

# Role of Market Orientation in Affecting Entrepreneurial Competencies in Turbulent Environments

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## ABSTRACT

Entrepreneurship plays a crucial part in advancing the economy. There are very few studies that have examined the outcome of the market orientation (MO) proceeding developing entrepreneurial competencies (EC). We collected data from entrepreneurs in different Pakistani cities using a survey design. A sample size of four hundred and twenty-two was obtained, based on simple random sampling. Regression and moderation analyses were conducted using Jeffrey's Amazing Statistics Program (JASP). Results suggested a very strong effect of MO in developing EC. Environmental turbulence (ET) also had a significant role in moderating the aforementioned relationship. More so, market oriented firms had a very strong focus on developing and enhancing competencies in highly turbulent environments. Entrepreneurial firms may benefit from this study by considering the benefits of adopting a market orientation. Entrepreneurs should have a strong market orientation, particularly in times characterized by high levels of ET. Future studies can look at the role of dimensions of market orientation and environmental turbulence in effecting specific competencies from multiple contextual perspectives.

**Keywords:** Entrepreneurship, Competencies, Orientation, Environment, Turbulence, Moderation, Market Orientation, Entrepreneurial Competencies

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## **INTRODUCTION**

Entrepreneurship is the cornerstone of economic development. It is like an engine that creates, inflates, and sustains an economy. Recent times have not been a breeze for the global and national economies. With many challenges coming in the past decades that have eroded many economic models. Entrepreneurship is seen as a key factor in determining the dynamism of an economy (Farinha, Lopes, Bagchi-Sen, Sebastiao & Oliveira, 2020). The current economic situation, characterized by turbulence in the economic, political, and technological environments, is a cause of great interest and concern for economics and entrepreneurs alike. This global socio-political turbulence has an effect on the development of entrepreneurial competencies and the development of entrepreneurial intention (Pesha, 2022). In such a situation, an issue of concern for entrepreneurs is deciding upon which competencies to develop in order to overcome the challenges posed by turbulence in the environment.

Market orientation is an important element in attaining success for organizations (Jaworski, Kohli & Sahay, 2000). In a study focused on the textile sector in Indonesia by Murwati and Anisah (2024), entrepreneurial competence and market orientation have been studied as antecedents to the development of competitive advantage which in itself is a milestone in the pathway to entrepreneurial success. The factors that affect competitive advantage include entrepreneurial competence (Destany, Suhaeni & Putri, 2022; Munir et al., 2019; Zebua, 2022), market orientation (Dalimunthe, 2017; Muhajirin, 2019; Puspaningrum, 2017; Safarnia et al., 2015; Setiawan, 2012), product quality (Hendrayanti, 2021; Kurniasari & Utama, 2018; Nisa & Anisah, 2023; Nurussakinah et al., 2018; Rinandiyana, Kurniawanti & Kurniawan, 2016), and product innovation (Dalimunthe, 2017; Hendrayanti, 2021; Katuuk et al., 2023; Kurniasari, 2018; Muhajirin, 2019; Nisa, 2023; Nurussakinah et al., 2018; Setiawan, 2012; Zebua, 2022). The results of Murwati and Anisah (2024) posited that market orientation did have an effect on competitive advantage, but entrepreneurial competencies did not directly affect competitive advantage. According to Behling and Lenzi (2019), entrepreneurial competencies can be used to develop stable strategies to respond to unstable social and economic situations. Entrepreneurial competencies are considered a group of competencies that enable and support successful entrepreneurship (Madichie, 2009; Man, Lau, & Chan, 2002; Thomas & HERRISIER, 1991). According to Idris and Abu Bakar (2020)

entrepreneurial competencies should remain the principal focus of future research in women entrepreneurship. Wang, Chen and Fang (2021) studied the effect of environmental turbulence on entrepreneurial competencies. There is a gap that exists in studying the effect of environmental turbulence on the relationship between market orientation and entrepreneurial competencies. The role of market orientation in attaining success is quite established. In turn, success may not be achieved without having competencies. In logical terms, market orientation, which is more of an inner psychological construct, would require a gradual behavioural mechanism to achieve the ultimate behavioural outcome of success. This study was designed primarily to study this intervening link. Al Mamun, Fazal and Muniady (2019) reported that networking, Entrepreneurial competency was positively impacted by both entrepreneurial abilities and market orientation. According to Kraus, Brier and Dasi-Rodriguez (2020), most studies assumed a linear relationship between market orientation and entrepreneurial competencies, but whether environmental turbulence creates threshold effects needs to be studied. Tang and Murphy (2022) found that the effect of market orientation on competencies may differ in emerging economies versus developed economies. The connection between market orientation and entrepreneurial competencies has been the subject of very few studies. The impact of market orientation on entrepreneurial competency, however, still needs further empirical research and confirmation, particularly in the context of current environmental turbulence, the relationship in question requires a stronger focus.

## **Research Objectives**

1. To research the effect of market orientation on entrepreneurial competencies
2. To test whether environmental turbulence moderates the relationship between market orientation and entrepreneurial competencies

The objectives were formulated owing to the increasing focus of entrepreneurial studies on market orientation and entrepreneurial competencies, both from a practical and theoretical perspective. It has become quite imperative that entrepreneurship is an essential requirement for economies to prosper, particularly from the perspective of developing economies. Entrepreneurships cannot become successful without acquiring the right set of competencies. Market orientation has been found to lead

organizations to success in general. There are a few studies that have found that this effect is also true for entrepreneurship. There is a gap that exists in studying the development and enhancement of entrepreneurial competencies influenced by market orientation. With this, there is an allied but important effect that needs academic attention. That is the effect of environmental turbulence. A strong gap exists in studying the effect of environmental turbulence on the development of competencies of market-oriented entrepreneurship particularly in a country like Pakistan that has been experiencing a very turbulent environment due to multiple reasons

## **LITERATURE REVIEW**

### **Market Orientation (MO)**

Based on continuous research, there are three perspectives on market orientation. These perspectives can be succinctly stated as cultural, capability, and behavioural perspectives as given by Kohli and Jaworski (1990). Most of the discussion on market orientation has been conducted from the behavioural perspective (Kohli & Jaworski, 1990). The core process in market orientation is the generation and dissemination of market intelligence throughout the organization.

