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Environmental Turbulence's Effects on Entrepreneurial Orientation

Khairi Mohamed Omar

College of Administrative Sciences, Applied Science University, P.O. Box 5055, East Al-Ekir, Kingdom of Bahrain

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Abstract: This study was carried out to examine the environmental turbulence's effects on entrepreneurial orientation. The paper reviews the effects of environmental turbulence's on entrepreneurial orientation in relation to gulf countries context. The quantitative method used to achieve the study objectives. Using convenient sampling, online questionnaires survey used in order to obtain the required data and information. Out of 500 targeted responses, 387 questionnaires returned representing 77.4%. The study findings reported that environmental turbulence's has a greeter effects on entrepreneurial orientation in related to entrepreneurial orientation in gulf countries. Further, the study emphasize the critical need of a suitable product-service competitive strategy that encourages novelty development in the tumultuous and unpredictable setting of today's economic climate.

Keywords: Environmental Turbulence, Entrepreneurial Orientation, Gulf Countries.

1. Introduction

The dynamic changes in today's world are fast than before ever. These changes are huge changes and affect all aspects of human been life socially economically, and politically. The business owner's entrepreneurs and small or big businesses start researching creative and brilliant ideas to survive. The world business either Micro or Macro business has begun already established different methodologies and strategies plans to gain competitors' advantages. The Small and Medium-Sized Enterprises (SMEs) play an important role in the country's economic growth and contribute significantly to countries economic and GDP. In developing economies, both SMEs and emerging companies are a key contribution to national economic development as well as a major source of job creation [1]. In the case of developing countries, the importance of SMEs is accentuated and increased since the country's growth is not only based on the shoulders of multinational enterprises, but local enterprises as well.

Other turbulences, such as the economic [2], cycle, currency rate, wage and raw material supply/price volatility, rising stringency on green compliance [3], and market protectionism, necessitate proactive, intelligent, and imaginative responses from electronic enterprises. The capacity to overcome these issues may all come down to one factor: a company's entrepreneurial orientation to survive and expand in an unpredictable market.

In recent years, there has been an upsurge in interest in environmental turbulence research due to the continual growth in unanticipated developments in technical and market sectors [4][5][6]. It is stated that environmental turbulence, the perils of which have long been described in the literature, provides a variety of chances for enterprises that can recognize its development potential and mobilize their internal systems accordingly [7][8][4]. In this regard, a rising body of literature recognizes innovation as the most common effect of environmental instability manifesting itself in technological areas and market settings [4][5][9].

More literature is focused on regions such as Canada, Latin America, South Africa, the Caribbean, Europe, and the Pacific [10]. Finally, few studies have concentrated on SMEs in the South East Asia area, which includes nations such as China, India, and Pakistan [11].

This research attempts to address environmental turbulence's effects on entrepreneurial orientation issues through theoretical and empirical contributions. The paper contend that the environmental turbulence's effects on entrepreneurial orientation, oversimplifies the nature and extent of the relationship, owing in large part to the fact that it undermines the inherent complexities and uncertainties of the current turbulent market environment. A contingency approach to the study of innovation is thus more adaptable and responsive to the realities of the corporate environment, especially in the present era of digital change.

As a result, the main objective of this research is to

*Corresponding author-mail: khairi.omar@asu.edu.bh

determine environmental turbulence's effects on entrepreneurial orientation SMEs performance in GCC countries.

2. Research gap

In the business and innovation management literature, the impact of entrepreneurial orientation on corporate performance is well-studied [12][13][14]. Previous research has shown that companies that exhibit the entrepreneurial orientation traits of proactive personality and innovation, as well as a willingness to take measured risks, seem to be more likely to obtain first-mover advantage by launching new goods before competitors [15][16].

Companies are more competitive and have a higher probability of achieving a positive [3]. However, limited study has been done on the connections between environmental turbulence, entrepreneurial orientation in the link among environmental turbulence. This study explored the suggested linkages to explore and to what degree environmental turbulence generates a firm's entrepreneurial orientation behaviors, building on previous studies and drawing strength from theoretical models on environmental turbulence, entrepreneurial orientation (EO).

It requires a great individual or team efforts to bring a successful ideas, services and product to market. While designers are in charge of usability, usefulness, and the rest of the user experience, there are several elements that influence the success or failure any idea or product development, many of which are outside the inventor's direct control.

