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# Entrepreneurial Marketing and Firm Performance: The Moderating Role of Environmental Turbulence: An Applied Study on Industrial Companies in Kurdistan Region of Iraq

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## ABSTRACT

This study aims to determine entrepreneurial marketing, firm performance, and the moderating role of environmental turbulence. It is an applied study on industrial companies in the Kurdistan region of Iraq. The researchers have proposed many hypotheses after an extensive review of the literature. This study examines how entrepreneurial marketing influences firm performance, with the existence of environmental turbulence as a moderating variable. This study developed a conceptual framework of entrepreneurial marketing and firm performance, with the moderating role of environmental turbulence. Previous studies' questionnaires were altered and sent to industrial companies in the Kurdistan area of Iraq as part of this study's quantitative methodology. In this study, 350 Iraqi customers from the Kurdistan area of Iraq participated. PLS method and PLS-bootstrapping were used, utilizing Smart-PLS 3.0. According to this study, researching industrial companies is considered as vital for Iraqi producers, investors, and other stakeholders. The findings' validity is limited. However, conclusions can be generalized to other Iraqi industrial sectors. Secondly, cross-sectional data generalization is possible. Longitudinal surveys are superior in both planning and forecasting.

**Keywords**: Entrepreneurial marketing, Firm performance, Environmental turbulence, Moderation, Industrial companies.

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# التسويق الريادي وأداء الشركة: الدور المعدل للاضطراب البيئي: دراسة تطبيقية على الشركات الصناعية في إقليم كردستان العراق

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## ملخص

هدفت هذه الدراسة إلى تحديد العلاقة بين التسويق الريادي وأداء الشركة، والدور المعدل للاضطراب البيئي: دراسة تطبيقية على الشركات الصناعية في إقليم كردستان العراق. اقترح الباحثان العديد من الفرضيات بعد مراجعة شاملة للأدبيات. تبحث هذه الدراسة في كيفية تأثير التسويق الريادي على أداء الشركة بوجود الاضطرابات البيئية. وضعت هذه الدراسة إطاراً مفاهيمياً للتسويق الريادي وأداء الشركة. تم تعديل استبيانات الدراسات السابقة وإرسالها إلى الشركات الصناعية في منطقة كردستان العراق كجزء من المنهجية الكمية لهذه الدراسة. شارك في هذه الدراسة 350 زبوناً عراقياً من منطقة كردستان العراق. وذلك باستخدام طريقة PLS وطريقة PLS-bootstrapping، بالاستفادة من برمجية .Smart-PLS 3.0. ووفقاً لهذه الدراسة، فإن البحث في الشركات الصناعية هو أمر حيوي للمنتجين والمستثمرين العراقيين وأصحاب المصلحة الآخرين. وتجدر الإشارة إلى أن صحة النتائج محدودة. ومع ذلك، يمكن تعميم الاستنتاجات على القطاعات الصناعية العراقية الأخرى وتعميم البيانات المستعرضة. كذلك فإن الدراسات الاستقصائية الطولية متفوقة في كل من التخطيط والتنبؤ.

**الكلمات الدالة:** التسويق الريادي، أداء الشركة، الاضطراب البيئي، الدور المعدل، الشركات الصناعية.

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## 1. Introduction

Researchers know that industries develop more quickly than other economic sectors, owing to their unique ability to embrace technological and manufacturing innovations, modern management methods, and their orientation toward production specialization in various fields. In light of this, this fact is especially true in the manufacturing sector. Accordingly, industrial companies are essential, as many intersect with other sectors and have significant opportunities to contribute to a greater proportion of the gross domestic product than they now do (GDP) (Bakar & Ahmad, 2010).

Small and medium-sized businesses (SMEs) play a vital role in developing and integrating all other economic sectors by quickly bringing innovative technology to the market (Guo & Shi, 2012). Industrial SMEs have piqued the attention of the Kurdistan region of Iraq, where unemployment has been a persistent issue since 2007 (Battal & Hameed, 2011).

A significant problem in this industry is a lack of significant governmental or private investment to help it flourish. There are no clear strategies to address this issue. According to the Center for International Private Enterprises (CIPE) (Enterprise, 2007), Kurdistan's industrial sector is poor compared to other sectors.

There is a variety of possible explanations for this. Government authorities and entities that oversee industrial activity have a low degree of scientific expertise. In 2007, 7.60 percent of the population had a university degree, compared to 52.57 percent who had a primary certificate. Workers' productivity in the Kurdistan region's industrial sector has declined due to (1) a lack of skilled people in the private sector; (ii) industrial SMEs in the Kurdistan region being plagued by poor management practices and workforce turnover (Ali, 2013). The low level of technical innovation capabilities (TIC) among industrial SMEs in Iraq's Kurdistan region may partly be due to a lack of specialized resources. That is mainly because Iraq, and the Kurdistan area in particular, have gone through several conflicts that have drained enterprises' resources and capacities (Tas, 2012). It has become more difficult for importers to recognize their consumers' needs because of a lack of consistency in the quality of imported and domestic products and services and the inadequacies of marketing operations (RDSKR, 2014).

In this regard, the CIPE (2007) report indicates that SMEs suffer from traditional and monotone measures of customer needs. This is another reason that may justify the inability of local products and services to compete with imported ones. These factors negatively reflect on customers' preferences and marketing processes' innovation.

Researchers still regard marketing and entrepreneurship as two distinct research disciplines (Mort et al., 2012). In light of this, marketing authors have been led to observe that present marketing techniques are ineffective, as they fail to meet the needs of businesses, thereby leading to calls for revised marketing techniques and strategies (Day & Montgomery, 1999; Deshpandé et al., 1993; Sheth & Parvatiyar, 1995; Vargo & Lusch, 2004).

Currently, there is little published literature on converging marketing and entrepreneurship that would help identify small-to-medium-sized companies' needs and determine the appropriate marketing strategies (Hills et al., 2008). This convergence has been termed "entrepreneurial marketing (EM)" (Morris et al., 2002).

EM has changed extensively in the last 30 years. It is still unclear whether using EM provides a direct positive benefit for resource-constrained businesses, as a systematic investigation into how EM and success correlate is still unavailable (Whalen & Akaka, 2016). This underscores the need to measure success goals and expectations for EM. Even if several other authors have examined efficacy (Jones et al., 2013; Paliwoda et al., 2009), in this context, few references showed the

influence of EM on a company (Mort et al., 2012).

This is mainly due to the fact that Iraq, and the Kurdistan region in particular, have suffered many wars that have led to a deficiency in the level of firms' capabilities and resources. Increased business volatility forced organizations to focus on stable and optimized output (Alqahtani & Uslay, 2020). The definition of "environmental volatility" has become important for explaining unpredictability in dynamic marketplaces. Increasing environmental turbulence may limit individual businesses' creativity, because it raises volatility and affects investment performance in innovation. However, it must be noted that different environmental conditions impact firms differently, which is why numerous forces in the sector must be investigated (Njeru, 2013).

Some similarity can be found in this work and the work of organizations that face conditions that shift at incredible speeds. Conditions can be quickly and suddenly altered, putting additional restrictions on managers' tasks and accomplishments. Hurricane Katrina had a strong influence on the population, the structures, and the government of New Orleans and beyond. Among other causes of turbulence are environmental disasters and terrorist incidents, the closing of organizations, or intergovernmental sales' reductions (Boyne & Meier, 2009).