Market orientation can also be understood as a form of organisational culture (McClure, 2010; Savabieh, Nayebzadeh, Abghari & Hataminasab, 2022). The concept of organisational culture encompasses the common assumptions, values, beliefs, conventions, and behaviours of its members. A prevalent definition of organisational culture in marketing is provided by Deshpande and Webster (1989): “the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them norms for behavior in the organization.” A variety of cultural layers can be induced, therefore, as values, behaviors, and norms. Market orientation is more of an organizational-level phenomenon that relates to the culture of the organization. Basically, the foundation is based on values and beliefs that are shared and held throughout the organization. A vast majority of highly successful organizations in current times are market-oriented (Jaworski, Kohli & Sahay, 2000).

Ngo (2021) studied the impact of market orientation on small business performance in Vietnam. Gul, Liu, Jamil and Baig (2021) studied the impact

of market orientation on the performance of businesses by considering positioning strategies in the context of fashion apparels in Pakistan. Kim, Kim and Hyun (2021) studied the impact of social entrepreneurship and market orientation on social enterprise performance.

Shaher and Ali (2020) examined 221 small firms in Kuwait to investigate the impact of market orientation on the relationship between knowledge management and entrepreneurial orientation, as well as the performance of the enterprises. Burrati, Profumo, and Persico (2020) examined the impact of market orientation on the business performance of university spin-offs in Italy. Bokhari, Zakarias, and Binti Muhammad (2022) examined the importance of entrepreneurial thinking and market orientation on the survival of SMEs in Pakistan's industrial sector during the pandemic.

## **Entrepreneurial Competencies (EC)**

Entrepreneurial skills and competencies frequently overlap. However, one can clearly distinguish them from each other. Entrepreneurial skills typically encompass the knowledge and abilities needed to successfully operate a business. While entrepreneurial competencies refer to the qualities and capability of the entrepreneur to get a job done (Mitchelmore & Rowley, 2013; Liñán & Chen, 2009). One of the researchers in early 1986 recommended that entrepreneurs had a different set of traits depending upon their personalities. These various clusters of attributes lead to the entrepreneurial competencies of different entrepreneurs (Lessem, 1986). It is important to recognize that without the inclusion of entrepreneurs, competency remains incomplete. These entrepreneurs change the organization in a better way and also add value to the organization with respect to its resources, opportunities, and prospects (Bird, 1995).

Competency can be defined as any characteristics among individuals, such as their values, traits, roles, skills, aims, or knowledge, etc., which can help form a business and make its growth and survival easier (Bird, 1995). Another definition of competency is the capability of a person to perform a specific role or job (Man, Lau, & Chan, 2002). We reviewed entrepreneurial competencies in individuals capable of transforming and changing various business areas and companies. One of the research studies even suggests that as the criteria for small and big businesses differ, so

do the competencies required for them when considered by their quality (Johnson & Winterton, 1999).

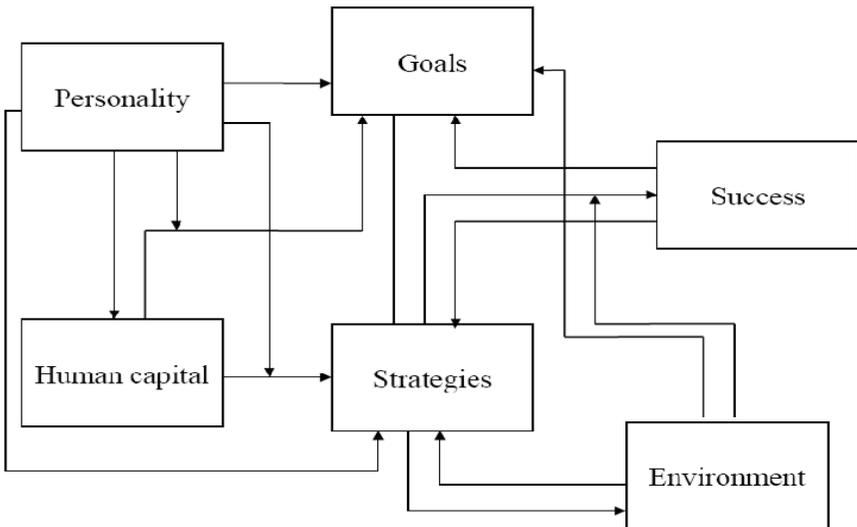
Competencies is a phenomenon that is mainly considered a group of characteristics that support and enable entrepreneurship in a successful manner (Madichie, 2009; Man, Lau, & Chan, 2002; Thomas & HERRISIER, 1991). An entrepreneur is an embodiment of a set of competencies and characteristics that enable him/her to add value through gathering opportunities and organizing resources for their organizations (Bird, 2019). Competencies can be construed as a set of basic features such as skills, social roles, specific knowledge, self-images, traits also motive which outcome in the creation, growth, besides continuation of a business venture (Bird, 1995). Man et al. (2002) posited that entrepreneurial competences as the entrepreneur's entire capacity to carry out a task associated with their profession effectively. Bartlett and Ghoshal (1997), in their study, described three categories of competencies namely skills/abilities, knowledge/experience, and attitudes/traits. In a study, Hood and Young (1993) concluded that the most important entrepreneurial competency was leadership skills, followed by written and oral communication skills and human relational skills. However, the other forms of entrepreneurial competencies, which include business plan preparation, goal-setting skills, logical thinking, analytical skills, decision-making skills, hiring skills, management skills, and deal-making skills, had no or weak influence on business performance. This may be due to contextual variations, as a different set of competencies is more important in different economic, political, and social/cultural settings. Man (2001) suggested ten areas of entrepreneurial competencies including but not limited to: personal strength competencies, commitment, strategic, human, operational, learning, innovative, analytical, relationship, and opportunity. This is quite a comprehensive list, but new elements may be added due to varying contextual or environmental factors. For example, analyzing and managing social hierarchy and networks may be an important competency in some settings. Mitchelmore and Rowley (2010) took the position that the major entrepreneurial competencies were exploiting opportunities, developing products/services, environmental scanning, idea generation, and the identification and definition of a viable market niche.