3. Literature review:

3.1. Entrepreneurship and entrepreneurial orientation (EO).

Over the years, entrepreneurship has been studied from a variety of angles and characterized in a variety of ways. The entrepreneurship and entrepreneurial activities refers to the result from it have been conceptualized as sets of personal traits and underlying behaviors, sets of collective values reflected in business procedures and practices or sets of methods, decision-making activities that individuals, collectives, and organizations engaged [17]. Which including the new development of the process of designing, launching and running a new business, this might be often similar to the "capacity and willingness to develop, organize and manage a business venture along with any of its risks to make a profit", this act could be by specific people with entrepreneurial aptitudes who create these ideas or businesses and to be often referred to as entrepreneurs.

Lately, the study of entrepreneurship as the primary driver of business survival and growth has gotten a lot of attention [18] [19]. Entrepreneurship is described as "the process by which an individual or a group of individuals, in conjunction with an existing organization, form a new organization or initiate renewal or innovation within that company" as a business phenomenon (Sharma & Chrisman, 1999). Entrepreneurship is the main driver of company success, according to empirical studies [20][21][14]. It is worthy to mention that Entrepreneurial Orientation (EO) led by several dimensions. According to Miller (1983) [22], entrepreneurship has three important dimensions:

1- Innovativeness.
2- Risk-taking.
3- Proactiveness.

When these dimensions aligned to address the challenges of a changing environment, they are referred to as a company's entrepreneurial orientation [23] [24].

Innovativeness. The most widely mentioned Entrepreneurial Orientation (EO), component is inventiveness. Lumpkin and Dess (1996) [13], define innovativeness as "a firm's inclination to participate in and promote new ideas, novelty, experimentation, and creative processes that might result in new goods, services, or technical processes." Innovativeness and innovation are two ideas that are connected but not the same. Indeed, innovativeness is a propensity, a person's or an organization's receptivity to new ideas, new thinking, or new solutions that lead to new possibilities [25] [26].

Innovation, on the other hand, is defined as "the adoption of an internally created or borrowed concept – whether it relates to a product, technology, system, process, policy, program, or service, that was new to the organization at the moment of adoption" [27].

Though no similar classification has been proposed in organizational, technological, and marketing innovations may all be found in the electronics manufacturing industry [28][26][29][30]. An improved or radically innovative product, a revolution or minor adjustment in manufacturing or administrative process, or the birth of a whole range of novel products spurred by the application of a revolutionary process, such as 3D printing, can all be the result of innovation.

Thrilled by inventiveness many academics feel that an entrepreneurial firm's willingness to participate in product-market innovation is the most conclusive measure [32][33]. An organization that engages in product-market innovation encourages and supports its workers to think and act in new ways. It is more eager and ready to provide an enabling and motivated environment in which new or considerably enhanced goods may be developed [34]. A more international division of labor based on skill sets, factor costs, and other social and political concerns has redefined innovation in the electronics sector [35]. Since the 1980s,

a global manufacturing network or value chain has been established that spans corporate and geographical boundaries. It is now common practice for lead firms or firms that conceive the product idea to outsource production to participants at the lower tiers of the value chain, such as contractors, turn-key suppliers, or assemblers, all over the world, rather than producing their product from idea to finished good in-house [36].

Relying on a single source of revenue, such as oil, is always an economic risk that results in a turbulent economy. Recently, the economies of the GCC Gulf nations have seen broad-based economic recovery as a result of rising non-oil activity and a gradual shift to more normalized oil output levels [37]. Indeed, indices of business confidence have rebounded to their best levels since early 2018, as activity in sectors such as tourism, commerce, and construction has increased. Growth is further aided by the activity around Dubai Expo2020. As a result, it is critical to study such innovativeness characteristics in today's world economy, particularly in this area of the world.

Bahrain is a Gulf country, and the country stands to benefit from the worldwide outsourcing of labor-intensive manufacturing from developed countries. Changes in demography, increased domestic demand, growing eco-consciousness, and other environmental turbulences have driven firms and industry actors to reassess their place in the industrial value chain in recent years.