In addition to insufficient evidence, there are issues with this approach due to unprecedented technological development; there is additional business volatility around goods and customers. A dynamic, disordered, but paradoxically disoriented, world must look for new opportunities due to rapid product and market life cycles (Reed, 2000; Whalen, Uslay, Pascal, Omura, McAuley, Kasouf, Jones, Hultman, Hills & Hansen, 2016; Whalen, Uslay, Pascal, Omura, McAuley, Kasouf, Jones, Hultman, Hills, Hansen et al., 2016).

There was some evidence of support for the pace of change in consumer structures called "market turbulence." Markets influenced by fluctuations demand that companies increasingly change their goods and services to accommodate consumers' changing needs. Technological turbulence has become the transition in the economy. Although technical turbulence is considerable, businesses lag behind technological developments, questioning their survival. In contrast, the speedy adoption of technology fosters competitive strength and pertains to the degree of rivalry and the competitors' ability to distinguish (Jaworski & Kohli, 1993).

New developments are mainly presented in environmental turbulence that influences the performance of businesses in different industries. It is widely believed that turbulent transition results from shifts in industry dynamics, technical developments, and competitive pressures. Although managers need to consider all the variables influencing the results, assessing the degree of impact has become progressively challenging (Kamau, 2019).

Multiple previous attempts have referred to the increased speed of globalization, changing consumers' demands, rising competition, and rapid technological advances generating an atmosphere where conventional marketing goods and services are restricted (Bhatt et al., 2010). Also of interest are results described by Day and Montgomery (1999), who pointed out that the five improvements to be addressed are especially relevant to marketing activities. In an information culture, globalization, and integration world, "marketing is one business function that the entrepreneur must use appropriately to launch and develop the new venture" (Hisrich, 1992: 44).

Most of the evidence supports that entrepreneurial marketing (EM) has been researched over twenty years (Hills & Hultman, 2011; Morris et al., 2002; Stokes, 2000). EM is essential in delivering the industry's highest value by leveraging creativity to develop goods, service procedures, and solutions that satisfy consumer demands and improve business performance (Hills et al., 2005). Academics have shown interest in EM. Scientists have determined that it has the power to

improve performance (Alqahtani & Uslay, 2018; Becherer et al., 2012; Hacioglu et al., 2012; Hamali, 2015; Hamali et al., 2016; Morrish, 2011; Mugambi & Karugu, 2017; Nora Sadiku-Dushi et al., 2019).

In the literature, there is broad theoretical and experimental evidence to support that marketing is a critical variable that impacts the performance of firms (Soriano, 2005). The importance of this subject has been widely emphasised in the literature. Globalization has affected traditional marketing (McKenna, 1991). The main result of this study is that the promotion of innovative marketing techniques complements older methods. Thus, to respond to these changes in the business environment, EM has emerged as a new marketing paradigm that helps firms rethink how they market. EM can help firms survive by adapting to the changes identified by Day and Montgomery (1999). At the same time, many authors have focused on performance (Kocak & Abimbola, 2009; Solé, 2013). There is no academic study concerning the effects of EM on firm performance (Mort et al., 2012).

Marketing and entrepreneurial actions require significant connections with the outside world and changes in risk and uncertainty. Based on the research on marketing and entrepreneurship (Matsuno, 2015), exploratory analysis has established that small enterprises can be more resilient in their external environment by increasing their use of entrepreneurial marketing (Becherer & Helms, 2016). Entrepreneurial marketing is effective when there are possible environmental changes and limited resources (Becherer & Maurer, 1997). Accordingly, firms can examine how they can better control capital to fully account for the complex market by increasing the possibility of innovation results arising from effective entrepreneurial practices (Wang et al., 2021).

As a result, this paper seeks to fill in the present gap and thoroughly examine this topic. The first section of this study introduces the studied topic to the reader. It is followed by providing an overview of the study's problems research questions, and hypotheses. Then, entrepreneurial marketing, firm performance, and environmental turbulence are described. The impact of environmental turbulence on business performance is discussed. Then, the data analysis is broken out in great depth, followed by a discussion of the findings. Finally, a conclusion is presented and recommendations for further studies are discussed. The current study has four main objectives:

- To examine the role of entrepreneurial marketing in firm performance.
- To examine the impact of entrepreneurial marketing on environmental turbulence.
- To examine the impact of firm performance on environmental turbulence.
- To access the moderation perspective of environmental turbulence in the relationship between entrepreneurial marketing and firm performance.

## *2. Literature Review*

### Theoretical Background

In this section, we review the related literature on our subject of study, the resource-based view (RBV), and the contingency principle to describe how businesses utilize their entrepreneurial orientation (EO) to maximize efficiency. The classical RBV theory purports that companies should earn more resources to accomplish their targets (Penrose, 1959). The RBV theory implies that organizations with valuable, unique, inimitable, or essentially non-replaceable resources are believed to have the potential for strategic advantage (Porter, 1990). Entrepreneurial orientation is likely to be a beneficial determinant of company success, since it can encourage creativity, risk-taking behavior, and proactive management (Covin & Wales, 2012). Entrepreneurial firms are more likely to be the ones to obtain market opportunities effectively. Consequently, RBV posits that companies with increased EO levels are also called intangibles (Pratono & Mahmood, 2016).

There is no singular business plan for all forms or companies. Environmental transition is regarded as a threat to small businesses. However, a small business can improve its performance by utilizing a mix of contingency factors and a decision management framework (Chung et al., 2012). The best framework for organizations is based on the external environment criteria, where the environment, organizational structure, and performance are correlated (Williams et al., 2017). Morton and Hu (2008) carried out a similar work, using the contingency theory as a theoretical framework to study environmental turbulence. It indicated that organizational success can be achieved by matching organizational characteristics to the variables that moderate their impact on efficiency.

**Entrepreneurial Marketing (EM)**

Entrepreneurial marketing research developed as a specific area of entrepreneurship and marketing in the last decade (Hills et al., 2008; Whalen, Uslay, Pascal, Omura, McAuley, Kasouf, Jones, Hultman, Hills & Hansen, 2016). The concepts of EM illustrate the actions of entrepreneurs. Concerning this research, some of the main issues are change, opportunities, and innovation. One illustration of the earliest description of the interface is that "the interface of entrepreneurial behaviour and marketing is where innovation is brought to market, […] marketing's role in the design, then, to provide the concepts, tools, and infrastructure to close the gap between design and market positioning to achieve sustainable competitive advantages". Most of the current evidence supports the use of a strategy that implies entrepreneurial marketing including constructive "reasonable risk-taking and the innovative method of creating co-created value for consumers and stakeholders" (Alqahtani & Uslay, 2020; Eggers et al., 2020).

Morris et al. (2002: 5) suggested an alternative definition for EM: "the proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative risk management, resource leveraging, and value creation." In light of this, Hills et al. (2010: 6) defined EM as: "a spirit, an orientation, as well as a process of pursuing opportunities and launching and growing ventures that create perceived customer value through relationships, especially by employing innovativeness, creativity, selling, market immersion, networking, or flexibility".

