

Effect of Strategic Complexity on Entrepreneurial Orientations of Small and Medium-Size Enterprises in Pakistan

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Abstract: Strategic complexity demonstrates an organization's capacity to use a wide range of facts and capabilities to create a valuable and difficult-to-copy approach. It plays important role in an organization. The purpose of the study was to explore the effect of strategic complexity on entrepreneurial orientations of small and medium size enterprises in Pakistan. It was a causal comparative and survey study. The population of the study comprised of employees working in Small and Medium Enterprises in the Pakistan. Data were collected from randomly selected 490 workers of SMEs. A survey instrument used which was adapted in form of the questionnaire. The filed experts validated the questionnaire. The researchers collected data from selected enterprises from sampled individuals. The regression was applied for observing the effect of strategic complexity on enterpreunrial orientation of SMEs. It is concluded that strategic complexity influences the entrepreneurial orientation and its factors significantly of SMEs. The strategic complexity should be customer oriented in the industry. The reason is that if customer is satisfied then demand of product is increased definitely.

Keywords: Strategic complexity, entrepreneurial orientations, customer, enterprises, Pakistan

1. Introduction

Small and medium size entrepreneurship (SMEs) has been flourishing remarkably all over the world. It is becoming increasingly important all over the world. In industrialised economies, for example, SMEs account for a bigger proportion of all enterprises and account for over half of all GNP. In advanced economies, SMEs create 66% of all new jobs and strategy more than one-third of all industrial innovations (Raza& Majid, 2015). Furthermore, in poor countries, SMEs are regarded important source of new employment creation. SMEs, which account for the majority of businesses in the country, make significant investments in employment development (Burns & Dewhurst, 1996; Busenitz& Barney, 1995). Small and medium-sized enterprises (SMEs) made up the majority of businesses in Pakistan. Their distribution is spread across many industries, including service, trade, and manufacturing. Strengthening SMEs is a critical

topic to examine in terms of the country's revenue and growth distribution. Furthermore, for the past two decades, SMEs have generated between 40 and 60 percent of Pakistan's total GDP (Raza & Majid, 2015). All of these figures demonstrate SMEs' enormous contribution to Pakistan's economy.

Complexity

It highlights the complexity of a strategy's features or the quantity of materials in a strategic activity framework. Complexities play a significant impact in the making of organisational decisions. The concept of complexity is linked to the internal features of organisations. The combination of socio-political issues, as well as making emotional decisions based on short-term aims, exacerbates this type of complexity. Such complication makes things more difficult, and it's tough to make judgments that are important for integrating the organization's structure and interests. The decision makers' mindset has impaired the situation, and the organization's hopes of making good decisions have been destroyed.

Complexity has an influence on the decisions made by policy leaders at all levels in sectors. It has a number of consequences, the most important of which is that it leads to a situation in which using logical decision-making models is no longer practical, and it does not result in improved decisions. The decisions are made in a variety of settings, as the context has an impact on the decision-making process (Florence, 2004). There is a standard method for determining the complexity of an issue, which is to identify the simplest programme that a turning device needs to resolve the issue.

Strategic Complexity

The concept of strategic complexity is central to the theory of bounded rationality, which demonstrates that people prefer 'simpler' strategies. Though, it is unclear which methods players use to reveal less complicated strategies. In a similar way, strategic complexity describes strategy, describing whether firms are motivated by a single strategy or use a variety of approaches to interact with a complex environment (Ashmos et al., 2000). Within an organization's planned assembly, strategic complexity refers to the "scope and concentration of apprehensions and operations. Strategic complexity demonstrates an institutional capacity to use a wide range of facts and capabilities to create a valuable and difficult-to-copy approach (Wernerfelt, 1989; Rivkin, 2000).

In an organisation, strategic complexity is critical. Multiple aspects of strategic intricacy, expressed as decision-making rules, affect an organisation. The need to accept strategic complexity has some surprising productivity consequences. To put it another way, if an organisation can learn from the environment's complexity, it can improve product quality. Higher levels of strategic complication are usually associated with higher levels of performance and more stability. As a result, while researching the role of complexity in administrations, strategic complexity is an important organisational result to investigate. One of the most basic prerequisites for a company to maintain a complex strategy is a thorough understanding of management skills (Neill & Rose, 2006; Miller, 1999).

