

Does Competitive Environment Predict Firm Innovativeness in Service Industry? Investigating the Role of Strategic Flexibility

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ABSTRACT

This study aims to test the role of competitive environment on firm innovativeness. The study also analyzed the mediating role of strategic flexibility in the relationship between competitive environment and firm innovativeness. The study proposed a model for firm innovativeness, which ultimately help the firm in achieving long term sustainable advantage. This quantitative research is cross-sectional in nature. Standardized scales were adapted from existing studies. This study used hierarchal regression analysis (three-step) and Sobel test to analyze the data collected from 587 Executives/Managers/Owners of service industry firms to test the theoretical model. Results proved that competitive environment helps firm to attain firm innovativeness. The findings of this research study also revealed that strategic flexibility perform a mediating role between competitive environment and firm innovativeness. This research contributes in two different ways; first one, it provides experimental facts and evidence which could be helpful for a firm to perceive competitive environment as a major antecedent of firm innovativeness.

INTRODUCTION

In today's hypertensive era, the notion of competitive environment has attained major scholar attention (Gaiardelli *et al.*, 2021; Smerecnik & Andersen 2011; Zahra & Bogner. 2000). Although, businesses face numerous challenges while operate in a competitive environment (Metts, 2007). However, the bright harmony of competitive environment cannot be neglected as it may influence business success, innovation, and high performance positively (Bommer & Jalajas, 2002; Yousaf,

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Radulescu, Sinisi, Serbanescu, & Păunescu, 2021). The competitive environment encourages new ideas to improve the firm's products and services, and it also contributes to the firm's innovativeness (Metts, 2007; Muharam, Ramily, & Khatib, 2021). Various outcomes were emphasized in the literature of competitive environment like innovation intensity (Cornett, Erhemjamts, & Tehranian, 2019); superior product (Lanctot, & Swan, 2000); Technological development (Bommer & Jalajas, 2002); firm performance (Slater and Narver, 1994). However, the most exciting result of the competitive climate in terms of strategic flexibility and business innovativeness has thus far been overlooked. Thus there is a literature gap that will be addressed. In this study, we identified the competitive environment as a positive impact that allows a company to achieve significant success in terms of innovation (Bommer & Jalajas, 2002).

This study also investigated the mediating role of strategic flexibility. Strategic flexibility is a capacity of a firm to acclimatize the required changes in their present arrangements and policies (Saeed, Tabassum, Zahid, Jiao, & Nauman, 2021; Shimizu & Hitt, 2004). Strategic flexibility, according to researchers like Hart (1937), is a facilitator of corporate innovation. Strategic flexibility serves as a link between the competitive environment and the firm's ability to innovate. In a highly competitive climate, strategic flexibility assists a company in increasing its innovativeness by implementing flexible structures and policies (Eppnik, 1978. Kong & Suntrayuth. 2021). Despite the fact that researchers have presented diverse consequences of strategic flexibility, studies have failed to provide any evidence of strategic flexibility's mediation role in the relationships between competitive environment and business innovativeness. Hence empirical gap exists which will be addressed in current study.

This research is an effort to better understand the competitive environment and the positive effects it has on a company's innovativeness. Competitive environment always compels a firm to adopt innovativeness (Aibar-Guzmán & Somohano-Rodríguez, 2021, Shimizu & Hitt, 2004). Along with this, this study also develops a company innovativeness model for service-oriented businesses in order to investigate the impact of the competitive environment on firm innovation. The importance of strategic flexibility as a mediating variable in the relationship between the competitive environment and business innovation is also examined in this study.

In the light of above discussion, the study is set to test the impact of competitive environment on firm innovation by collecting data from 587 Executives/Managers/Owners of service industry firms in Pakistan. Furthermore, the study also evaluated the mediating role of strategic flexibility in the relationship of competitive environment and firm innovation.

To test the above-mentioned objectives, the paper is divided into different parts including literature review, framework, hypotheses, methodology, results, discussion, implications and limitations.