**Entrepreneurial Marketing Dimensions**

In recent years, scholars have studied various company practices using different terms. The classification systems used in such studies depend on the settings. While entrepreneurial marketing behaviours are among the most studied marketing behaviours, there is no agreement on the number of entrepreneurial marketing behaviours (Kilenthong et al., 2015). Morris et al. (2002) defined the seven dimensions of entrepreneurial marketing using theoretical concepts. Other studies have considered these exact dimensions to achieve different objectives/goals. Many papers use the seven dimensions shown in Figure 1.

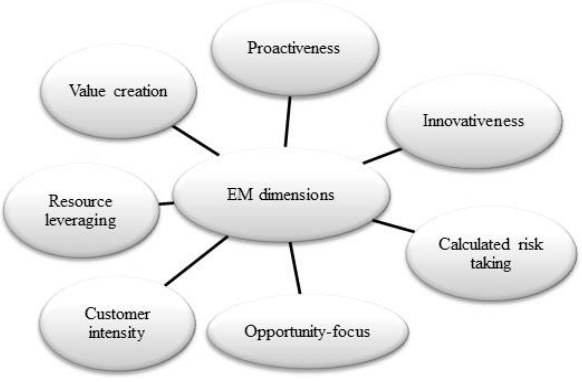


**Figure (1)**
**EM dimensions**
Source: Based on Morris et al. (2002).

Morris et al. (2002) named the seven dimensions of EM as business orientation.

Proactiveness, measured risk-taking,

innovativeness, opportunity focus, resource maximizing, consumer strength, and value creation. Morrish and Deacon (2011) utilized Morris et al. (2002) model. Their research aimed to look at examples of entrepreneurial approaches to marketing. They performed the qualitative analysis by analyzing a vodka manufacturer from New Zealand and Penderyn Distillery, a whisky distiller from Wales. EM was used successfully in both instances.

Several recent approaches use resource leveraging as a crucial marketing fact integrated with guerrilla marketing from the literature. This is everything from advertising and marketing literature. Value creation considers a network as essential principles for advancing entrepreneurial marketing. Kilenthong et al. (2015) described how EM collects business knowledge and accesses consumers across their network. Proactiveness is "an opportunity-seeking, forward-looking perspective involving introducing new products or services ahead of the competition and anticipating future demand to create change and shape the environment". Lumpkin and Dess (2001) revealed that innovation is associated with willing to support innovation with experimentation. Risk-taking is considered very important, mainly focusing on different market environments that are uncertain or dangerous (Lumpkin & Dess, 2001; Rauch et al., 2009). Zontanos and Anderson (2004) suggested that the most significant characteristic shared by both marketing and entrepreneurship is the production of consumer value. Some studies have suggested that proactiveness had no impact on customer orientation, whereas others have argued that risk-taking and innovation had such positive impacts (Al-Rawadiah, 2022; Al-Hashem, 2022).

**Firm Performance**

Companies today place an excessive emphasis on financial efficiency. Venkatraman and Ramanujam (1986) mentioned that efficiency could be determined with financial (transactions) and operational (operation capability) metrics. Economic metrics are indicators of financial classification linked to such variables as profitability and revenue growth (e.g. Return on Investment, return on Assets, Return on Equity, and Return on Sales Growth). Operational measures are efficiency, market share, satisfaction, new product creation, market success, and customer loyalty.

Researchers in expense accounts, practices, the production chain and risk control, management information systems, transition management, psychology, and sociology have sought to analyze success assessment. Numerous initiatives have attracted multiple administrators' interest, requiring selecting and reviewing various output metrics, contributing to more effective management processes (van den Bekerom et al., 2016). It is interesting how market analysts are attracted to performance measurements' contradictory existence and how their diversity will integrate into one composite dimension (Venkatraman & Ramanujam, 1986, 1987). Smith and Reece (1999: 153) identified business performance as "the operational ability to satisfy the company's major shareholders," It must be assessed to measure an organization's accomplishment. Neely et al. (1995) asserted that "... in the academic community, people from a wide variety of different functional backgrounds are researching the topic of performance measurement". Experts in accounting, economics, human resource management, marketing, operation management, psychology, and sociology explored the subject. One of the significant problems with the field is that they are all doing so independently.

**Environmental Turbulence**

An organization's degree of business focus can be influenced by environmental turbulence, market turbulence, technical turbulence, and competitive intensity (Greenley, 1995; Slater & Narver, 1993; Voss & Voss, 2000). Some similarities between this work and the work of environmental turbulence are the unexpected and complex developments that work

together within a sector (Jaworski & Kohli, 1993). In business, environmental turbulence refers to unpredictable and very complex activities where a specific industry operates (Boyne & Meier, 2009; Ko & Tan, 2012).

Basic concepts must be discussed to understand that environmental turbulence comprises the firm's external environment. A company can thrive and succeed when considering the external world and internal management structures (Simerly & Li, 2000; Venkatraman, 1990), because environmental turbulence can "influence the capability gap between the actual configuration of each capability and the corresponding value-maximizing configuration, which refers to the most valuable capability configuration potentially available in the post-change environment" (Lavie, 2006: 155).

**Technological Turbulence**

Many of the current marketing methods have proven sufficient to achieve marketing goals. Marketing abilities may help over-generalize the gains without proper consideration. Researchers regard the external world as critical to understanding industries and economic growth. Thus, strategies must adjust to various competitive conditions (Ketchen Jr et al., 2007). Technical turbulence is the sector's fitness level for technological transition (Huang & Tsai, 2014). Technology turbulence comprises the evolving methods and equipment used in operational procedures (Turulja & Bajgoric, 2019).

**Competitive Intensity**

The level of competition in a particular industry is called its "competitive intensity" (Tsai & Yang, 2013). Competition between enterprises, especially marketing conflicts and increased competition, is at issue (Cui et al., 2005). In the literature, intense competition concepts have been examined regarding how the company's internal environment influences its external environment (Abubakar et al., 2018). The previous study demonstrated that competition is a critical component of corporate success. The evidence from the last two decades strongly supports Ramaswamy (2001), who examined how competitive strength affects the partnership between the ownership and output of major manufacturing companies in India's public and private sectors. Their theoretical work indicated that ownership itself is linked to success.

**Market Turbulence**

Market turbulence is generated either by a change in consumer market or by a change in the taste of goods and services they consume (Hartono & Sheng, 2016; Kam-Sing Wong, 2014; Tsai & Yang, 2013). Furthermore, consumers frequently change their tastes in turbulent markets and move to brand new products (Hanvanich et al., 2006). To sum up, Table 1 describes the research variables.