Relying on a single income like oil may always be an economic gamble that results in a volatile economy. Recently, the GCC Gulf countries' economies are amidst a broad-based economic recovery due to accelerating non-oil activity, and a gradual move to more normalized oil output levels [38]. Indeed, the indicators of business confidence have recovered to their highest levels since early 2018 as activity has expanded in areas such as tourism, trade and construction. Growth is also benefiting from activity around Dubai Expo2020. Therefore, it is an important thing to have such Innovativeness variables to be studied in today world economy specially in this part of the world.

Bahrain is one of the Gulf countries', the country has a good position to gain from the global outsourcing of labor-intensive manufacturing from industrialized countries. In recent years, changes in demographics, expanding domestic demand, growing eco-consciousness, and other environmental turbulences have pushed businesses and industries actors to reconsider their position in the industrial value chain.

In keeping with the industry's goal to move up the value chain, the country's administration has promoted industrial upgrading and innovation in its most recent 2030 vision. A steady stream of purposeful governmental efforts has been conducted at both the national and regional levels to encourage industry participants to explore competitive advantages beyond cost and labor capacity. The question persists, despite the fact that it appears that some favorable conditions have already been created for GCC countries industrial and businesses to advance in their innovation activities. Is there a common approach, vision, or practice toward innovation in the country? The importance placed on leading-edge technology and innovation by respondents, the number of new product lines created in a given period, the radicality of the innovation, and the respondents' proclivity for innovation, in general, were used to determine respondents' perceptions of innovativeness in this study.

This study aims to shed light on these elements such as innovativeness related to environmental turbulence effects on entrepreneurial orientation.

Risk-taking: Companies with a strong innovation culture are more likely to introduce new and better ideas, items and services before their competitors, providing them a competitive advantage [38][39]. This advantage, however, is not just due to meticulously planned innovation; the company's willingness to take a risk by breaking new ground in product development also contributes significantly to the advantage.
At the business level, risk-taking is defined as "the extent to which managers are willing to accept big and hazardous resource commitments i.e. those with a reasonable probability of costly failures" [40].
Risk-taking is an essential aspect of EO, and most scholars believe that for it to be effective, risk must always be present in conjunction with innovation [41][42][22][16].
While risk is intrinsic to innovation since the commercial potential of new goods is extremely unknown, risk-taking fosters creativity because innovation is unlikely to occur without it [43]. According to several studies conducted in relation to this topic such as, [44][3], the failure rate of innovation initiatives might be as high as 50% which make sense in many ways. Entrepreneurial businesses, on the other hand, were unfazed by the high stakes and may commit up to one-fourth of their revenues to goods produced in several years.

Now, in many businesses and business fields, risk-taking generally takes the shape of new product development and introduction [45]. Despite the fact that these endeavors require the dispersal of scarce resources and may result in a colossal cost to the firm if customers are unwilling to pay for these innovations, firms are still enticed to take the risk by the prospect of new opportunities, new sources of revenue, profits, and new or enhanced competitive advantages.

It becomes fact, critical, and urgent significant that businesses should have to create indigenous innovations and grab product and process breakthroughs. Perhaps, in order build such skills it is required to have access to a diverse collection of talents and experience, along with

suitable funding's in some cases and the courage to take on the risk of competing directly with existing competitors if any.

Proactiveness: Innovativeness and risk-taking are linked to proactiveness because to innovate and take risks, all that is required is the desire to step outside of one's comfort zone and bring about change and company growth through the introduction of a new product or method [23] [24]. As an EO dimension, proactiveness refers to "the desire and insight to exploit fresh possibilities" [13].

A proactive company is forward-thinking and on the lookout for new opportunities [46]. It focuses on the future and tries to take advantage of possibilities it sees by using all of its knowledge of the environment, such as consumer demands, resource availability, technology availability, rival tactics, and so on. Proactivity is linked to first-mover advantage because a company that can foresee future demands and develop new goods to fulfill those needs ahead of the competition likely to gain competitive advantages in sourcing, finance, and market access [21].

The attitudes of new ideas or product developers toward the development of creative ideas and bringing these ideas to life are determined by a company's proactiveness. According to previous research, firms serving industrial or consumer product markets differ in terms of proactiveness, with the former being more inclined toward standardization and control and less proactive in satisfying current and future customer needs, and the latter being more responsive to changing customer preferences and more ready to meet customer preferences [47].