LITERATURE REVIEW

The literature review of important variables of research are discussed below:

Competitive Environment positively and Firm innovativeness

Competitive environment refers to all those factors and forces that affect the internal, external or both areas of a firm and cause changes in firm policies and cause firm's innovativeness (Metts, 2007; Meidute-Kavaliauskiene, Çiğdem, Vasilis Vasiliauskas, & Yıldız, 2021). Firm innovativeness refers to the tendency that makes a firm enable to take up with new strategies and get positive outcomes (Cornett, Erhemjamts, & Tehranian, 2019). Firm innovativeness can also be described as, the adaption of new culture/process by an organization with respect to the requirements of overall market that may overcome competitive environment (Dibrell, Craig & Hansen 2011). Innovation includes expansion of products variety and/or services range, improvements to already existing products and the addition of new products and services (Hipp, & Grupp, 2005). Firm innovations always result due to market forces (Neely, Filippin, Forza., Vinelli, & Hii, 2001) initiated by a competitive environment (Koufteros, Vonderembse, & Doll, 2002). The highly competitive environment makes a firm capable to explore first-class opportunities like technological advancement (Bommer, & Jalajas, 2002), human resource development (Chan, Shaffer & Snape, 2004). Although some scholars like Fang, Palmatier, and Grewal (2011), the innovativeness of the firm in its production is susceptible to uncertainty due to competitive forces. However, highly competitive environment allows a firm to a positive association with innovative performance (Zahra, & Bogner, 2000). These bright outcomes of competitive environment provided basis for our first hypothesis i.e.

Hypothesis-1: Competitive environment when perceived positively can crop up firm innovativeness.

Researchers suggested that dynamic innovative capabilities are an outcome of competitive environment (Koufteros, Vonderembse & Doll 2002; Zheng, Zhang & Du, 2011). Innovations in the firm's dynamic practices allow a firm to perform speedily, effectively, and also produce quick responses in competitive environment (Liao, Kickul & Ma, 2009). There is no single explicit research conducted to investigate the impact of competitive environment on firm innovativeness in service firms (Lau, Tang & Yam, 2010). However, most of the researchers have acknowledged numerous outcomes of competitive environment like; global operations strategies (Liu, Zhu & Zhang, 2018), innovation intensity (Cornett, Erhemjamts & Tehranian, 2019) Technological efficiency (Huang, 2011). Information technology used by firms is also a major force of competitive environment that cause firm innovativeness (Bommer & Jalajas, 2002).

According to the porter model, there are five major factors or forces that affect a firm in its strategies and pushes the organization towards innovativeness (Porter, 1979) i.e. entry barrier, suppliers power, substitute availability, customer bargaining power, competitive rivalry (Hernández-Espallardo & Delgado-Ballester, 2009). The foremost factor that affects a firm in its missions is the entry barrier. The presence of top rival companies does not allow a new firm into the market until it comes with

innovative strategies (Zhu, Wittmann & Peng, 2012). When a firm gets successful arrival into a competitive market, now it shall focus on their operations and performance in an innovative way (Glenn, Genchev & Daugherty, 2005). Supplier is also a major competitive force and firm needs constant production hence, some trust-worthy vendors are always required to compete rival companies (Menguc, Auh & Yannopoulos, 2014). Therefore, firms need some effective decision in accordance with the policies of supplier to grow into market innovatively.

If rival firms in a competitive environment provide same product or service in lower price so it is difficult for the other firms to retain their market shares and they would be compelled to adopt different innovative strategies that give them competitive advantages (Griffith & Rust, 1997). Likewise, a potential customer of the product is one of the key elements described in the porter model of the external competitive environment (Porter, 1979). It is clearly stated that customer is the influential force which ultimately decides the future of a firm and its innovativeness (Fang, Palmatier & Grewal, 2011). Firms always struggle to make their customer more satisfied through innovative products with up-to-the-mark and latest feature (Dibrell, Craig & Hansen 2011). The competitive environment in terms of external affairs like supplier's relations (Menguc, Auh & Yannopoulos, 2014), linkages with market intermediaries (Howells, 2006), stakeholders' interests (Porter, 1979) ultimately bring firm innovativeness (Rennings, 2000). The competitive environment always demands newest products/services through which firms can initiate innovative process. And the customer does agree to pay for it due to its innovative touch that has not been practiced by the rivals (Hipp & Grupp, 2005). Competitive environment is referred to real options and could have a key impact on the value of innovativeness (Jansen, Van Den Bosch & Volberda, 2006).