Different research papers have defined different characteristics of entrepreneurs as a competency, which can include their experience in

industry, innovativeness, production and marketing relationships, links with venture capitalists, socio-economic factors such as personal business background and education, sources of financing, financial evaluation, managerial planning, functional expertise, managerial staff, delegation of work, and the intellectual, social, and managerial skills of the individuals etc. (Basu & Goswami, 1999; Freel, 1999; Hofer & Charan, 1984; Murray, 1996; Gasse, d'Amboise, Simard, & Lasker, 1997). Martin and Staines (1994) described personal qualities of entrepreneurs like innovativeness, ability to take risks, self-confidence, leadership, approachability, and having an outgoing personality.

### **Market Orientation and Entrepreneurial Competencies**

Market orientation is an important orientation that is a core foundation in the marketing domain. Is there an effect of market orientation in developing entrepreneurial competencies? Research on this notion lead to some evidences. Al Mamun, Fazal and Muniady (2019) suggested that networking and entrepreneurial competency were positively impacted by market orientation and entrepreneurial skills. According to Idris and Abu Bakar (2020) entrepreneurial competencies should remain the principal focus of future research in women entrepreneurship.



**Figure 1: Giessen-Amsterdam Model of Small Business Success**

The Giessen Amsterdam Model (GAM) provides an important theoretical direction. As given in Figure 1, the GAM presents a model of entrepreneurial success (Rauch & Frese, 2000). The model suggests the way for an entrepreneur or an entrepreneurship to reach success. The core linkages given in the model explain the connection of orientation and the effect of environment on success. The starting point of this model posits personality and human capital as the initiators of success. Personality can be considered akin to orientation. Every personality carries an orientation. This is what leads to the accumulation of capital or enhancement of capabilities, also known as competencies. Based on this conceptualization, the following hypothesis was proposed.

**H1:** Market orientation has a positive impact on entrepreneurial competencies.

## **Environmental Turbulence**

Environmental turbulence is a dynamic occurrence characterised by perpetual change and activity. The alterations inherent in the phenomenon of environmental turbulence exhibit traits of dynamism, unpredictability, rapidity, and complexity (Volberda & Bruggen, 1997; Gyedu et al., 2021). Environmental turbulence refers to the degree of unpredictability in the environment resulting from the diverse occurrences affecting a specific industry (Wong, 2014; Tsai & Yang, 2014). An unstable environment, marked by significant uncertainty, presents enterprises with opportunity to transcend conventional industry boundaries. In this scenario, corporations can either accept risk, innovate new products and technology, or penetrate new markets (Calantone, Garcia & Dröge., 2003; Soares & Perin, 2020). There are negative effects of environmental turbulence that can force firms to quickly exit a market. To remain updated, firms have to monitor relevant information and adapt to market changes otherwise they face the risk of losing their competitive advantage (Dai, Maksimov, Gilbert & Fernhaber, 2014; Ojha, Struckell, Acharya & Patel, 2020). Businesses have to be very vigilant against the constant changes in the environment. Environmental turbulence is conceptualized based on three main sources of turbulence which can be considered as dimensions as well. These sources are “market turbulence” (Wong, 2014; Tsai & Yang, 2013; Hartono & Sheng, 2016), “Technological turbulence” (Huang & Tsai, 2014) and “Competitive Intensity” (Tsai & Yang, 2013).

Quite a few studies have arrived at the conclusion that many times competitive strategies work out with the support of environmental turbulence, which eventually results in the achievement of a competitive advantage. Ward and Duray (2000), Kuivaleinen et al. (2004) and Ojha et al. (2020) though there are many studies that do suggest that environmental turbulence has a negative effect on performance (Li & Atuahene-Gima, 2001; Lin & Germain, 2003; Power & Reid, 2005; Wang et al., 2021).

## **Environmental Turbulence and Entrepreneurial Competencies**

Ottesen and Grønhaug (2004) investigated the dynamics of market orientation in turbulent environments. During environmental turbulence, firms tended to prioritize other constituencies and external actors over their customers. So, there is an effect that environmental turbulence induces in an organization. Sumiati, Rofiq and Pramono (2019) consider turbulence in internal and external environments as a phenomenon that has an impact of market orientation.

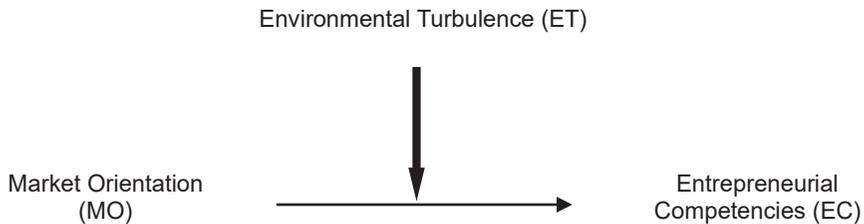
Many research papers have also implied that any orientation taken up by the firm to enhance its performance was directly affected by the market condition (McKee, Varadarajan, & Pride, 1989; Snow & Hrebiniak, 1980). It can be linked to market growth i.e. markets with higher demand ratio acquire less market orientation and vice versa, or it can also be linked to the competitors in the market, which can create more emphasis on the customers if the competition is fierce (Day & Wensley, 1988).