This study makes no distinction between companies that make industrial or end-market goods, because the electronics industry's rapidly shortened product cycle and growing competition have made it obvious that being inactive is no longer an option if a company wants to thrive [48]. To compete, all businesses, regardless of the markets they service, must create a wide range of items in varying volumes in a short amount of time [49].

This agility can only be achieved if management thinks ahead and anticipates consumer demands, then aligns the necessary resources to satisfy those needs boldly and creatively [49]. Proactiveness was assessed in this study by a company's capacity to take action ahead of rivals, to lead the market in new product development, and a respondent's overall opinion of a company's proactiveness and competitiveness [39][23].

4. Environmental Turbulence (ET):

In the context of business, environmental turbulence refers to the unpredictability, uncertainty, volatility and the wide-ranging events that occur in the environment in which a specific industry functions [47][7] [48]. Therefore, in order to sustain a competitive advantage and achieving the goals and success, it is wise to assess the external environment and adopt appropriate responses within the environment.

According to previous market orientation research, environmental turbulence can take three forms: technical, competitive, and market turbulence [50]. Technological Turbulence (TT), refers to the speed and unpredictability of technological change within an industry [51] [52], whereas, Competitive Intensity (CI), refers to the level of competition a firm faces within an industry [53] [54] and Market Turbulence (MT), refers to the extent and volatility of changes in the composition, behavior, and preferences of customers [51]; and market [55] [56][51]. Environmental turbulence is a term used in this research to describe external variables that cause well-known unpredictability or fluctuation in an industry's businesses [58][57]. It was assessed by polling respondents on their views on market predictability, rate of change in terms of innovation, consumer preferences, and research and development spending [58].

The significant and prominent instability in some industries and services in recent years has been described as progressively shortened product life cycle. The rapid technological advancements for instance (Technological Turbulence) customers' growing desire and preferences for better new products (Market Turbulence); and intensifying competition among producers to meet customer expectations, to address evolving environmental goals [3].

While some businesses look at environmental turbulence as a threat to their performance or even existence [59][60], it is seen as both a challenge and an opportunity by more enterprising businesses [61]. On the one hand, environmental turbulence disrupts the status quo, stealing customers and forcing businesses to leave their comfort zones and compete with new capabilities and offerings; on the other hand, it presents an opportunity for developing new products, mastering new technology, engaging with new customers, and expanding into new markets, all of which contribute to growth and competitive advantage [62] [63]. Organizations are driven to think and act entrepreneurially by the desire to discover a method to work through turbulence and to generate growth and success out of volatility.

Based on what has been discussed above, environmental turbulence motivates a individuals and businesses to develop a keen discernment of market risks and opportunities, to build organizational momentum and innovative capabilities to seize the opportunity while addressing the risks and uncertainties that turbulence presents, and to channel and harness internal efforts to achieve the goal of turning opportunity into profit and as a result, it was proposed that:

H1. Environmental turbulence (ET) has a direct effects on Entrepreneurial Orientation (EO).
H1a. Environmental turbulence (ET) has a direct effects on risk-taking.
H1b. Environmental turbulence (ET) has a direct effects on innovativeness.
H1c. Environmental turbulence (ET) has a direct effects on.

5. Research model:

When this research framework is translated into the hypothesized model as displayed in below Figure (1), the demonstrating variables were drawn with the error terms for each latent variables. Figure (1) depicts a research model based on the aforementioned ideas. In addition, all variables were assessed using multi-item scales: the environmental turbulence items were adopted from Stanley [8]. These items were also reviewed based on some similar work done by [58][39][3].

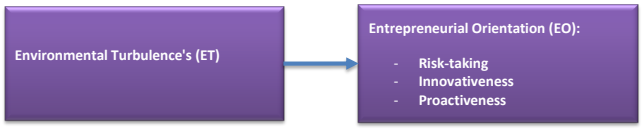

Fig.1: Research framework.

6. Research methods:

The pilot test were utilized to fine-tune and verify the questionnaire items, which was in order to comply with the study objectives by invited some academic and expert in this area to participate in the pre-test by filling sent the questionnaire. The questionnaire was sent and returned with minor comments from the participants. This procedures was a helpful and yielded positive findings. However, and due to the good validity and reliability of the study questionnaire items as adopted from previous research, the final questionnaire was distributed to the selected sample size. The required data for the main study was collected via an online questionnaire. Furthermore, for data analysis, Smart PLS 3.0 software were used.