Strategic Flexibility as mediator

Strategic flexibility refers to an organization's ability to recognise and act on major changes in the external environment, to quickly provide resources to various courses of action in reaction to those changes, and ultimately to recognise and act on when and where committed resources should be used (Jiang, Wang, & Wei, 2021; Shimizu & Hitt, 2004). Although, the word strategic flexibility has formally appeared in the literature in the start of the 1950s, and yet it is successfully sustained its key role since the recent past (Johnson, Pui-Wan, Saini & Grohmann, 2003). Till to the date, the concept has been defined in different scenarios and has helped in eliminating ambiguities (Johnson et al., 2003).

Strategic flexibility always performs as a catalyst among environmental forces and a firm's innovativeness (Shimizu & Hitt, 2004). Strategic flexibility helps organizations to adopt successful innovation (Feifei, 2012). As it is sure that a firm can't move in a market with rigid policies (Dibrell, Craig & Hansen, 2011) and every firm need to adopt changes in accordance with market feedback. A firm's regulations in relation to the competitive environment may expose it to considerable risk (Nadkarni & Narayanan, 2007). In eliminating the risk factor of a competitive environment there is only successful approach i.e., strategic flexibility. If a firm focus upon flexibility in its strategies with

respect to environmental pressures the firm can easily sustain its market share. Strategic flexibility is a mean that makes a firm able to move for innovativeness (Shimizu & Hitt, 2004).

According to our research, it is revealed that competitive environment impels a firm to accept the challenges and accommodate itself accordingly (Dehkordi, Rezvani & Behravan 2012). Due to a highly competitive environment a firm must adopt flexible strategies. These flexible strategies will induce some new features to the product i.e., innovativeness (Kettunen, Grushka, Degraeve & De Reyck 2015). Strategic flexibility initiated though competitive environment enable a firm to modify its stick polices and adapt required changes that will improve its products/services (Shimizu & Hitt, 2004; Wei, Yi & Guo, 2014).

The innovative process is not an easy task for an organization but is one of the most challenging decisions (Rothwell, 1994). Before reducing the likelihood of risk and initiating the innovation process, the business must examine the relevant element of its strategy in relation to the competitive environment (Spanos & Lioukas, 2001). It is crucial to learn about the firms' adaptable methods (Hitt, Keats & DeMarie, 1998). With flexible strategies through competitive environment, it is not difficult to ensure firm innovativeness (Lumpkin & Dess, 1996). Strategic flexibility initiated through competitive environment led an organization to achieve goals and targets of firm innovativeness (Shimizu & Hitt, 2004). Strategic flexibility supports the organization's working force to produce innovative things more specifically as per market demands (Evans, 1991).

There are some dynamic situations faced by organizations in their external competitive environment like price fluctuation in the market (Dreyer & Grønhaug 2004; Grant, 1996), changes in customer interest, (Zahra 1996). Strategically flexible firms have the ability to modify its operations as per competitive environment and leads to innovativeness. Firm innovativeness can be possible due to strategic flexibility in its overall strategies with respect to dynamic situation (Liao, Kickul & Ma, 2009). Keeping in view the about arguments this study proposed the following second hypothesis of the study:

Hypothesis-2: Strategic flexibility mediates the relationship between competitive environment and firm innovativeness.