A major factor that induces changes in customer preferences and choices for products and services in an industry is market turbulence (Jaworski & Kohli 1993; Olson, Slater & Hult, 2005). Market turbulence is a key source of overall environmental turbulence. The frequency and magnitude of changes in the markets and technology in an industry are referred to as environmental turbulence. To create competitive advantages, companies should first have a clear understanding about their customers by monitoring and analyzing the industry around them (Grant, 2010). In times of intense market turbulence, customer needs evolve rapidly, and the innovativeness of a company becomes quite critical in developing solutions that satisfy customer needs and demands (Santos-Vijande & Alvarez-Gonzalez, 2007). During the time of technological turbulence, a manager

with a wide range of networks can quickly identify new opportunities, which may lead him/her to develop marketable services and products (Burt, 2000). Only a manager, either individually or within the organization, can create a wide range of networks if they have a market orientation. The same may be considered true for entrepreneurs. Through experience from environmental volatility, entrepreneurs develop a more realistic view of the market and therefore make decisions that are better aligned with market demand (Ribeiro-Soriano & Kraus, 2018). Higher turbulence may lead to more instances of experience that enable an entrepreneur to develop analytical skills and develop more options to tackle a wide array of challenges.

The Giessen-Amsterdam model suggests that the environment should exert a moderating influence on the relationship between strategies and success of an entrepreneurship. A strategy is developed based on an orientation, which in this context may be an entrepreneurial orientation. It has already been theorized that the environment has an effect on market orientation; moreover, entrepreneurial competencies may be taken as an antecedent to entrepreneurial success. Consequently, as a corollary, it may be theorized that environmental turbulence may moderate the link between market orientation and entrepreneurial competencies.

**H2:** Environmental turbulence moderates the link between market orientation and entrepreneurial competencies.



**Figure 2: Study Framework**

## METHODOLOGY

This study was based on the positivist philosophical foundation, in which an objective and systematic observation of a phenomenon was considered by exploring its aspects. A deductive approach was used where the identified

hypotheses developed through literature are examined for confirmation. We conducted the cross-sectional study within a single time frame.

The study followed a cross-sectional design, conducted within a single time frame. A questionnaire-based survey was administered to entrepreneurs of Pakistani SMEs in 2023, targeting individuals who either were currently running their businesses or had at least two years of prior business experience. A simple random sampling technique was employed to select a sample from the population. We used JASP software to analyze the collected data. For analysis, regression was used to determine the direct effect of MO on EC. Moderation analysis was carried out using Hayes's (2009) technique.

## **Population & Sample Collection**

Formal databases with established entrepreneurs data were not available. So, the researchers collected contact information of potential respondents through contacts available in multiple industries. A sampling frame of one thousand respondents was created based on their representation of industry and education level to ensure that the questionnaire in English would be comprehended by the respondents. About 600 questionnaires were distributed based on the simple random sampling method (Bougie & Sekaran, 2019). We created an electronic version using Google Forms and sent it to the majority of respondents. Of the 600 forms distributed, 470 forms were returned, out of which 422 were found to be sufficiently completed and suitable for further analysis.

## **Measuring Market Orientation**

There are two core conceptualizations of market orientation based on two distinct strands of thought (Matsuno, Mentzer & Rentz, 2005; Farooq & Vij, 2021). The first strand considers market orientation as a cultural construct. The second strand considers market orientation as a functional and operational construct. Narver and Slater (1990) considered MO as a cultural construct having three behavioral components, namely inter-functional coordination, competitor orientation, and customer orientation, and two decision criteria, being long-term focus and profitability. Inter-functional coordination refers to the internal dissemination of information that has been

collected from the customer and from the environment about customers and consumers. Competitor orientation refers to information gained about competitors from internal and external sources. While customer orientation again refers to information collected about the customers from internal and external sources.

This strand of thought takes orientation as a psychological construct; thus, all the elements are developed from that perspective. On the other hand, Kohli and Jaworski (1990) consider MO as an implementation of the marketing concept. The elements connected with MO are market intelligence generation, market intelligence dissemination, and organizational responsiveness. These stated sub-dimensions of MO take an operational perspective of marketing, considering intelligence, which is a functional phenomenon. In a different study, a scale has been developed by Farooq and Vij (2021) It includes market information, inter-functional cooperation, competitor orientation, and customer orientation as crucial components of market orientation. The scale incorporated both distinct strands of thought in one instrument using a five-point Likert scale, with 1 representing “strongly disagree” and 5 representing “strongly agree.”. The instrument developed by Farooq and Vij (2021) was used in this study.

## **Measuring Entrepreneurial Competencies**

Man and Lau (2000) had categorized entrepreneurial competencies into six stages of entrepreneurial behaviours. In the perspective of a specific context, it was essential to assess the entrepreneurs’ critical competencies. The context was a guide to understand which competencies are critical. The critical competencies included opportunity competency, learning ability, conceptual competency, strategic ability, ethical competency, personal ability, and familism. Opportunity competency was related to the ability of the entrepreneur to identify and move towards taking advantage of the opportunity. Learning competency was the ability to learn from the environment. Conceptual competency meant to formulate ideas. Strategic competency referred to developing a plan an set of actions. Ethical competency was related to following ethical guidelines. Personal competency and familism was related to dealing with and inspiring people to work with the entrepreneur. Man, Lau, and Chan (2000) had presented an entrepreneurial competency scale with the dimensions consisting