**Table 1. Description of the research variables**

| Hypotheses | Variables | Theoretical Background |
|---|---|---|
| *H1* | *Entrepreneurial Marketing, Firm Performance* | (Alqahtani & Uslay, 2020; Atuahene-Gima, 1996; Hamali, 2015; Jones, Sethna & Solé, 2013; Kalsom & Ab Rahim, 2015; Sadiku-Dushi, Dana & Ramadani, 2019; Whalen et al., 2016). |
| *H2* | *Entrepreneurial Marketing, Environmental Turbulence* | (Davis, Morris & Allen, 1991; González-Benito, González-Benito & Muñoz-Gallego, 2009; Hilal & Tantawy, 2021; Khouroh, Sudiro, Rahayu & Indrawati, 2020; Morris, Schindehutte & LaForge, 2002). |

| Hypotheses | Variables | Theoretical Background |
|---|---|---|
| *H3* | *Firm Performance, Environmental Turbulence* | (Alqahtani & Uslay, 2020; Gatignon & Xuereb, 1997; Kirca, Jayachandran & Bearden, 2005; Lee & Tang, 2018; Lin & Germain, 2003; Morris et al., 2002; Power & Reid, 2005; Rahim & bin Zainuddin, 2017). |
| *H4* | *Entrepreneurial Marketing, Business Performance, Moderated by Environmental Turbulence* | (Aziz & Yassin, 2010; Danneels & Sethi, 2011; Eisenhardt & Martin, 2000; Hanvanich, Sivakumar & Hult, 2006; Jaworski & Kohli, 1993; Lumpkin & Dess, 2001; Moorman & Miner, 1997; Su, Peng, Shen & Xiao, 2013; Subramanian & Gopalakrishna, 2001; Turulja & Bajgoric, 2019; Whalen & Akaka, 2016; Su et al., 2013). |

**Firm Performance and Entrepreneurial Marketing**

In today's rapidly rising and turbulent marketplace, several variables could influence firms' strategies and efficacy in improving efficiency (Alqahtani & Uslay, 2020). The importance of this subject has been widely emphasised in the literature by finding that entrepreneurial marketing is significant for firm performance. (Atuahene-Gima, 1996). Much research has shown a positive association between EM and organizational performance (Whalen & Akaka, 2016). Sadiku-Dushi et al. (2019) determined that performance, profit, growth, and reputation are critical measures of success. Hamali (2015) examined the influence of EM on market efficiency in the Indonesian city of Bandung. He reviewed 90 people and identified several essential and beneficial effects of EM dimensions on market success. According to Kalsom and Ab Rahim (2015), many sectors benefit from using more creative marketing and advertising practices, because this helps companies be competitive and improve their performance.

This research developed an integrated paradigm for marketing research and highlighted the synergies between marketing research and entrepreneurship across two distinct paths (Solé, 2013). Research on marketing will enhance entrepreneurial marketing and entrepreneurship. This study explores EM literature and provides the conceptual structure of the proper background variables, observing the significance of EM to different-sized organizations and exploring the role of networks in EM environments (Alqahtani and Uslay, 2020). After this analysis, the study hypothesizes:

***H1: Entrepreneurial marketing has a positive impact on firm performance.***

***Entrepreneurial Marketing and Environmental Turbulence***

Most of the current evidence supports the use of environmental turbulence and supports businesses in developing an opportunity to resolve risks, see opportunities in the industry, grow momentum, and have the creative ability to overcome turbulent risks and uncertainties. It also leverages and exploits internal efforts to change opportunities into benefits (González-Benito et al., 2009). Some studies showed that entrepreneurial marketing influences environmental turbulence (Davis et al., 1991; Morris et al., 2002). According to the literature, the study hypothesizes:

***H2: Entrepreneurial marketing has a positive impact on environmental turbulence.***

***Firm Performance and Environmental Turbulence***

Lee and Tang (2018) suggested that technological turbulence drives firms to pursue innovation, leading to better performance outcomes. Specifically,

environmental turbulence (which encompasses competitive and technical factors) is related to marketing and strategy success as a moderator in marketing and strategy studies (Gatignon & Xuereb, 1997).

Environmental turbulence includes the moderating effect of shifting the orientation of a relationship between multidimensional constructs; technological innovation capabilities and business performance are all affected by environmental turbulence (Rahim & bin Zainuddin, 2017).

In a meta-analytical analysis of 114 studies, Kirca et al. (2005) offered no data to confirm the effect of business volatility, technological turbulence, and competitive pressure on organizational efficiency. Academic literature indicated that SMEs could successfully compete for higher performance because of small funds and environmental changes (Morris et al., 2002). It is now generally agreed, as outlined by a study conducted by Anning-Dorson (2017), that increasing the effectiveness of an unpredictable cause leads to more detrimental organization's performance. Environmental uncertainty can significantly affect a firm's performance. Also, Alqahtani and Uslay (2020) pointed out that firms that succeed in employing networks, paying inclusive attention, promoting creativity, maximizing capital, taking appropriate risks, co-creating value, supporting proactivity, and being opportunity-focused endeavours typically perform better than their counterparts. Other research indicated that high environmental turbulence has a negative effect on performance (Lin & Germain, 2003; Power and Reid, 2005). According to the literature, the study hypothesizes:

***H3: Firm performance has a positive impact on environmental turbulence.***

***Entrepreneurial Marketing and Firm Performance, Moderated by Environmental Turbulence***

Although various conditions mean different sensitivities with dynamic capabilities (Eisenhardt and Martin, 2000), environmental turbulence refers to the environment's unpredictability (Danneels & Sethi, 2011; Hanvanich et al., 2006). It comprises technological turbulence and market turbulence (Jaworski & Kohli, 1993). Technological turbulence has become a description of the high rate of change in manufacturing product innovation breakthroughs. Business instability seems to be a very turbulent mechanism, because the quality of demand variation in the market is rapid (Moorman & Miner, 1997).

There is some evidence to suggest that the high rate of environmental change results in increased volatility in organizations. Discoveries regarding the atmosphere are quickly rendered irrelevant by developments in technological advancement. Companies should actively upgrade and adopt new techniques to mitigate obsolescence (Lumpkin & Dess, 2001). Entrepreneurship is carried out by companies with limited capital to efficiently take advantage of their limited resources and enable them to succeed in hostile markets and under unpredictable business circumstances (Whalen, Uslay, Pascal, Omura, McAuley, Kasouf, Jones, Hultman, Hills & Hansen, 2016; Whalen & Akaka, 2016). Environmental turbulence can affect micro-finance organizations, as they will not compete with the external environment. Companies typically opt for a market-oriented standard to help them respond more effectively to environmental turbulence (Subramanian & Gopalakrishna, 2001).

Technology turbulence comprises the dynamic change in an organization's processes (Turulja & Bajgoric, 2019). Several investigations have focused on technological turbulence as a moderator in a specific market, including small and medium enterprises (Aziz & Yassin, 2010).

Technological turbulence can moderate the relationship between TIC and business performance. In the context of uncertainty, a firm may respond through effective use of the multidimensional constructs of TIC (Su et al., 2013). Given the above, the study hypothesizes:

***H4: Entrepreneurial marketing has a positive impact on firm performance, with environmental turbulence as a moderator.***

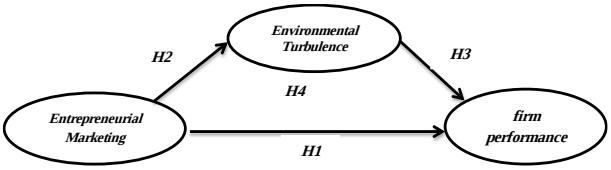


**Figure (2)**
**Conceptual framework**

**3. Research Framework and Methodology**

This study establishes how entrepreneurial marketing links to environmental turbulence. The conceptual structure of the investigation is established by first analyzing the literature to identify popular trends. After evaluating previous studies in conjunction with theories, it analyzes the relationship between the independent variable and the dependent variable illustrated in Figure 2 with environmental turbulence as the moderating variable. Figure 2 demonstrates the nature of this relationship.