Dimensions of Strategic Complexity

Customer Orientation

Consumer needs section notification, purchasing proclivities, penchants for characteristics and value, market surge (Cooper, 1983), challengers and brokers are all concerns that the term “market” encompasses (Porter, 1985, 2008). Client inclination is defined by Deshpande and Webster (1989) as the beliefs on which the client places the most value on his interest. The markets that can be developed in the future for profit are brought to light by a customer’s propensity. Finally, a customer-oriented mindset aids a firm in acquiring a significant amount of the technical issues that arise in business hubs. It assesses potential prominent portions as well as the progress of the corporation.

Competitive Orientation

The ability to recognise, investigate, and respond to opponent” moves is defined as a competitive orientation. It entails identifying and producing competitive advantages in terms of quality or specific functions, as well as enabling the firm to effectively reach a position of creative refined products. The dispositions enable a business to recognise that the major trends and competitors have both brief and medium strengths and weaknesses to which it may successfully respond (Naryer& Slater, 1990).

Product Orientation

This type is a concern with introducing innovation, generating substantially unique outputs, improving the performance of existing products, and persuading users that new products and infrastructure are for the better. The extent to which a company focuses on product understanding is referred to as product orientation. The product is the reason for success in any product-oriented business, and success needs exceptional product knowledge.

Macro Environment Orientation

In an organization, macro environmental elements such as political, administrative, legal, and economic situations play a major effect. Uncertainty in these sectors has the ability to reduce a firm’s ability to plan and execute tactical decisions. Any firm’s policy and structure must be modified to the external influencing elements in order to remain effective and prospering. This is especially true for multinational corporations, as their outside competence enhances their value. The more the contrasts between the firm and its external environment, the greater the number of influencing elements affecting the industrial growth overall. Every managerial job is placed in some outer setting, specifically this setting may be its social context, industry, and ‘sector (Mintzberg, 2009). It was discovered that locations with low levels of literacy and a scarcity of qualified people have a higher rate of migration, which could be a symptom of the brain-drain phenomenon, when professionals leave for fear of losing their jobs. As a result, businesses should consider the educational background and talents (skills) of the people who live in the area where they plan to do business.

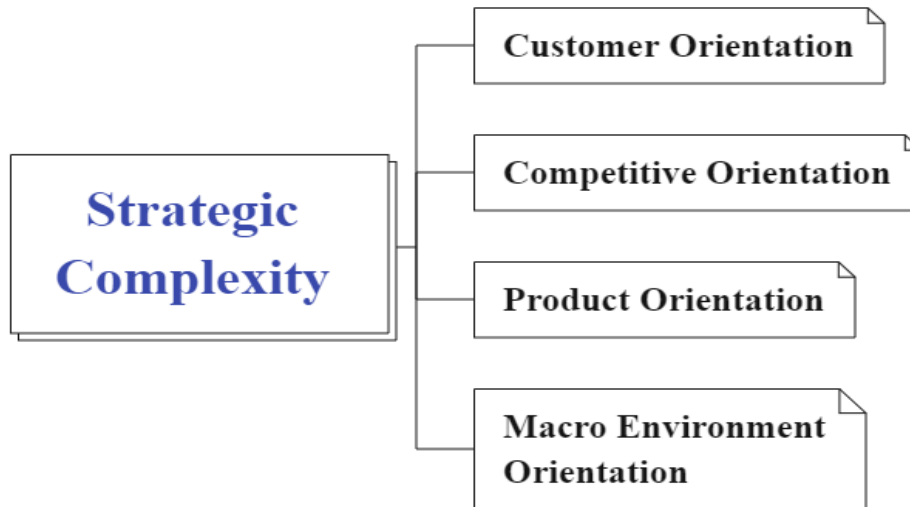


Figure 1: Factors of strategic complexity

Entrepreneurial Orientation

It is a type of attitude exhibited by someone who recognises economic prospects, initiatives, innovation, and originality (Covin& Lumpkin, 2011). This is a dynamic system of vision, adaptation, and production that necessitates the use of dynamism and passion in order to apply innovative concepts and creative solutions (Kuratko&Hodgetts, 2008). Entrepreneurs help to a country’s economic development and comprehensive expansion by assisting in the rise of competition and endeavours through the implementation of new technologies (Shrivastava&Shrivastava, 2013). Businessmen who start new businesses are regarded to be significant initiators of new employment creation in an economy (Eggers et al., 2013), which can have a cascading effect on financial growth.

