fourth, learning orientation has a positive effect on the performance of plastic manufacturing organizations in Ethiopia. This implies that plastic manufacturing organizations possess a learning-oriented culture that contributes to organizational performance.

Fifth, environmental orientation has no significant effect on the performance of plastic manufacturing organizations which may be attributed to the timing of environmental orientation adoption by plastic manufacturing companies. The sixth objective was to assess the moderating effect of innovation culture in the relationship between strategic orientation and plastic manufacturing organizations. It was concluded in this study that innovation culture does not have a moderating effect. However, it was noted that innovation culture itself influences the performance of plastic manufacturing organizations.

5.3. Recommendation

The key findings of this study come from the examinations of the effect of strategic orientation dimensions on plastic manufacturing firms performance and the moderating effect of innovation culture in determining the relationship between strategic orientation and organizational performance. According to Barney (1991), strategic orientation dimensions are intangible strategic resources that provide firms with unique capabilities. The results of this thesis suggests that market orientation, entrepreneurial orientation, technology orientation and learning orientation have positive effects on the performance of plastic manufacturing firms in Ethiopia. Therefore, based on the findings of this study, the researcher outlines the following recommendations.

1. Plastic manufacturing organizations in Ethiopia should be market oriented so as to be able to respond appropriately to changing market needs and therefore act as a source of competitive advantage. Plastic manufacturing organizations need to emphasize on understanding customer needs, staying attuned to competitors, and fostering a culture that supports customer-centric decision-making in order to enhance the performance of their firms.
2. From the descriptive analysis of this study we observed that there is moderate emphasis given to market, entrepreneurial, and learning orientation. Hence, top-level managers in plastic manufacturing organizations should regularly evaluate the level of their organizations' strategic orientation and take corrective action in line with their business demand.
3. The findings of the study showed that technology orientation and entrepreneurial orientation are higher predictors of organizational performance. Therefore, it is recommended that plastic manufacturing organizations should cultivate both technology orientation and entrepreneurial orientation so that they can harness innovation, adapt to changing landscapes, and achieve sustainable success.
4. Furthermore, top-level managers in Ethiopian plastic manufacturing firms should integrate several strategic orientation dimensions. To achieve and maintain positive firm performance, plastic manufacturing firms are recommended to possess an organizational structure that integrates and incorporates market, entrepreneurial, technology and learning orientation. The cumulative effect significantly influences performance, broadens management perspectives, and encourages proactive responses to market changes and technological advancements.
5. Currently International markets are demanding products from sustainable practices and Ethiopia is strengthening its environmental regulations. Plastic manufacturing firms are

obliged to prioritize environmental sustainability to cope up with challenges in complying with regulations and competing in the global market.

6. Managers should understand that fostering an innovative culture enhances the impact of strategic decisions and they should invest in creating a culture that encourages creativity, risk-taking, and knowledge sharing
7. Finally, the researcher recommends that various stakeholders in Ethiopia's plastic manufacturing sector, including the Ministry of Industry and the Ethiopian Plastic and Rubber Manufacturers Association, should actively support plastic manufacturers by offering training, follow-up, and effective supervision to help sustain their competitive advantage and foster a strategic orientation mindset.

5.4. Limitation and future research direction

As in any study, the findings of this study must be viewed in light of its boundaries and limitations. This research was conducted in the context of plastic manufacturing firms which are active members of the Ethiopian Plastic and Rubber Association. Future research could address other manufacturing areas in Ethiopia such as textile & apparel, food & Agro-processing, pharmaceutical, and metal processing. As this research adopted a cross sectional design, it is important to note that this study provides a snapshot in time that may lead to measurement errors. Therefore, future research could adopt a longitudinal survey methodology to validate the findings of this study and eliminate any errors in application of findings. Moreover, future research should prioritize expanding the sample size, with a specific focus on top managers actively engaged in strategic decision-making. Finally, the researcher suggests future research in this area, focusing on analyzing innovation culture as a mediator and exploring other moderating factors such as firm size, ownership type, support from professional associations and government incentives would enhance our understanding.