The questionnaire that has been designed is comprised of closed-ended questions. Several items from the independent variable, entrepreneurial marketing, are included in the questionnaire (proactiveness, opportunity focus, measured risk-taking, innovativeness, resource maximizing, and value creation). The three sub-variables (efficiency, growth, and profit) comprise the dependent variable in this study, whereas the moderator variable was environmental turbulence in constructing a questionnaire for data collection. The researchers employed a 5-point Likert scale for this investigation. The analysis of data is an essential part of any research project. SPSS and SmartPLS software packages were utilized. Table 2 shows the research variables.

**Table 2**
**Research variables and sub-variables**

| **Independent Variable** | **Moderating Variable** | **Dependent Variable** |
|---|---|---|
| *Entrepreneurial Marketing* | *Environmental Turbulence* | *Firm Performance* |
| - *Proactiveness*<br>- *Opportunity focus*<br>- *Measured risk-taking*<br>- *Innovativeness*<br>- *Resource maximizing*<br>- *Value creation* | | *Efficiency*<br>*Growth*<br>*Profit* |

***Data Analysis and Results***

Entrepreneurial marketing, firm performance, and environmental turbulence were all studied. The convergence validity test used the items' loadings and average variances to determine the validity of the test. The test was carried out following the authors' suggestions. Reflective measurement models were tested for their accuracy. As a first step, we conducted a PLS analysis to examine the reliability and validity of reflective measurement models. According to our evaluation of indicator dependability, all 20 indicators had external loadings greater than or equal to 0.70.

**Table 3**

**List of research variables' their dimensions and number of questions**

| variables | Dimensions | No. of questions |
|---|---|---|
| Independent Variable | Proctiveness | 2 |
| Entrepreneurial Marketing | Opportunity focus | 2 |
| | Measured risk-taking | 2 |
| | Innovativeness | 2 |
| | Resource maximizing | 2 |
| | Value creation | 2 |
| Dependent Variable | Efficiency | 2 |
| Firm Performance | Growth | 2 |
| | Profit | 2 |
| Moderating Variable | Environmental Turbulence | 2 |
| Environmental Turbulence | | 20 (total) |

### *4. Results and Discussion*

### 4.1 Measurement Model Assessment

**Entrepreneurial Marketing**

The study adopted entrepreneurial marketing's six dimensions: Proactiveness, opportunity focus, measured risk-taking, innovativeness, resource maximizing, and value creation. The study adopted two items to measure proactiveness (e.g. "My firm shows the willingness to support creativity") and (e.g. "I am good at discovering business prospects for my organization."), two items for opportunity-focus (e.g. "My management strategy focuses on our current consumers), as well as (e.g. "I am adept at identifying and pursuing business prospects for my organization."), two items for calculated risk-taking (e.g. "My company would rather take a risk than lose an opportunity" and (e.g. "My company is ready to take chances when they benefit the firm"). Two items were used for innovativeness (e.g. "My organization strives to use creative ways whenever possible if doing so would allow it to complete its tasks more quickly) and (e.g. "My company's ability to be inventive gives it a competitive edge"). Two items were used for resource leveraging (e.g. "I have been able to leverage our resources by bartering or sharing") and (e.g. "Those who know me well say that I am tenacious and relentless in conquering challenges"). Two items were used for value creation (e.g. "I make sure that my organization provides value to the experience of its customers") and (e.g. "I advise managers on how staff can provide value to consumers.

**Firm Performance**

Murphy et al. (1996) measured the firm performance variable with three dimensions: efficiency, growth, and profit. The respondents rated the firm's performance on a five-point scale concerning competitors. Business performance as the dependent variable included three sub-variables; namely efficiency, including two items (e.g. "My company is pleased with its investment returns") and (e.g. "The return on equity at my company is generally satisfactory"), while growth included two items (e.g. "My company is generally pleased with the increase in sales") and (e.g. "My firm is usually satisfied with employee growth") and profit included two items (e.g. "My company is generally delighted with the return on sales" and (e.g. "My company is generally delighted with its net profit margin"). The variable environmental turbulence included two items (e.g.

"The level of competition in the market is relatively strong for our primary goods, services, and business methods, among other things") and (e.g. " Competition in global markets is intense regarding our primary goods, services, and business models, especially for new products and services").

Similarly, three items measured growth: sales, employees, and market share. Three items measured profit: return on sales, net profit margin, and gross profit margin (Murphy et al., 1996). Table 4 shows the measures of the study.

**Table 4**
**Measures of the study (variables of the study)**

| Variables of study | Constructs | Questions |
|---|---|---|
| Entrepreneurial marketing dimension ✓ | Proactiveness ✓ | I am continually looking for new and innovative methods to better my business. ✓ |
| | | I am good at discovering business prospects for my organization. ✓ |
| | Opportunity-focus ✓ | My management strategy focuses on our present consumers and markets to identify further prospects for our organization. ✓ |
| | | I am adept at identifying and pursuing business prospects for my organization. ✓ |
| | Calculated risk-taking ✓ | My company would instead take a risk than lose an opportunity. ✓ |
| | | My company is ready to take chances when it benefits the firm. ✓ |
| | Innovativeness ✓ | My organization strives to use creative ways whenever possible if doing so would allow them to complete their tasks more quickly. ✓ |
| | | My company's ability to be inventive gives it a competitive edge. ✓ |
| | Resource leveraging ✓ | I have been able to leverage our resources by bartering or sharing. ✓ |
| | | Those who know me well say that I am tenacious and relentless in conquering challenges. ✓ |
| | Value creation ✓ | I make sure that my organization provides value to the experience of its customers. I advise managers on how staff can provide value to consumers. My objective for any company is to provide value to our clients. ✓ |
| Business performance ✓ | Efficiency ✓ | My company is pleased with its investment returns. ✓ |
| | ✓ | The return on equity at my company is generally satisfactory. ✓ |
| | Growth ✓ | My company is generally pleased with the increase in sales. ✓ |
| | | My firm is usually satisfied with employee growth. ✓ |
| | Profit | My company is generally delighted with the return on sales. ✓ |
| | | My company is generally delighted with its net profit margin. ✓ |
| Environmental Turbulence | | The level of competition in the market is relatively strong for our primary goods, services, and business methods, among other things. ✓ |
| | | Competition in global markets is intense regarding our primary goods, services, and business models, especially for new products and services. ✓ |

Source: Adapted from Becherer, Helms, and McDonald (2012) and Li, Huang, and Tsai (2009).

**Evaluation of the Structural Model**

This research depends on a measurement model that Hair Jr et al. (2021) developed. As a technique for assessing the model's validity and reliability. Table 5 shows the measuring model's assessment criteria. The data in the table was gathered and analyzed to validate the model's validity and reliability. The survey was well-designed, and the collected data was ready to be analyzed further according to the findings. The authors used a bootstrapping technique to examine the relevance of the links in the structural model, which focuses on evaluating the hypotheses established by Hair Jr et al. (2016). Bootstrapping with 5000 resamples was recommended by Hair Jr et al. (2016), and the results of the present investigation are shown in Table 5.