Dimensions of Entrepreneurship Orientation

EO extents were deemed revolutionary, risky, and good by Lumpkin and Dess (1996). Later, Covin and Wales (2012) proposed self-sufficiency, novelty, risk-taking, inner cost, proactivity, and low-cost aggressiveness as the five EO factors. The focus of this research is on proactivity, risk-taking, innovation, and internal costs.

Pro-activeness

“Pro-activity is a prospective viewpoint evaluated by the impact of new items and services before competition and the expectation of impending demand” (Rauch et al., 2009, p.763). Although there is debate regarding whether strategy is the most effective, the first market or the quick tracker approach, both have advantages and disadvantages (Lumpkin &Dess, 1996). As a result, proactivity emphasises a company’s ability to show the bazaar's space on a regular basis, as evidenced by: “(1) aggressive behaviour toward competitor enterprises; and (2) managerial exploration for satisfying commercial opportunities” (Vij&Bedi, 2012, p.20). According to Eggers et al. (2013), a proactive businessman is more likely to form a trusting

relationship with a networking site user and to find tools that help them achieve capitals and events in surrounding environment.

Risk Taking

It can only be identified as soon as it occurs “Nature’s conceivable situations and their precise chances of occurrence are acknowledged. As a result of this fascinating scarcity in business judgments, precise probabilities are not usually established” (Weiers, 2008, p.739). When applied to commercial orientation, risk-taking can be characterized as an event that includes enterprising behaviors such as volunteering in the unknown, obtaining major sponsorship steps, or allocating crucial assets (monetary or non-monetary) to firms in an unknown environment (Rauch et al., 2009; Vij & Bedi, 2012).

Innovativeness

Innovation is critical in overcoming business challenges and opportunities, allowing businesses to thrive. It is tied to innovation, and without it, there will be no compelling reason to be innovative. It reflects the company’s desire to participate in and sustain the production of original ideas and inventive techniques that can lead to new markets (Lumpkin & Dess, 2001; Damanpour & Gopalakrishnan, 2001; Rauch et al., 2009). Modernization can be radical or progressive from a business standpoint, and both contribute to a corporation’s desirability. A firm’s innovation aspects are its readiness to seek out and maintain creative or new solutions to challenges and demands (Kuratko & Hodgetts, 2004). It happens on a spectrum and is necessary for improved performance.

Internal Cost Orientation

Firms are facing aggressive outbreaks from competitors on a variety of premeditated scopes in fiercely competitive marketplaces. Furthermore, the potential accessibility of superior acquisitions options provides clients with explanations to evaluate and reassess their current pronounced directions (Song, Wang, & Parry, 2010). Corporate units facing severe competitiveness must strive for efficacy in all aspects of their worth restraint in order to be competitive and successfully handle the increased gravity of worth clashes (Zhou et al., 2005).

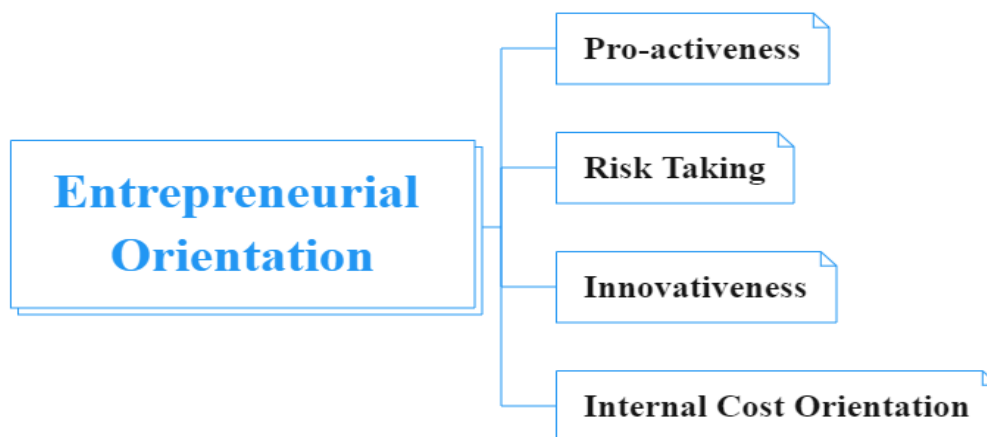


Figure 2: Factors of entrepreneurial orientation of SMEs.