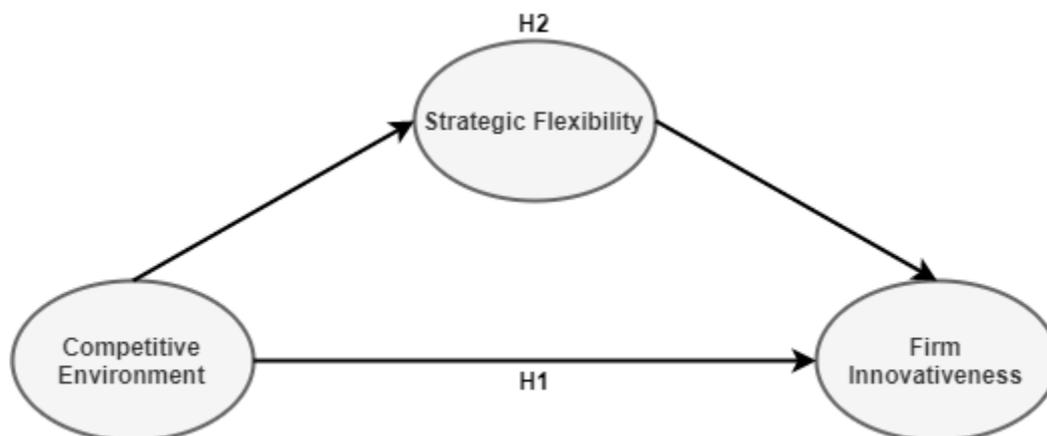


Figure 1 Theoretical Framework

RESEARCH METHODOLOGY

The service industry firms in Pakistan have been selected as a population for this research as their contribution towards economy is substantial (Wadood, Shamsuddin, & Abdullah, 2013) and as per knowledge of researchers, no such research has been conducted on this industry. The service industry firms are non-subsidiary firms usually considered as backbone of a country that works independently (Khalique, Isa, Shaari & Abdul, 2011). They are always considering important in both perspectives i.e., socially, and economically.

Data collection

To gather all the information related to firm innovativeness, competitive environment, and strategic flexibility with respect to service industry firms in Pakistan. Data has been collected through questionnaires from 587 employees attached to service industry firms in Pakistan. Data was collected from managers, executive and CEOs of different firms registered with SMEDA. In this research work, six assistants were given the responsibility to collect the data. As per the research requirements we have trained our research assistant and then data collection process was started. Executive level authorities were asked about their concerning firm and its performances. In different situations it was difficult to deal with respondents. Initially almost 1200 people were asked, at the end only 587 people have responded as according to our desired requirements. As it was mediation model and we got data from more than 450 respondents, it was sufficient for testing mediation model. The necessary details of respondents is presented in Table 1. Most of respondents were male, with experience of less than 8 years and having 16 years of education. Most of the business were having less than 450 employees but more than 350.

Table 1 Demographics

Gender			Experience of Respondent		
			Less than 4 years	187	32
Male	381	65	Less than 8 years	223	38
Female	206	35	Less than 16 years	86	14
			Less than 32 years	91	16
Total	587	100	Total	587	100
Business Overall size			Education of Respondent		
Employees In numbers			Matriculation	31	5
Less than 250	11	17	Bachelor	167	28
Less than 350	23	37	Masters	252	43
Less than 450	29	46	PhD	39	7
Total	63	100	Total	587	100
Age (In Years)					
25 to 30	47	8			
30 to 35	94	16			
35 to 40	147	25			

40 to 50	223	38
50 and above	76	13
Total	587	100

Scale measurement

Independent variable i.e., competitive environment was measured with 2 item scale. This scale has been adapted from the work of Huang (2011) strategic flexibility, a mediating variable, was measured using a four-item scale adapted from Fernández-Pérez, Garca-Morales, and Pullés (2016). Dependent variable, firm Innovativeness was measured with 5 item-scales adapted from the work of (Lee, Choi & Kwak, 2014). To make sure its validity of scales, a pilot study was also carried out with more than 70 questionnaires, which confirms that no changes in the whole process are required because of the certain results.