of opportunity competencies, relationship competencies, conceptual competencies, organizational competencies, strategic competencies, and learning competencies. It was critical to assess entrepreneurial competencies from the perspective of a specific context (Tehseen, Qureshi, Johara & Ramayah, 2020). Al Mamun, Fazal and Muniady (2019) used a scale to measure entrepreneurial competencies using the scales by Man, Lau, and Snape (2008). This study used a measure of entrepreneurial competencies developed by Ibidunni, Ogundana, and Okonkwo (2021). This scale was an improved version of Man, Lau, and Chan (2002) by adding risk-taking competency as an essential addition. Risk-taking competency referred to the entrepreneur's ability to take risks and drive success from those risks. This addition enhanced the entrepreneurial perspective by conceptualizing entrepreneurial competencies and using a five point Likert scale with 1 representing "strongly disagree" and 5 representing "strongly agree.". The scale developed by Ibidunni, Ogundana, and Okonkwo (2021) was used in this study.

## **Measuring Environmental Turbulence**

Volberda and van Bruggen (1997) did a detailed analysis on the dimensions of environmental turbulence, where dynamism, predictability, and complexity have been taken as the key dimensions. This was a variable that has been used in multitudes of studies, as it was a universal phenomenon. Jaworski and Kohli (1993) used a scale for environmental turbulence with technological turbulence and market turbulence as its dimensions. Kmiecik, Michna, and Meczynska (2012) further modified the scale and added a third dimension, being competitive intensity. This scale has now been used in further studies, like the one by Turulja and Bajgoric (2019), analyzing the effect of environmental turbulence on firm performance and innovation. Environmental turbulence (ET) was measured using an eight-item scale for the second-order reflective measurement model of ET, consisting of three first-order models, namely competitive intensity, technological turbulence, and market turbulence, as adopted by Turulja and Bajgoric (2019). Using a five point Likert scale with 1 representing "strongly disagree" and 5 representing "strongly agree.".

### Analysis Methodology

For analysis, regression was used to determine the direct outcome of the entrepreneurial orientation proceeding the entrepreneurial competencies. We employed the Hayes (2009) technique for mediation analysis. JASP software, developed by the University of Amsterdam, was used for conducting analysis.

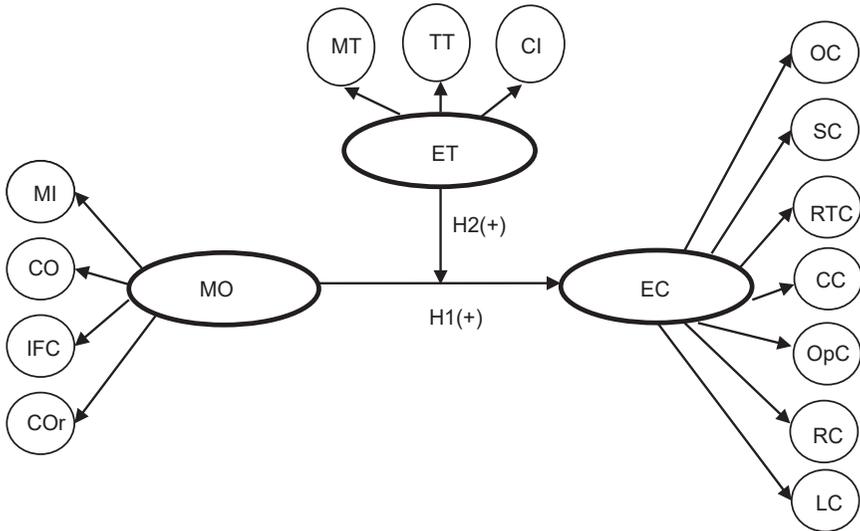


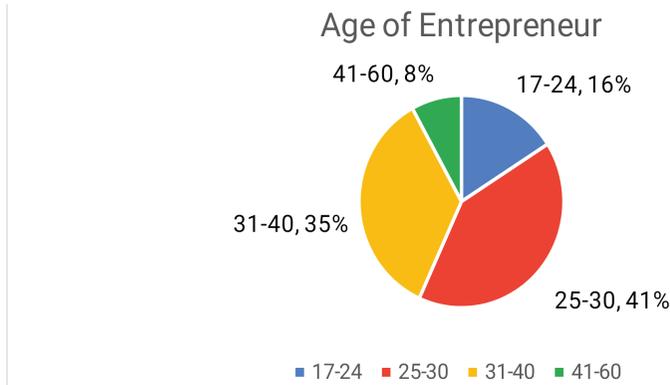
Figure 3: Structural Model of Study

The structural model given in Figure 3 depicts the constructs of the main variables as well as represents the hypothesis. Market orientation (MO), the independent variable, was based on the dimensions of market intelligence (MI), customer orientation (CO), inter-functional coordination ((IFC), and competitive orientation (Comp\_Orient). The moderating variable of environmental turbulence (ET) was composed of the dimensions of market turbulence (MT), technological turbulence (TT), and competitive intensity (CI). The dependent variable of entrepreneurial competencies (EC) was based on the dimensions of organizing competency (OC), strategic competency (SC), risk-taking competency (RTC), conceptual competency (CC), opportunity competency (OpC), relationship competency (RC), and learning competency (LC). Hypothesis (H1) was depicted, indicating a

positive direction of relationship. While moderating hypothesis (H2) was also depicted as a positive relationship.

## RESULTS

### Demographics



**Figure 4: Age of Respondents**

The values given in Figure 4 present the age groups of the respondents. About 16% of the respondents were in the 17-24 age range. Nearly 41% of the ones who responded were in the 25-30 age group. Some 35% of the entrepreneurs were in the 31-40 age range while only 8% of the one's responding were in the 41-60 age range.

**Table 1: Gender of Respondents**

Male	373
Female	50

The genders of the respondents are presented in Table 1. About 88% of the respondents were male and some 12% of the respondents were female.