**Table 5**
**Constructs' validity and reliability**

| Construct | | Items | Outer loading | Cronbach's alpha | CR | AVE |
|---|---|---|---|---|---|---|
| Entrepreneurial Marketing | Proactiveness | Proac1 | 0.077 | 0.040 | 0.456 | 0.498 |
| | | Proact2 | 0.995 | | | |
| | Opportunity focus | Opp1 | 0.872 | 0.586 | 0.827 | 0.706 |
| | | Opp2 | 0.807 | | | |
| | Measured Risk-Taking | Mrt1 | 0.891 | 0.678 | 0.860 | 0.755 |
| | | Mrt2 | 0.846 | | | |
| | Innovativeness | Inno1 | 0.906 | 0.809 | 0.926 | 0.839 |
| | | Inno2 | 0.926 | | | |
| | Resource maximizing | Reso1 | 0.842 | 0.511 | 0.803 | 0.670 |
| | | Reso2 | 0.795 | | | |
| | Value creation | Valu1 | 0.940 | 0.878 | 0.942 | 0.891 |
| | | Valu2 | 0.948 | | | |
| Firm Performance | Efficiency | Eff1 | 0.784 | 0.525 | 0.807 | 0.676 |
| | | Eff2 | 0.859 | | | |
| | Growth | Grow1 | 0.873 | 0.765 | 0.894 | 0.808 |
| | | Grow2 | 0.924 | | | |
| | Profit | Prof1 | 0.889 | 0.676 | 0.860 | 0.754 |
| | | Prof2 | 0.847 | | | |
| Environmental turbulence | | Entur1 | 0.915 | 0.744 | 0.885 | 0.794 |
| | | Entur2 | 0.867 | | | |

**Notes:**
proac= proactiveness; opp= opportunity focus; MRT = measured risk-taking; INNO = innovativeness; RESO = resource maximizing; VALU = value creation; EFF = Efficiency; GROW = growth; PROF= profit; Entur=Environmental turbulence.

Based on Table 5, it can be proposed that Cronbach's alpha values are over the 0.70 threshold imposed by Bernstein and Nunnally (1994) for measuring the validity of constructs. There are no issues here, since the Cronbach's alpha values for all subgroups fulfil this condition. In our approach, the content validity of most of the elements has already been established. In order to determine the convergent validity of the items, we employed the factor loadings, composite reliability, and (AVE). Metric factor loadings (Table 4) range from 0.077 to 0.995, which is higher than the 0.7 threshold suggested by Fornell and Larcker (1981). However, one of the subgroups' measurements had factor loadings greater than 0.7. Based on the results of this study, the whole dataset's dependability is over the level of 0.70 proposed by Nunnally and Bernstein (1994). This criterion is also met by the composite reliability scores of all constructs in the subgroups. Fornell and Larcker's concept is also used to assess AVE (1981). The AVE ranges from 0.0.839 to 0.498 for the whole dataset. Only

reactiveness scored less than 0.5, while the AVE values of all the subgroups match the requirement of being more than 0.5.

The model's explanatory factors ($R^2$) and their respective significance values may be used to analyze the structural model. Figure 3 shows a discussion of the validation of the model with the defining elements. PLS-SEM does not require any distribution assumptions or parametric techniques to be used to assess the validity of the data. The bootstrapping approach determines whether the route coefficients have significant values (Sanchez, 2013). In order to get accurate findings, previous research suggested using a bootstrapping value of not less than 500, which is the number used by default in software (Wetzels et al., 2009).

Nevertheless, the bootstrapping approach was used on 5000 sub-samples in this investigation to obtain more accurate estimates of route coefficients. Figure 3 shows the model's explanatory factors ($R^2$), and Figure 4 shows the composite reliability; in addition, Figure 5 points out the values of the path coefficients.

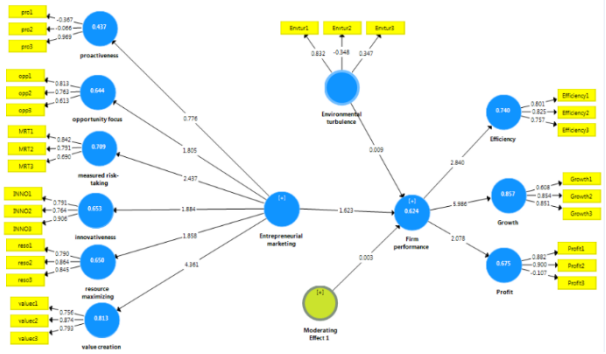


**Figure (3)**
**The model's explanatory factors ($R^2$)**

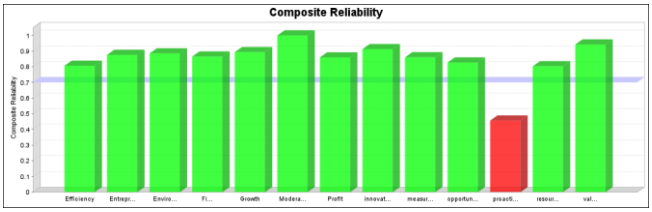


**Figure (4)**
**Composite reliability**

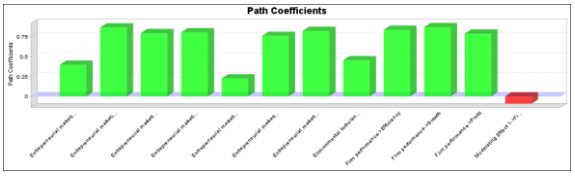


**Figure (5)**
**Path coefficients of research variables**

**Fornell-Larcker Criterion**

Fornell-Lacker criterion is used to establish discriminant validity. All latent variables' square root AVE values were greater than the inter-construct correlations (Fornell & Larcker, 1981), supporting discriminant validity. The loadings of all indicators were more significant than their cross-loadings (Hair et al., 2013). An indicator's dependability is how much variance in an item can be explained by a single variable (Hair et al., 2013). An increase in the variable's outer loading shows that the linked measure is closely related to the variable's measurement (Hair, Ringle & Sarstedt, 2013). A loading value greater than 0.40 should be discarded, and the effect of the variable on AVE and CR should be examined, according to Hair et al. (2013).

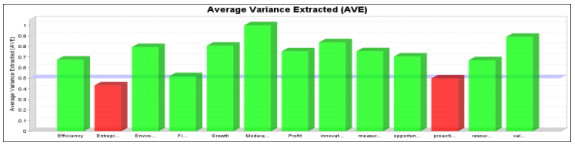


**Figure (6)**
**The average variance extracted (AVE) for the research variables**

The outer measurement model is intended to compute the observed variables' reliability, internal consistency, and validity (measured by the questionnaire) and the unseen variables (Ho, 2006) in conjunction with the observed variables. A single experimental and concept reliability test is used to evaluate consistency, while convergent- and discriminant- validity tests are used to evaluate validity (Hair et al., 2012).