Strategic Complexity and Entrepreneurial Orientation

This becomes much more relevant when one considers that strategic intricacy appears to be a feature of complex platforms that are constantly rearranging to greater levels of complexity (Combs, 1995). According to Glass (1996) and Courtney, Kirkland, and Viguerie (1997), offering visuals or tactical purpose rather than strategic planning allows people to react quickly and appropriately to change. Stacey (1992) advocates for superior organisation of complicated and unequal situations by encouraging personnel innovation and spontaneity. Morris, Schindehutte, and LaForge (2002) agree with this approach and characterize it as entrepreneurial marketing. Marketing is regarded as an art form, based on an entrepreneur's fancies, vision, skill, and creativity. The chaos metaphor combines the traits of entrepreneurship with those of a multifaceted, then offers a simple example to demonstrate how an organisation dealt with its dynamic and unstable environment by adopting an entrepreneurial attitude.

SMEs Sectors of Pakistan

Small and medium-sized enterprises contribute an important part in a country's economic, industrial, and societal growth. The most industrialized countries recognize the importance of the SME sector in their fiscal planning. SMEs have a unique role in development since they have historically been a source of job creation and revenue growth. By increasing people's income, these contribute to a state's success in maintaining the average life expectancy. Firms have a crucial role in the economy's progress and attractiveness. These are one of the most important foundations for poverty reduction through the expansion of the national economy. This can serve as a basis for engagement and progress in the community. Pakistan's economy, like that of many other developing countries, is based on the SME sector.

Theoretical Framework of the Study

The current research was carried out using two theories: chaos and complexity theory. Chaos theory describes simple laws that produce complicated and unexplained outcomes. Complexity theory, on the other hand, demonstrates how complex causes lead to simple outcomes. Managers that are committed to solving the puzzle of complex decision making will benefit greatly from understanding this element. Chaos is a systems theory that is attributed to multifaceted non-linear, and active systems.

Significance of the Study

The study highlights the importance and effect of strategic complexity through entrepreneurial orientation of SMEs. As a consequence of this study, SMEs stakeholders may be talented to take decision timely. This research could also aid SMEs in developing a comprehensive decision-making process based on Chaos and Complexity theory in a complicated setting. Researchers from both developed and poor countries are expected to read the findings of this study, as the under-discussed topic is surfacing on both sides of the divide. The study's findings are expected to aid future research by offering crucial insights into the theoretical and methodological background of strategic complexity and management decision-making.

Research Objectives

The study has following objectives:

1. To explore the relationship between strategic complexity and entrepreneurial orientations of small and medium size enterprises in Pakistan.
2. To explore the effect of strategic complexity on entrepreneurial orientations of SMEs enterprises in Pakistan.

Hypotheses

There is significant effect of strategic complexity on entrepreneurial orientations of small and medium size enterprises in Pakistan. The below figure or model is explanation and narrow down the hypothesis into factors hypotheses.