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Appendix 1: Questionnaire

Dear Respondent,

Thank you for participating in our survey! Your insights are valuable to us, and we appreciate your time.

I am an MBA student in Addis Ababa University. I am conducting research on “The effect of strategic orientation on the performance of plastic manufacturing firms” The purpose of this questionnaire is to gather information on the subject matter that is going to be used as a partial fulfillment of the requirements of Masters of Business Administration. Your responses will remain confidential, and the data will be used for academic purposes only.

Please answer the questions honestly and to the best of your ability. The survey should take approximately 20 minutes to complete.

If you have any questions or concerns, feel free to contact me at dnasse@gmail.com or +251 913 425447

Thank you for your cooperation!

Sincerely

Assefa Ayalew

Addis Ababa University

ID: GSE/2458/13

Section I

General Information

Please put “**X**” mark on the provided box

1. Name of the Department:_____

2. Position of the person filling the questionnaire_____

3. Gender: Male ☐ Female ☐

4. Please indicate your highest level of formal education

Diploma ☐ BSc/BA Degree ☐ Masters Degree and above ☐

6. Please indicate your age group

Below 25 years ☐ 25 - 30 years ☐ 31 - 40 years ☐ Above 40 years ☐

7. How many years have you worked in this Organization?

1- 5 years 6 - 10 years 11-15 years Over 15 years

7. How many employees are currently permanently employed in your firm: _____

Section II

2. Measurement of Strategic orientation

2.1. Market Orientation

The below items are prepared to measure the effect of market orientation on the performance of plastic manufacturing organizations. Please put “**X**” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
1	Market Orientation					
1.1	Our company systematically collects information about our customers’ needs and wants.					
1.2	We use customer feedback to improve our products/services.					
1.3	We prioritize customer satisfaction over other goals.					
1.4	We actively seek input from customers.					
1.5	We tailor our offerings to meet specific customer needs.					
1.6	We focus on building long-term relationships with customers.					
1.7	We closely monitor our competitors’ actions and strategies.					
1.8	We analyze our competitors’ strengths and weaknesses.					
1.9	We adapt our strategies based on competitive dynamics.					
1.10	We benchmark ourselves against industry leaders.					
1.11	We proactively respond to competitive threats.					

1.12	Different departments within our organization collaborate effectively.					
1.13	We share market information across functions (e.g., marketing, R&D, production).					
1.14	Our teams work together to achieve market-oriented goals.					
1.15	We align our activities to support overall market objectives.					

2.2. Entrepreneurial Orientation

The below items are prepared to measure the effect of entrepreneurial orientation on the performance of plastic manufacturing organizations. Please put “ **X** ” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
2	Entrepreneurial Orientation					
2.1	In general, the top managers of our organization favor a strong emphasis on Research & Development, technological leadership, and innovations.					
2.2	In the past 2 years, our organization has marketed a large variety of new lines of products or services					
2.3	Over the past two years, the modifications to our product and service lines have been predominantly minor.					
2.4	In dealing with competitors, our organization often leads the competition, initiating actions to which our competitors have to respond.					
2.5	In dealing with competitors, our organization typically adopts a very competitive posture aiming at overtaking the competitors.					
2.6	In general, the top managers of my organization have a strong propensity for high-risk projects (with chances of very high return).					
2.7	The top managers believe, owing to the nature of the environment, that bold, wide-ranging acts are necessary to achieve our organization					

	objectives.					
2.8	When there is uncertainty, our organization typically adopts a “wait-and-see” posture in order to minimize the probability of making costly decisions.					
2.9	Management actively responds to the adoption of “new ways of doing things” by main competitors.					
2.10	We are willing to try new ways of doing things and seek unusual, novel solutions.					
2.11	We encourage people to think and behave in original and novel ways.					