The reliability of a single observed variable indicates the variance of an individual observed variable compared to an unseen variable by assessing the standardized outer loadings of the observed variables (Götz et al., 2010). Observed variables with an outer loading of 0.7 or above are considered acceptable (Hair et al., 2012), but observed variables with other loading less than 0.7 are considered unacceptable (Chin, 1998). However, the cut-off value for the outer loading for this investigation was 0.7, which was considered acceptable.

The discriminant validity of latent constructs was tested next. In order to have discriminant validity, a construct's manifest variable must have a cross-loading value in the latent variable that is bigger than any other constructs in the path model (Sarstedt et al., 2014). It was decided to test the discriminant validity using the Fornell-Larcker criterion and cross-loadings (Fornell & Larcker, 1981a, 1981b).

The Fornell-Larcker approach is used to determine discriminant validity in the sample. Furthermore, the square roots of the AVE values are shown in Table 5. This data implies that all objects have discriminant validity and may be established the analysis.

| | Efficiency | Entrepreneurial marketing | Environmental turbulence | Firm performance | Growth | Moderating Effect 1 | Profit | innovativeness | measured risk-taking | opportunity focus | proactiveness | resource maximizing | value creation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Efficiency | 0.795 | | | | | | | | | | | | |
| Entrepreneurial marketing | 0.799 | 0.626 | | | | | | | | | | | |
| Environmental turbulence | -0.069 | -0.078 | 0.558 | | | | | | | | | | |
| Firm performance | 0.860 | 0.787 | -0.119 | 0.679 | | | | | | | | | |
| Growth | 0.688 | 0.698 | -0.120 | 0.926 | 0.780 | | | | | | | | |
| Moderating Effect 1 | -0.001 | -0.030 | 0.083 | 0.004 | -0.007 | 10^789 | | | | | | | |
| Profit | 0.505 | 0.522 | -0.128 | 0.822 | 0.716 | 0.022 | 0.730 | | | | | | |
| innovativeness | 0.659 | 0.808 | -0.063 | 0.630 | 0.584 | -0.042 | 0.358 | 0.823 | | | | | |
| measured risk-taking | 0.669 | 0.842 | -0.048 | 0.635 | 0.550 | -0.034 | 0.405 | 0.674 | 0.777 | | | | |
| opportunity focus | 0.635 | 0.802 | -0.089 | 0.623 | 0.537 | -0.011 | 0.429 | 0.536 | 0.607 | 0.755 | | | |
| proactiveness | 0.524 | 0.661 | -0.021 | 0.452 | 0.367 | -0.010 | 0.259 | 0.392 | 0.487 | 0.663 | 0.599 | | |
| resource maximizing | 0.605 | 0.806 | -0.074 | 0.665 | 0.598 | -0.025 | 0.524 | 0.514 | 0.572 | 0.561 | 0.450 | 0.834 | |
| value creation | 0.752 | 0.902 | -0.070 | 0.743 | 0.666 | -0.018 | 0.488 | 0.691 | 0.698 | 0.645 | 0.530 | 0.713 | 0.809 |

**Figure (7)**
**Discriminant validity: Fornell-Larcker criterion**

**Discriminant Validity**

Examining discriminant validity, Fornell-Larcker's method has been considered inferior to the (HTMT) ratio with 0.85 threshold, which has been identified as a better criterion (Henseler et al., 2015). As shown in Table 6, there were no statistically significant correlations among all covariates at a significance level of 0.85. All constructs also had a variance inflation factor (VIF) lower than the suggested threshold (Hair et al., 2013; Hair et al., 2012; Hair Jr, 2014), as shown in Table 6.

**Table 6**
**(HTMT 0.85 criterion)**
**Collinearity statistics (VIF), outer VIF values**

| Varabiles | VIF |
|---|---|
| Entrepreneurial Marketing* Environmental Turbulence | 1.000 |
| Mrt1 | 1.357 |
| Mrt2 | 1.357 |
| Eff1 | 1.145 |
| Eff2 | 1.145 |
| Entur1 | 1.540 |
| Entur2 | 1.540 |
| Grow1 | 1.623 |
| Grow2 | 1.623 |
| Inno1 | 1.860 |
| Inno2 | 1.860 |
| Opp1 | 1.207 |
| Opp2 | 1.207 |
| Proac1 | 1.000 |
| Proact2 | 1.000 |
| Prof1 | 1.352 |
| Prof1 | 1.726 |
| Reso1 | 1.134 |
| Reso2 | 1.134 |
| Valu1 | 2.581 |
| Valu2 | 2.581 |

**Moderating Effect Assessment**

The path coefficients indicate a significant moderating effect on firm performance sample mean (M) -0.089; standard deviation (STDEV) 0.042 ($\beta$ = 0.030; $p < 0.01$). These results support hypothesis H4 stating that environmental turbulence moderates the relationship between entrepreneurial marketing and firm performance, as pointed out in Figure (8).

Entrepreneurial marketing and firm performance were hypothesized to be moderated positively by environmental turbulence in their relationships with exogenous factors. According to Hair et al. (2013); Hair Jr, Hult, Ringle & Sarstedt (2016); Hair Jr, Hult, Ringle, and Sarstedt (2021), this study used the product indicator methodology to evaluate the moderating effect. A bootstrapping approach with 1000 resamples was utilized to examine the moderating relationship. The results are listed in Table 7. We found that the data did not support the hypothesis that entrepreneurial marketing affects proactiveness.

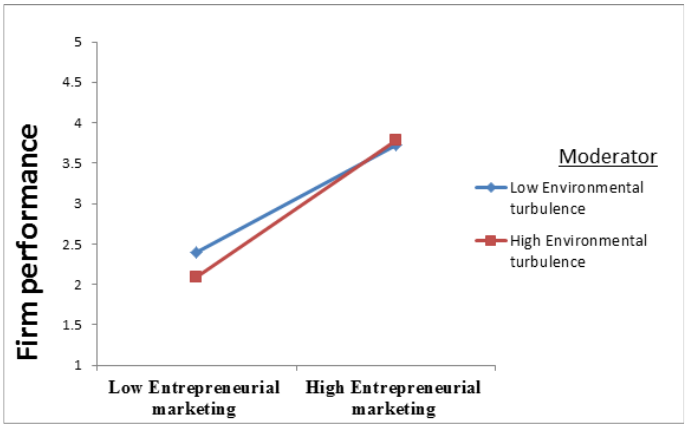


**Figure (8)**
**Moderating effect of environmental turbulence between entrepreneurial marketing and firm performance**

Note: Environmental turbulence strengthens the positive relationship between entrepreneurial marketing and firm performance.