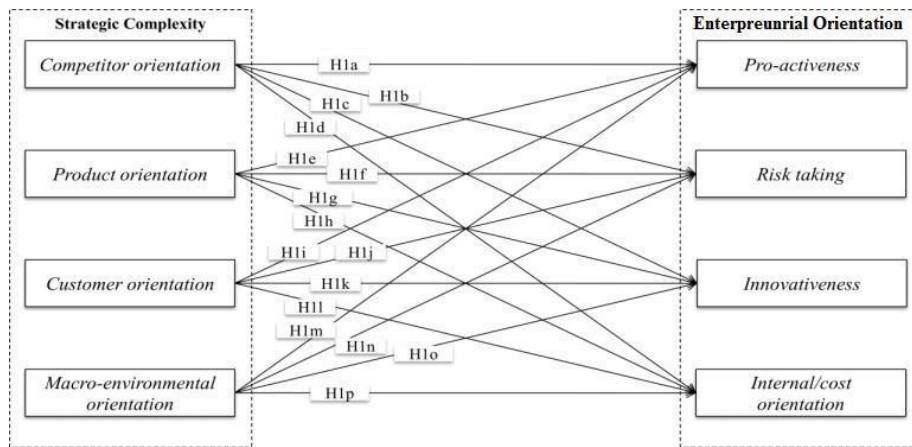


Figure 3: Effect of strategic complexity on entrepreneurial orientation of SMEs.

2. Method

Research Design

It was a causal comparative study. This study used cross-sectional research for two reasons: it is a quantitative study with a deductive method. It is also claimed that while conducting a survey, the cross-sectional study is preferred.

Population and Sample

The population of the study comprised of employees working in Small and Medium Enterprises in the Khyber Pakhtunkhwa Province Pakistan. SMEs are defined by the SBP (State Bank of Pakistan) as enterprises with less than 250 employees or a revenue of less than 30 million rupees (Raza& Majid, 2015). A union of SMEs was formed with the purpose of achieving the greatest number of SMEs possible. This union agreed to distribute the questionnaire to their members, allowing us to obtain a bigger sample of small businesses.

Scholars have frequently used the SMEs listed in online business dictionaries, chambers of commerce, and SMEDA for the purpose of selecting samples and populations. SMEs from Pakistan's Khyber Pakhtunkhwa province made up the study's population. From the aforementioned datasets of SMEs, a combined list of 10,000 SMEs was compiled. Only those SMEs were included as part of the investigation's population who had access to their whole database of postal addresses, phone numbers, and email addresses.

According to literature, a sample size of 370 is similar to speaking to a population of 10,000 people, while a sample size of 490 is equivalent to speaking to a population of 15,000 people (Cavana, Dellahaye, & Sekaran, 2001). Print media reported thirty two million SMEs in Pakistan which were registered while 15000 were functional despite they were not getting help from the government. This list also available in the SMEDA. With the purpose of ensuring that the sample was representative of the population, the minimum parameters for SMEs amount by branch and segment of movement were also established.

Measurements

A survey instrument used which was adapted in form of the questionnaire. The filed experts validated the questionnaire. The reliability of survey instrument items was explored by Cronbach's alpha statistics. All of the items of measuring instrument were measured through likert scale on seven point starting from 1="strongly disagree" to "7=strongly agree".

Strategic Complexity

The independent variable was strategic complexity, and it was represented by four factors. Eighteen questions were developed under four dimensions and adapted from Neill and Rose (2006), Cheng and Chang (2010).

Entrepreneurial Orientation

The dependent variable was the entrepreneurial orientation variable, which was represented by four features. Twenty items were used to assess the four dimensions, which were adapted from Barrett and Weinstein (1998), Narver and Slater (1990), and Theodosiou, Kehagias, and Katsikea (2012).

Table 1

Frequencies and Reliability Values of Factors

Sr.	Variables	M	SD	Minimum	Maximum	Reliability (α)
1	Gender	0.59	.40	0.00	1.00	~
2	Business size	2.17	.67	1.00	3.00	~
3	Comp.Orient.	5.51	.62	1.00	6.75	.84
4	Cust.Orient.	5.57	.62	1.00	6.67	.83
5	Prod.Orient.	5.53	.75	1.00	6.67	.84
6	M.En.Orient.	5.46	.65	1.00	6.80	.84
7	Risk	5.34	.77	1.00	7.00	.84
8	Pro.Act.	5.29	.80	1.00	7.00	.84
9	Innov.	5.28	.67	1.00	6.60	.84
10	I/C.Orient.	5.21	.81	1.00	6.60	.83

Above table is presenting the frequencies and reliability values of sub factors of both variables. All values are highly statistically significant and acceptable of sub dimensions. Similarly, the overall reliability of strategic complexity and enterpreunrial orientation was .89, and 90 respectively. Thus, items of both variables are statistically significant and highly contexted.