The major investigation took place in kingdom of Bahrain. A total of 500 online questionnaire were created and distributed. This process followed by several follow up stapes such as notifications and so on, five days following the first invitation, each of the participators received a reminder. Out of 500 distributed questionnaires 387 valid questionnaires received which corresponds to an approximate response rate of 77.4%, which is comparable to other research of a similar kind [3].

6.1. Data analysis

In this study, there were four phases to data analysis. To begin, an exploratory factor analysis (EFA) was performed using SPSS version 21, to investigate the underlying variables of the measuring items. Second, descriptive statistics and reliability test results for the underlying variables, as well as correlations between them, were given. Third, the factor structure and model fit were confirmed using a Smart PLS 3.0, measurement model. Finally, the hypothesis were tested using a structural equation model using Smart PLS 3.0.

The model was analyzed using Smart PLS 3.0, a Partial Least Squares (PL) Structural Equation Modeling (SEM) tool. Smart PLS simultaneously assesses the psychometric properties of the measurement model and estimates the parameters of the structural model.

In terms of respondent characteristics, according to Figure 1, the majority of respondents thought their businesses were medium-sized (59.4%), 29.5 percent thought their businesses were tiny, and 11.1 percent thought their businesses were huge. When it came to the number of design engineers employed, the majority of the businesses (58.6%) had 20 or more design engineers, followed by those with 20 to 50 design engineers (33.6 percent). Only 7.8% of the businesses had 51-100 design engineers, and none of the firms that responded had more than 100 design engineers. Components and/or subassemblies suppliers accounted for 46.3 percent of the responding companies, completed product suppliers stood for 32 percent, and companies active in both industries accounted for 21.7 percent.

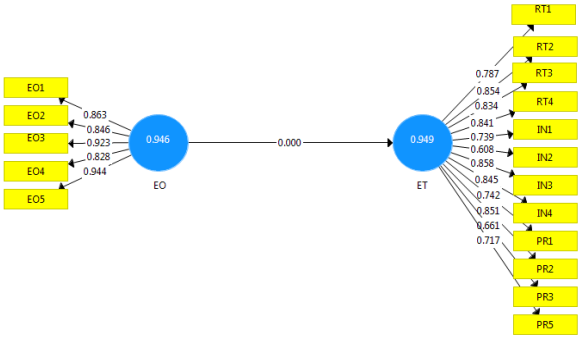

Fig.2: Structural model.

Figure (2), depicts the research model representing the study hypotheses. Smart PLS 3.0 and Structural Equation Modeling (SEM) tools, was used to examine the research model. Smart PLS evaluates the psychometric characteristics of the measurement model while also estimating the structural model parameters.

6.1.1. Validity and Reliability:

The discriminant validity testing results are calculated by using the AVE square value [64], as it displayed in Table

1. The AVE square root value of all constructs reported above the correlation value with other latent constructs. Similarly, the cross-loading value of all items from an indicator is greater than the other indicator items, so it can be concluded that the model has met discriminant validity. All the indicators have a loading factor value above 0.5, based on that the study model met the convergent validity requirements. Apart from loading factor, the AVE value of each construct was conducted to assess the convergent validity.

However, the AVE value for each construct of this study is more than 0.5. So the convergent validity of this study model and met all the requirements [65]. Table 1 was created for better understanding of the discriminant validity testing results for the values of loadings, Cronbach's alpha, composite reliability, and AVE for each complete construct. The model's composite reliabilities vary from 0.896 to 0.969, which above the suggested threshold value of 0.70. [66]. the average variance extracted (AVE) for each measure exceeds 0.50, from 0.701 to 863, which consistent with recommendation of several authors [67][68][69]. The bolded components in the matrix diagonals, which indicate the square roots of the AVEs, are always greater than the off-diagonal elements in their respective row and column. Therefore, the study result supports the discriminant validity of the scales.

Also, the results displayed in table 1, shows that Cronbach's alpha value and the composite reliability of all constructs helps in assess the construct reliability value. It is recommended for composite reliability and Cronbach's alpha value to achieve (> 0.7), and more. This study reliability test results shows that all constructs have composite reliability and Cronbach's alpha values greater than (> 0.7), which can be concluded that, all constructs have satisfied and met the required reliability [65] [66].