**Table 7**
**Mean, STDEV, T-values, P-values**

| Variables of the study | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T-statistics (\|O/STDEV\|) | P-values | Decision |
|---|---|---|---|---|---|---|
| Entrepreneurial marketing -> Firm performance | 0.400 | 0.390 | 0.066 | 6.038 | 0.000 | Supported |
| Entrepreneurial marketing -> innovativeness | 0.871 | 0.870 | 0.031 | 28.462 | 0.000 | Supported |
| Entrepreneurial marketing -> measured risk-taking | 0.799 | 0.797 | 0.035 | 22.862 | 0.000 | Supported |
| Entrepreneurial marketing -> opportunity focus | 0.808 | 0.807 | 0.032 | 25.404 | 0.000 | Supported |
| Entrepreneurial marketing -> proactiveness | 0.227 | 0.115 | 0.232 | 0.977 | 0.329 | Not supported |
| Entrepreneurial marketing -> | 0.764 | 0.765 | 0.039 | 19.662 | 0.000 | Supported |

| Variables of the study | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T-statistics (\|O/STDEV\|) | P-values | Decision |
|---|---|---|---|---|---|---|
| resource maximizing | | | | | | |
| Entrepreneurial marketing -> value creation | 0.827 | 0.826 | 0.026 | 31.554 | 0.000 | Supported |
| Environmental turbulence -> Firm performance | 0.456 | 0.463 | 0.052 | 8.844 | 0.000 | Supported |
| Firm performance -> Efficiency | 0.841 | 0.839 | 0.027 | 31.018 | 0.000 | Supported |
| Firm performance -> Growth | 0.874 | 0.875 | 0.021 | 41.878 | 0.000 | Supported |
| Firm performance -> Profit | 0.793 | 0.787 | 0.046 | 17.063 | 0.000 | Supported |
| Moderating Effect 1 -> Firm performance | -0.092 | -0.089 | 0.042 | 2.182 | 0.030 | Supported |

Note: The diagonal figures are the square-roots of the AVE values, whereas the off-diagonals are the correlations; VIF ¼ Variance inflation factor. ** p < 0.01, * p < 0.05.

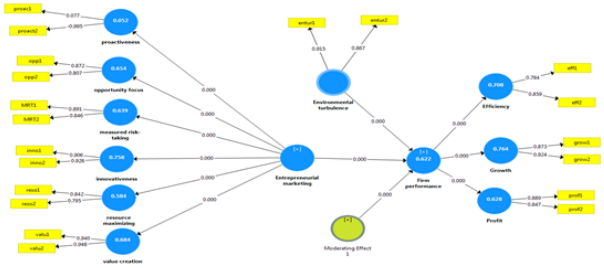

**Figure (9)**
**Structural model for the direct relationship between entrepreneurial marketing and firm performance**

In light of this, an analysis of the interaction between entrepreneurial marketing and firm performance is needed. According to the research, there is a positive and robust correlation between entrepreneurial marketing and firm performance. (Fig. 9).

H1 indicates that entrepreneurial marketing positively impacts firm performance. The findings highlight that sample mean (M) (0.390); standard deviation (STDEV) (0.066); T-statistic (|O/STDEV|) (6.038). This is supported by the findings from past studies (Alqahtani & Uslay, 2020; Atuahene-Gima, 1996; Hamali, 2015; Jones et al., 2013; Kalsom & Ab Rahim, 2015; Nora Sadiku-Dushi et al., 2019; Whalen, Uslay, Pascal, Omura, McAuley, Kasouf, Jones, Hultman, Hills, Hansen et al., 2016).

H3 suggests that Environmental Turbulence has a positive impact on firm performance. The findings highlight that sample mean (M) 0.463; standard deviation (STDEV) 0.052; T-statistic (|O/STDEV|):8.844. This is supported by the findings from past studies (Alqahtani & Uslay, 2020; Gatignon & Xuereb, 1997; Kirca et al., 2005; Lee & Tang, 2018; Lin & Germain, 2003; Morris et al., 2002; Power & Reid, 2005; Rahim & bin Zainuddin, 2017).

H4 points out that the relationship between entrepreneurial marketing and firm performance is moderated by environmental Turbulence. The findings highlight that Original Sample (O) -0.092; Sample Mean (M); Standard Deviation (STDEV): 0.042; T-statistic (|O/STDEV|):2.182. This is supported by the findings from past studies (Aziz & Yassin, 2010; Danneels & Sethi, 2011; Eisenhardt & Martin, 2000; Hanvanich et al., 2006; Jaworski & Kohli, 1993;

Lumpkin & Dess, 2001; Moorman & Miner, 1997; Su et al., 2013; Subramanian & Gopalakrishna, 2001; Turulja & Bajgoric, 2019; Whalen & Akaka, 2016; Su et al., 2013).

**Assessing $F^2$, $R^2$**

When an exogenous variable is eliminated from a model, the $F^2$ size effect determines how the $R^2$ value has changed due to the removal. The degree to which a particular predictive latent variable influences an endogenous variable is outlined.

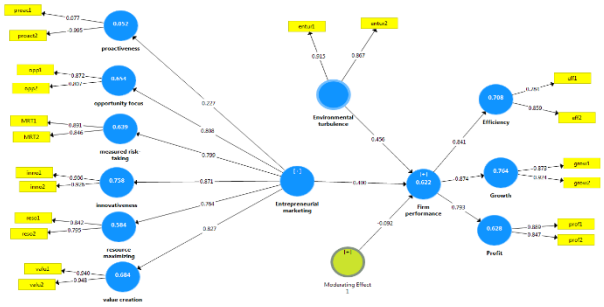

**Figure (10)**
**Results of $F^2$**

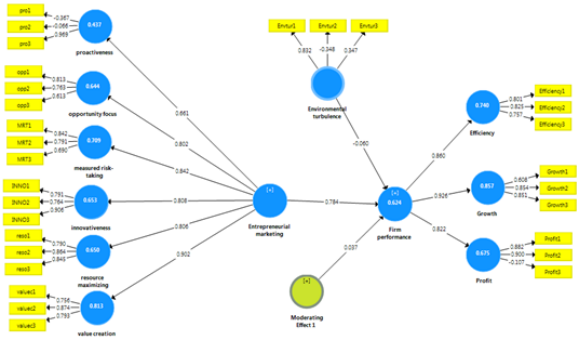

**Figure (11)**
**Results of $R^2$**

**Research Limitations**

This research includes strengths and limitations. This research examined the link between entrepreneurial marketing, which included six elements, and firm performance. This research studied environmental turbulence's moderating influence. This research was quantitative. Entrepreneurial marketing and firm performance are linked in this research. The study confirms the moderating effect of environmental turbulence. This study focused on Iraqi Kurdistan's industrial companies. This research has been conducted on Iraqi Kurdistan industrial enterprises. The findings' validity is limited. However, conclusions can be generalized to other Iraqi industrial sectors. Secondly, cross-sectional data generalization is possible. Longitudinal surveys are superior in both planning and forecasting.

**Conclusion**

There is a need to extend the present study, not only within Kurdistan region of Iraq itself, but also to other contexts. This part of the study begins by drawing some conclusions from this study. This research provides an overview of the previous philosophical structure that integrates entrepreneurial marketing with firm performance while accounting for company success. The independent variable in the study was entrepreneurial marketing. The dependent variable was firm performance. However, the moderator in this analysis was environmental turbulence. This study includes various direct and indirect factors that influence the interrelationship of these variables. However, further investigation of the posited theories is essential through additional studies.

**Future Research**

Some of the observations reported would need further exploration. The existence of information centres, public research as well as administrative centres and academic research centres in the Kurdistan region of Iraq provides up-to-date information on leading and entrepreneurial organizations to facilitate the mission of researchers and academics in their

studies and research as well as the work of publishing and marketing of materials to leading organizations in the region for specific needs.

**Acknowledgment**

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