Data Collection and Analysis

The researchers collected data from selected enterprises from sampled individuals. They visited the organizations personally and met managers and leading personnel of the industry. The whole process was carried out by following ethics. After completing the data collection it were analyzed by applying various relevant statistics. The mean and frequencies also explored. The pearson r used for confirming the correlation between variables and factors. The regression also applied for observing the effect of strategic complexity on enterpreunrial orientation of SMEs.

3. Findings and Results

Table 2

Correlation between Strategic Complexity and Enterpreunrial Orientation

Variables	<i>r value</i>	<i>Sig.</i>
Strategic Complexity and Enterpreunrial Orientation	.56	.01

Table 2 shows the relationship between two variables of management field. There was a moderate significant association between strategic complexity and enterpreunrial orientation of SMEs. It is concluded that both factors are correlated with each other.

Table 3

Correlation among Sub-Factors of Strategic Complexity and Enterpreunrial Orientation

Sr.	Factors	1	2	3	4	5	6	7	8
1	Comp.Orient.	1							
2	Cust.Orient.	.326**	1						
3	Prod.Orient.	.251**	.333**	1					
4	M.En.Orient.	.296**	.411**	.257**	1				
5	Risk	.183**	.442**	.325**	.165**	1			
6	Pro.Act.	.207**	.379**	.333**	.269**	.195**	1		
7	Innov.	.317**	.290**	.277**	.374**	.255**	.199**	1	
8	I/C.Orient.	.168**	.321**	.263**	.325**	.229**	.272**	.128**	1

Customer orientation is significantly positively interrelated with other factors. It has significant association with product dimension ($r=0.333, p < .01$), macro-environmental ($r=0.411, p < .01$), risk taking ($r = .442, p < .01$), pro-activeness ($r=0.379, p < .01$), innovation($r=.290, p < .01$), internal/cost orientation ($r=.321, p < .01$). The product orientation is significant correlated with other dimensions. It has significantly correlation coefficient values with macro-environmental orientation ($r = .257, p < .01$), risk captivating ($r = .325, p < .01$), pro-activeness ($r = .333, p < .01$), novelty ($r = .277, p < .01$), cost alignment ($r = .263, p < .01$). It is concluded that sub-factors of strategic complexity and enterpreunrial orientation have mostly moderate relationship among each other.

Table 4

Effect of Strategic Complexity on Entrepreneurial Orientations of SMEs

Factors	Beta (β)	SD	t	sig.
Competitor orientation				
<u>Comp.Orient</u> → <u>Pro.Act</u>	.27**	.06	4.66	.01
<u>Comp.Orient</u> → Risk	.23**	.05	4.10	.01
<u>Comp.Orient</u> → <u>Innov.</u>	.34**	.05	7.38	.01
<u>Comp.Orient</u> → <u>I/C.Orient</u>	.22**	.06	3.75	.01
Product orientation				
<u>Prod.Orient</u> → <u>Pro.Act</u>	.36**	.05	7.77	.01
<u>Prod.Orient</u> → Risk	.33**	.04	7.57	.01
<u>Prod.Orient</u> → <u>Innov.</u>	.25**	.04	6.36	.01
<u>Prod.Orient</u> → <u>I/C.Orient</u>	.28**	.05	6.01	.01
Customer orientation				
<u>Cust.Orient</u> → <u>Pro.Act</u>	.48**	.05	9.02	.01
<u>Cust.Orient</u> → Risk	.54**	.05	10.86	.01
<u>Cust.Orient</u> → <u>Innov.</u>	.31**	.05	6.68	.01
<u>Cust.Orient</u> → <u>I/C.Orient</u>	.41**	.06	7.48	.01
Macro-environmental orientation				
<u>M.En.Orient</u> → <u>Pro.Act</u>	.33**	.05	6.15	.01
<u>M.En.Orient</u> → Risk	.20**	.05	3.68	.01
<u>M.En.Orient</u> → <u>Innov.</u>	.39**	.04	8.88	.01
<u>M.En.Orient</u> → <u>I/C.Orient</u>	.40**	.05	7.58	.01

**p < 0.01; n=490

As a result, pro-activeness is positively influenced by competition, product, customer, and macro-environmental orientation ($\beta = .27, .36, .48, .33$). At $p < .01$, competition orientation has a favourable and

significant impact on SMEs' risk taking, innovativeness, and internal/cost orientation. Assume that the hypothesis is correct. As a result, the first criteria of Baron and Kenny's process is met in terms of model.