6.1.2. Hypothesis testing:

The hypothesis testing in Partial Least Squared (PLS), considered is inner model test which includes a significance test for direct or indirect effects as well a measurement of the magnitude of the influence of exogenous variables on endogenous variables [64] [65]. In this study and in order to examine the effect of environmental turbulence on entrepreneurial orientation, a direct effect test was conducted.

The effect test was performed using several technique and statistical tests using the Partial Least Squared (PLS) analysis model using the SmartPLS 3.0 software [65][66] [67][68]. Besides, the bootstrapping technique, were conducted as will to obtain the R Square value and the significance test value as revealed in Hypothesis testing and results tables (2).

Table 2 shows the results of the structural model, where the beta values of path coefficient indicate the direct influences of predictor upon the predicted latent constructs. According to the results, environmental turbulence (ET) showed a positive effects on entrepreneurial Orientation (EO) (0.001 *P-value*) confirming H1. On the other hand, the result gives partial support for the hypothesis (H1a) regarding the link between environmental turbulence (ET) and risk-taking (RT) with (0.175 P-value) therefore, H1b supported. Results also indicate support (H1b), the results showed a direct effects of environmental turbulence (ET) on innovativeness (INN) confirming H1b. However, hypothesis (H1c) suggesting a direct effects on proactiveness is not supported.

The environmental turbulence (ET) was founded to have a direct strong effects on Entrepreneurial Orientation (EO) and then H1 accepted.

7 Discussion and implications:

This study has established four direct causal effects, H1. Environmental turbulence (ET) has a direct effects on Entrepreneurial Orientation (EO), H1a. Environmental turbulence (ET) has a direct effects on risk-taking, H1b. Environmental turbulence (ET) has a direct effects on innovativeness, and H1c. Environmental turbulence (ET) has a direct effects on proactiveness. Although, the proactiveness concept refers to how new ventures mold their strategic direction, stimulate firms to develop new goods and markets, and support internal adjustments and organizational restructuring in order to contribute to the enterprise's success [70][71][72][73]. Interestingly, the proposed hypothesis regarding the direct effects of environmental turbulence (ET) on proactiveness was found to be not supported by the study findings which somehow might be due to the period of this study where this study was conducted during the COVID 19 pandemics, the respondents feel that in this time and due to the lockdown and other factors the proactiveness was not in their main focus in contrary with the risk-taking and innovativeness.

The findings of this research indicate that environmental turbulence has a direct effect on entrepreneurial orientation, this fact could be interpreted to the direction of the entrepreneurial orientation are always subject to environmental turbulence issues. They easily can be affected in the way that they might stop their business. Also, for entrepreneurial mindsets, they have to be risk-takers equipped with innovativeness tools to enter the hot markets and competitions.

However, overall, the findings emphasize the need of aligning sensing capabilities with proactiveness inenterprises in order to generate innovation. In order to obtain a market-based competitive advantage,

Table 1: discriminant validity testing results.

Variable name	Cronbach's Alpha	rho A	Composite Reliability	(AVE)
Environmental Turbulence's (ET)	0.928	0.934	0.946	0.779
Entrepreneurial Orientation (EO)	0.908	0.915	0.932	0.774
Innovativeness	0.960	0.973	0.969	0.863
Proactiveness	0.776	0.857	0.896	0.812
Risk-taking	0.860	0.888	0.903	0.701

Table 2: Hypothesis testing and results.

No	Hypothesis	Standardized Path Coefficient (β)	P Value	Test Result
H1	ET → EO	0.370	0.001	Supported
H1 a	ET → RT	0.163	0.175	Supported
H1 b	ET → INN	0.466	0.011	Supported
H1 c	ET → PR	0.029	0.855	Not Supported

organizations must eventually establish the concept and practical usage of intellectual capital in their businesses.

8 Limitations and future research:

While the findings of this study are likely to add to academic research and management practice in the GCC, they may be constrained in numerous ways. First, because this study was quantitative and cross-sectional in nature, it only collected and examined a snapshot of the impacts of environmental variables on EO behaviors and GCC an Entrepreneurial Orientation. Also, this study suggested to make use theoretically the contingency theory to examine it theoretically and analytically in order to understand the impact of numerous contextual elements on the form of environmental turbulence effect on entrepreneurial orientation and the proactiveness in enterprises.

Conflicts of Interest

The authors declare that they have no conflicts of interest to report regarding the present study.

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