Most of the respondents—about 40%—were between the ages of 25 and 30. Some 11.5% of the respondents were between 19 and 21 years of age. Only 6.5% of the respondents were below the age of 18 or above the age of 25.

## Reliability

**Table 2: Mean, Standard Deviation, Correlations & Cronbach Alpha**

	Mean	Std. Deviation	MO	Int_C	Env_T
<b>MO</b>	4	0.536	<b>0.791</b>		
<b>Ent_C</b>	3.863	0.585	0.627	<b>0.754</b>	
<b>Env_T</b>	3.762	0.610	0.493	0.566	<b>0.824</b>

Values given in Table 2 represented the mean, standard deviation, and correlation values between the constructs. While Cronbach alpha values for reliability are given in bold. Mean values were above three, with MO having a mean value of 4, meaning that there was a higher level of agreement about market orientation, entrepreneurial competencies, and environmental turbulence in the contextual settings of the study. Cronbach alpha values for all the constructs were above 0.7, suggesting a high level of reliability of the constructs of each variable.

## Validity

**Table 3: Validity of Constructs of MO**

	CR	AVE	CO	Comp_Orient	IFC	MI
CO	0.843	0.516				
Comp_Orient	0.761	0.420	0.700			
IFC	0.816	0.467	0.763	0.787		
MI	0.795	0.435	0.590	0.762	0.810	

The numbers given in Table 3 represent the CR, AVE, and HTMT values of the dimensions of Entrepreneurial Orientation, including innovativeness (INNOV), proactiveness (PA), and risk taking (RT). The CR values were

**Table 4: Validity of Constructs of EC**

	CR	AVE	OC	CC	LC	RTTC	SC	OPPC
OC	0.818	0.529	-	-	-	-	-	-
CC	0.887	0.561	0.919	-	-	-	-	-
LC	0.845	0.520	0.837	0.888	-	-	-	-
RTTC	0.833	0.512	0.739	0.797	0.837	-	-	-
SC	0.839	0.502	0.812	0.805	0.846	0.892	-	-
OPPC	0.850	0.529	0.802	0.799	0.847	0.746	0.758	-

The figures given in Table 4 represent the CR, AVE, and HTMT values of the dimensions of entrepreneurial competencies of organizing competency (OC), conceptual competency (CC), learning competency (LC), risk-taking competency (RTTC), strategic competency (SC), relationship competency (RC), and opportunity competencies (OPPC).

**Table 5: Validity of Constructs of ET**

	<b>CR</b>	<b>AVE</b>	<b>MT</b>	<b>TT</b>	<b>CI</b>
MT	0.828	0.443	-	-	-
TT	0.847	0.523	0.772	-	-
CI	0.825	0.485	0.640	0.588	-

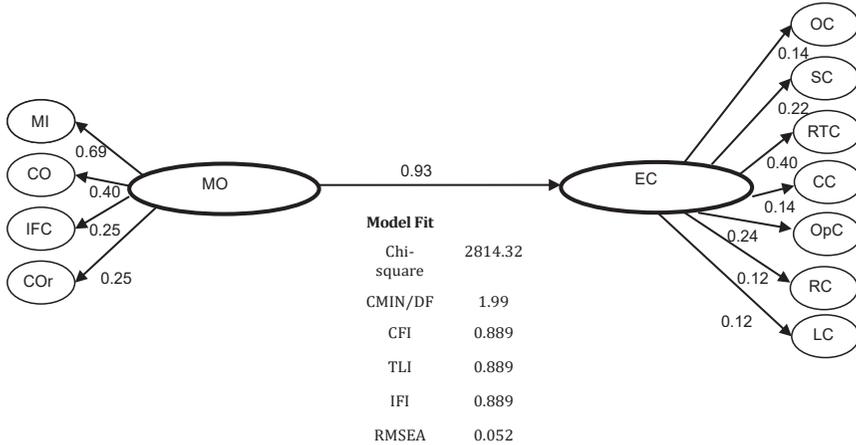
The numbers given in Table 5 represent the CR, AVE, and HTMT values of the dimensions of Environmental Turbulence (ET). The dimensions covered were market turbulence (MT), technological turbulence (TT), and competitive intensity (CI).

For identifying the latent variable reliability, the  $CR \geq .70$  (Hair, Hult, Ringle, & Sarstedt, 2022). For all the measured constructs, the CR values were greater than 0.7. We used AVE to measure convergent validity. For the constructs of entrepreneurial competencies (EC), the AVE values were above 0.5, which was considered acceptable. On the other side, the AVE values for the constructs of entrepreneurial orientation (MO) and environmental turbulence (ET) were some measured variable values that were less than 0.5 and above 0.4. Some experts recommend that if CR values are above 0.7, then it is acceptable to consider convergent validity as good enough. As AVE, it is considered a conservative measure (Malholtra, 2010, p. 702).

For discriminant validity, HTMT values were used. All the values of the measured variables had HTMT values of below 0.850. Threshold values for HTMT were 0.850 for strict and 0.900 for liberal discriminant validity. All the values were below 0.9, so strict discriminant validity was ascertained for all the measured variables.

## DATA ANALYSIS

### Market Orientation and Entrepreneurial Competencies



**Figure 5: Direct Outcome of Market Orientation on Entrepreneurial Competencies**

The first hypothesis developed projected the result of market orientation on entrepreneurial competencies. We developed an SEM model, as depicted in Figure 5, to test the stated hypothesis. The correlation between MO and ET was 0.493 which showed a strong level of correlation. The CR and AVE values were also within limits and all the assumptions of SEM were acceptable. The model fit values indicated an acceptable fit. The estimate of the beta value of the relation between market orientation and entrepreneurial competencies was 0.93 which meant that a unit change in market orientation will bring a 93% change in the value of entrepreneurial competencies at a p-value < 0.000 showing a very strong direct effect of market orientation on improving entrepreneurial competencies.