4. Discussion and Conclusion

The purpose of the study was to explore the effect of strategic complexity on entrepreneurial orientations of SMEs. Strategic complexity qualities had a strong positive influence on entrepreneurial orientation attributes. As a result of the research, strategic complexity and its features were found to be important predictors of entrepreneurial orientation and its characteristics. Strategic complexity and entrepreneurial orientation have a considerable positive impact on organisational characteristics of major firms' performance, according to the literature (Appiah-Adu & Singh, 1998; Pelham, 1999; Pelham & Wilson, 1995). It is a novel discovery of this study that academics should take note of. The findings of the survey of strategic complexity of SMEs support complexity theory (Fabac, 2008) and chaos theory, which is one of the study's primary theoretical contributions (Hayward & Preston, 1998). These theories are offered in order to provide a general understanding of the phenomenon of complexity. The role of strategic complexity in managerial decision-making in Pakistani SMEs is examined in this study. Furthermore, each factor supports the Chaos and complexity theory, particularly strategic complexity which the main variable of the study. Hence, Chaos and complexity theory enabled this study to determine the effect of strategic complexity in entrepreneurial orientation of SMEs.

In conclusion, this study added to the literature and enhanced the understanding relating to the effect of strategic complexity on entrepreneurial orientation in Pakistan SMEs. There was a moderate significant association between strategic complexity and entrepreneurial orientation of SMEs. It is concluded that both factors are correlated with each other. While validating the importance of strategic complexity in management decision-making, it was discovered that it has a substantial impact on SMEs' entrepreneurial orientation and variables. Internal/cost orientation, on the other hand, has no bearing on the link between client orientation and internal/cost orientation. The internal/cost orientation element has no bearing on the macro-environmental orientation relationship. Risk taking, innovativeness, and internal/cost orientation of SMEs are all positively influenced by competitor orientation.

The outcomes of this study in terms of theoretical perspective are that strategic complexity, entrepreneurial orientation, and qualities have an impact on SMEs. The correlation and regression analysis were used to prove the association. As a result, it was observed that there was a relation between strategic complexity and SMEs' entrepreneurial orientation. Another significant addition of this research is to test a theoretical model that examines the impact of strategic intricacy on entrepreneurial orientation processes. Furthermore, such results present a fresh opportunity for SMEs policymakers and researchers to develop proven trends in order to improve SMEs business decision. New scientific data is contributed to concepts that had before been overlooked in SMEs and decision-making literature.

Recommendations

Following are the recommendations for future:

1. The strategic complexity and entrepreneurial orientation of SMEs are associated with each other. Therefore, enterprises need to focus and prefer on both variables for accomplishing the desired goals.

2. Both variables are correlated and strategic complexity influences the entrepreneurial orientation and its factors significantly of SMEs. Thus, industrial management may introduce relevant and simple strategic scheme to maintain the entrepreneurial orientation of SMEs.
3. The product is the most preferable concern of any organization. To enhance the level of product, management should focus on strategy development process for achieving goals.
4. Strategic complexity should be customer oriented in the industry. The reason is that if customer is satisfied then demand of product is increased definitely.
5. The organizational environment is vital in all aspects. It is source of drastic and positive changes in the industry. The management should provide a healthy and friendly environment to employees and customer.
6. If the macro environment is pleasant then it means employees may do work with commitment and sincerity.
7. However, administration may take risks only when internal environment and infrastructure support the system and both have capacity of enrichment.
8. Innovation is the main ingredient of entrepreneurial orientation of SMEs. The management should bring innovation to compete the market. It is only possible with innovative thoughts and strategic development.
9. The researcher may use preferably mix method by using SEM for analyzing data in future studies. Decision makers and SMEs policymakers are likely to be intrigued by the findings.
10. A comparison of emerging and advanced states using the same paradigm will be looked into with interest. A sample from a large corporation would also be a useful contribution to the pertinent data.

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