2.3. Technology Orientation

The below items are prepared to measure the effect of technology orientation on the performance of plastic manufacturing organizations. Please put “**X**” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
3	Technology Orientation					
3.1	The policy of this firm has been to always consider the most up-to-date production technology available.					
3.2	Our new products are always at the state of the art of the technology.					
3.3	Technological innovation, based on research results, is readily accepted in our organization.					
3.4	New technologies are integrated to our firm rapidly					
3.5	Our firm initiates development of new technologies and products					
3.6	R&D activities are very important in our firms					

2.4. Learning Orientation

The below items are prepared to measure the effect of learning orientation on the performance of plastic manufacturing organizations. Please put “ **X** ” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
4	Learning Orientation					
4.1	We agree that our organization’s ability to learn is the key to our competitive advantage.					
4.2	One of the values of our organization includes learning as a key to improvement.					
4.3	We believe that employee learning is an investment, not an expense.					
4.4	In my organization, learning is regarded as a vital asset essential for ensuring the organization's survival.					
4.5	There is a collective purpose that binds us together in my organization.					
4.6	There is total agreement on our organizational vision across all levels, functions, and divisions.					
4.7	All employees are committed to the goals of this organization.					
4.8	Employees perceive themselves as partners in shaping the direction of organization					
4.9	We are not afraid to reflect critically on the shared assumptions about our customers.					
4.10	Our employees recognize the need to continually question their understanding of the market.					
4.11	We rarely collectively question our own bias about the way we interpret customer information.					
4.12	We continually judge the quality of our decisions and activities taken over time.					
4.13	There is a good deal of organizational conversation that keeps alive the lessons learned from history.					
4.14	We always analyze unsuccessful organizational endeavors and communicate the lessons learned widely.					
4.15	We have specific mechanisms for sharing lessons learned in organizational activities from department to department					
4.16	Top management repeatedly emphasizes the importance of knowledge sharing in our company.					
4.17	We put little effort in sharing lessons and experiences.					

2.5. Environmental Orientation

The below items are prepared to measure the effect of environmental orientation on the performance of plastic manufacturing organizations. Please put “ **X** ” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
5	Learning Orientation					
5.1	Our firm makes concerted efforts to let every employee understand the importance of environmental preservation.					
5.2	Our firm has clear policy statements urging environmental awareness in every area of operations.					
5.3	Environmental preservation is highly valued by our firm members.					
5.4	We try to promote environmental preservation as a major goal across all departments					
5.5	The developments in the natural environment affect our firm's business activities.					
5.6	The financial well-being of our firm depends on the state of the natural environment.					
5.7	Environmental preservation is vital to our firm's survival					
5.8	Various external stakeholders expect our firm to preserve the environment.					

Section III: Measurement of Innovation Culture

The below items are prepared to measure the effect of innovation culture on the relationship between strategic orientation and performance of plastic manufacturing organizations. Please put “ **X** ” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
1	Innovation Culture					
1.1	My company encourages creativity, innovation and/or the development of new ideas, as cultural values.					

1.2	A common system of values, beliefs and objectives exists in my company, directed towards innovation.					
1.3	People are not penalized for new ideas that do not wor					
1.4	Our managers promote and support innovative ideas, experimentation and creative processes					

Section IV: Measurement of Organizational performance

With regard to your firm's main marketplace, how would you rate your business performance, over the last two years, relative to your major competitors in terms of:

Please put “ **X** ” mark on the number that best represents your level of agreement.

1- Strongly low, 2 - low, 3 - average, 4 - high and, 5 - very high

Sr. no	Construct	1	2	3	4	5
1	Organizational Performance					
With regard to your firm's main marketplace, how would you rate your business performance, over the last two years, relative to your major competitors in terms of:						
1.1	Return on investment					
1.2	Sales growth					
1.3	Market share					
1.4	Employee satisfaction					
1.5	Customer satisfaction					
1.6	Product quality					

..... **END of the questionnaire**

Thank you for your Valuable time