## Environmental Turbulence as Moderator

**Table 6: Total Effect of Environmental Turbulence as Moderator**

	Estimate	Std. Error	z-value	p	95% Confidence Interval	
					Lower	Upper
Mark_O → Ent_Com	0.4141	0.041	10.697	<0.001	0.360	0.552
Env_Tur → Ent_Com	0.335	0.040	8.337	<0.001	0.256	0.414
Mark_O:Env_Tur → Ent_Com	-0.042	0.022	-1.940	<0.001	-0.085	4.319x10 <sup>-4</sup>

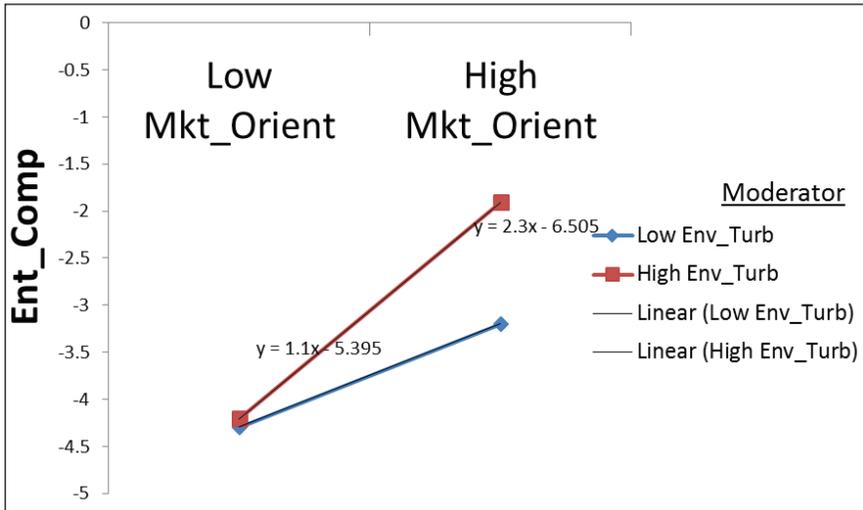
The second presented hypothesis posited that environmental turbulence moderated the link between market orientation and entrepreneurial competencies. Table 6 illustrates the comprehensive consequences. Market orientation continued to significantly influence entrepreneurial competencies. The projected value of 0.441 was significant at  $p < 0.001$ . Environmental volatility significantly influenced entrepreneurial competencies. This was evidenced by a substantial ( $p < 0.001$ ) estimate value of 0.335.

The model indicated that market orientation significantly influenced entrepreneurial skills, evidenced by a beta value of 0.441, which was significant at  $p < 0.001$ . The composite variable of market orientation and environmental turbulence exhibited a beta value of -0.042, which was slightly statistically insignificant at  $p < 0.001$ . But if the testing was done at the  $p < 0.01$  level, then it may be considered significant. The direct impact of environmental turbulence on entrepreneurial competencies was substantial, with a beta coefficient of 0.335. The  $R^2$  score was 0.48, signifying a robust model fit. On the other hand if we compared it with the direct model, as in the SEM model, which showed an effect of 0.933, the influence of market orientation had decreased by approximately 53% to a value of 0.441 in a model with the presence of environmental turbulence. This indicated a substantial moderating impact of environmental turbulence on the overall system.

**Table 7: Effect of Market Orientation on Entrepreneurial Competencies at Various Levels of Environmental Turbulence**

	Env_Turb	Estimate	Std. Error	z-value	p	95% Confidence Interval	
						Lower	Upper
Mark_O → Ent_Com	16	0.481	0.042	11.552	<0.001	0.399	0.563
Env_Turb → Ent_Com	50	0.433	0.042	10.23	<0.001	0.350	0.516
Mark_O:Env_Turb → Ent_Com	84	0.407	0.048	8.417	<0.001	0.312	0.502

Values given in Table 7 represent the total effect of market orientation on entrepreneurial competencies at different levels of environmental turbulence. Results suggested that as environmental turbulence increased, the effect of market orientation on entrepreneurial competencies decreased. This is evident from the decrease in estimated values. The graph given in Figure 6 also represented this effect.



**Figure 6: Moderation of Environmental Turbulence**

At lower levels of market orientation, as well as lower levels of environmental turbulence, the levels of entrepreneurial competencies were also low. This may be looked at as a level of competencies. As market orientation improved, the level of entrepreneurial competencies also increased. At low levels of environmental turbulence, there was some improvement in entrepreneurial competencies. On the other hand,

in conditions of higher levels of environmental turbulence, there was a significant increase in entrepreneurial competencies. The same was the case with high levels of environmental turbulence. But the rate of improvement in entrepreneurial competencies was quite high for situations with high market orientation and high levels of environmental turbulence in comparison to situations with low levels of market orientation.

## **DISCUSSION**

Market orientation is a fundamental concept that has been infrequently addressed in relation to entrepreneurship and entrepreneurial success. Limited research had investigated the influence of entrepreneurship on the development and enhancement of entrepreneurial competencies. Limited research had investigated the synergistic effect of market orientation and entrepreneurial orientation on performance in the entrepreneurial domain. This study addressed the significant gap regarding the impact of market orientation on entrepreneurial competencies. This study also addressed the impact of environmental instability on market orientation and competences within the entrepreneurial context, which was a significant gap in the literature.

The initial hypothesis formulated was to assess the impact of market orientation on entrepreneurial competencies. The results indicated a significant favourable impact of market orientation on entrepreneurial competencies. Market focus undeniably aided entrepreneurs in cultivating skills that ultimately result in success. This aligned with the study conducted by Al Mamun, Fazal, and Muniady (2019). In addition to the guidance provided in GAM, which asserted that personality influenced the development of human capital.

The second hypothesis was developed to determine how market orientation and entrepreneurial competencies were related to environmental turbulence. The findings showed that, generally speaking, the degree of turbulence in the environment, termed environmental turbulence, created a strong influence on developing and enhancing entrepreneurial competencies created or enhanced due to market orientation.

Environmental turbulence is a phenomenon that is operative on all elements of any system. In the case of an entrepreneurial system the source and intensity of turbulence in the environment creates varying effects on entrepreneurial outcomes. The three key sources of turbulence discussed are markets, technology and competition. Market turbulence is inherently connected with market orientation. An entrepreneurship that has its focus on the market would have a very strong chance of managing and even profiting from market turbulence. This is true for any sector or any type of industry. Recent examples of companies like Alphabet, Tesla, BYD, and Zoom are a testament to market orientation and managing turbulence in the environment. Results of this study seemed to follow this fact. At low levels of environmental turbulence there was a strong effect of market orientation on entrepreneurial competencies. This was so because in stable environments, market oriented companies were focusing more on customers, and they may have been able to improve competencies based on the insights gained from the market. In case of high environmental turbulence the case became quite interesting. For firms with low levels of market orientation, the focus on entrepreneurial competencies significantly improved. But, for firms with a high market orientation, the focus on improving competencies became very intense. This may be due to companies with high market orientation rigorously following market patterns and were able to hone their competencies with very sharp focus as compared to firms with low or no market orientation. This finding may explain why most of the firms with a strong market orientation have been able to survive and even thrive in highly turbulent environments. This is in line with the idea that firms that have market orientation as a culture (McClure, 2010; Savabieh, Nayebzadeh & Abghari & Hataminasab, 2022) can be highly successful (Jaworski, Kohli & Sahay, 2000), with the right set and levels of competencies, even in turbulent environments.

## **CONCLUSION**

Market orientation is an important antecedent to firm success (Jaworski, Kohli & Sahay, 2000). This research focused on a significant milestone in the pathway to reach success, starting from market orientation. The key milestone was entrepreneurial competencies. The literature review suggested that there may be a strong impact of environmental turbulence

on the link between market orientation and entrepreneurial competencies. A survey-based methodology was designed with entrepreneurs who are currently active or have been actively indulged in entrepreneurship in the past designated as the population. We obtained workable data from a sample of about 422 entrepreneurs from different cities in Pakistan. The data obtained was analyzed using JASP software. The techniques applied were regression and moderation analysis. The results of the hypothesis testing are summarized in Table 8.

**Table 8: Results of Hypothesis Testing**

	<b>Hypothesis</b>	<b>Status</b>
H1	Market Orientation has a positive effect on entrepreneurial competencies	Accepted
H2	Environmental turbulence mediates the relationship between Market Orientation and entrepreneurial competencies	Accepted

Some important insights were obtained from the analysis. Market orientation was found to have a strong effect on entrepreneurial competencies meaning a market-oriented firm is more active in developing and enhancing entrepreneurial competencies. This is of significant importance for entrepreneurs, as having a market orientation can guide the entrepreneurs to focus on developing and enhancing competencies that are market-focused. Environmental turbulence is a phenomenon that affects every organization. The results of this study suggested that for entrepreneurs in terms of developing competencies, environmental turbulence does have an impact. But if the orientation of the firm is market-focused, then in times of high environmental turbulence, their focus on developing competencies becomes more acute meaning that entrepreneurs' focus on competencies that are more market-focused becomes even stronger. Even in times of lower levels of turbulence in the environment, market-oriented entrepreneurship still had a significant focus on market-relevant competencies. This again is a significant guidance for entrepreneurs that market orientation will help companies focus on developing competencies that are desired by the market.

From a theoretical perspective, the results of the study are quite in line with the Giessen Amsterdam Model, which in itself is an abstraction from the resource-based view. An entrepreneur's personality includes market orientation, which serves as the foundation for the development of their human capital. Competencies are a key characteristic of human

capital. The core contribution of the study is in quantifying the effect of market orientation on entrepreneurial competencies, as well as looking at the variance in effects of market orientation on entrepreneurial competencies at varying levels of environmental turbulence. This study also contributes to literature by studying the effect of market orientation on entrepreneurial competencies in the context of a developing country.

## **LIMITATIONS AND FUTURE RESEARCH**

This study examined a relationship that had not received much empirical research before. There were several factors that limited this study. Pakistan is compelling case for high levels of environmental turbulence due to multiple factors. Entrepreneurs that operate in these situations are quite robust in terms of their opinions so data collection was only possible from entrepreneurs that the researcher has some level of acquaintance with or were part of the local or social networks. Even organizations were not very comfortable about sharing information. Due to this limitation, only a few cities of Pakistan could be covered, where the researchers were able to identify and reach entrepreneurs who were willing and able to reply to the questionnaire. The study was cross-sectional and limited in terms of the length of time available to conduct the study. This study was also self-funded by the researchers.

Future studies can further validate the effect of market orientation on entrepreneurial competencies. It would be beneficial to study which aspects of market orientation have an effect on entrepreneurial competencies. Furthermore, which competencies are affected more by which dimensions of market orientation. Another interesting area to study is the effect of the dimensions of environmental turbulence. Which sources of turbulence have stronger effects on market orientation as a whole or its dimensions, and then which types of competencies are impacted? Similarly, we can replicate the current study in diverse regional and national contexts. Future research can also be conducted using the most relevant dimensions of market orientation, environmental turbulence, and entrepreneurial competencies. It would also be quite relevant to study the effect of competencies at the global and dimensional level on entrepreneurial success from a financial perspective as well as non-financial aspects of entrepreneurial success.

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