ANALYSIS

Following the criteria of Joreskog and Sorbom (1996), LISREL8.54 and SPSS 22 software were used to handle and analyze the gathered data. CFA was also used to check the validity of the data. SEM was used to assess the model's fitness. The mediation effect was investigated using a three-step hierarchical linear regression analysis. The significance of the intermediary impact was further assessed using the Sobel test. The proposed 3-Factor Model (M0) was compared to other alternative models in which F1 stands for Competitive Environment (CE), F2 for Strategic Flexibility (SF), and F3 for Firm Innovativeness (FI) (FI). The 3-factor model was found to be fit to the data and to have acceptable CFA values (RMSEA = .06, $\chi^2 = 856.55$, $df = 358$; $\chi^2/df = 2.393$; CFI = .94; GFI= .93; IFI= .95).

Both convergent validity and discriminate validity was tested. Also, we have used composite reliability (CR) and average variance extracted (AVE) techniques to evaluate the validity of all constructs (Fornell & Larcker 1981). The discriminate and convergent validity both were confirmed as the value of composite reliability and average variance extract that are present in the given table 2 which were greater than the cutoff value it means that there is no need of any reconciliation into performed work i.e. (CR> 0.70), and (AVE>0.50) (CR> AVE). The consequences of our research study productively met the results that were already outlined by Fornell and Larcker (1981). The values of SL, AVE, and CR are presented in Table 2.

Table II. Validity and Reliability of Constructs

Details	SL	t-value	AVE	CR	AVE
Firm Innovativeness			0.74	0.94	0.84
FI1	0.86	14.52			
FI2	0.87	14.98			
FI3	0.85	13.57			
FI4	0.84	12.56			

FI5	0.86	14.21					
Strategic Flexibility			0.75	0.95	0.83		
SF1	0.83	12.23					
SF2	0.88	15.96					
SF3	0.87	14.92					
SF4	0.85	13.54					
Competitive Environment			0.73	0.93	0.81		
CE1	0.84	12.87					
CE2	0.86	14.32					

The correlations values, SD and means are shown in Table No 3. The results proves that competitive environment is optimistically linked with strategic flexibility ($r = 0.32$, p value is significant), and firm innovativeness ($r = 0.22$ p value is significant). Strategic flexibility is also positively associated with firm innovativeness ($r = 0.38$ p value is significant).

Table III. Values of mean, SD and correlations

Sr	Variable deatil	Mean	SD	1	2	3	4	5
1	Age	2.45	0.81	1				
2	Size	2.31	0.84	0.12	1			
3	Competitive Environment	1.59	0.62	0.09	0.07	1		
4	Strategic Flexibility	2.11	0.71	0.04	0.12	.32**	1	
5	Firm Innovativeness	2.45	0.61	0.02	0.11	.22**	.38**	1

Notes: * $p < 0.001$; ** $p < 0.01$; *** $p < 0.05$

To examine hypotheses of the research, 3-steps hierarchical linear regression was used. Results from Table No 4 showed that competitive environment has a significant positive impact on firm innovativeness. Table 4 proved H1 is accepted as the direct effect of competitive environment on firm innovativeness is significant (Beta = 0.38**). For testing the mediating role of strategic flexibility, in this study we have used three-step hierarchical linear regression. In step-1 the impact of control variables on strategic flexibility and firm innovativeness was checked. In step-2 effect of strategic flexibility on firm innovativeness was tested in presence of control variables. Strategic flexibility was finally entered in the last step-3 to test its mediating effect. Results proved that strategic flexibility fully mediates the relationship between competitive environment and firm innovativeness. Table 4 shows that when strategic flexibility was added the effect of competitive environment on firm innovativeness has been reduced from (Beta =.38, P value = Significant) to (Beta =.12, P value = non-significant). The results of the Sobel test also confirmed the mediator effect ($t=3.31$, $p < 0.05$), hence hypothesis 2 of this study is supported by results.

Table IV Results of H1 & H2

Details	Strategic Flexibility				Firm Innovativeness			
	Beta	t	Beta	T	Beta	t	Beta	t
Step-1								
Age	0.05	1.23	0.06	1.56	0.08	1.87	0.09	1.01
Size	0.04	1.54	0.07	1.28	0.04	2.01	0.07	1.23

Step-2						
Competitive Environment	.28**	9.58	.38**	15.32	13.751	1.87
Step-3						
Strategic Flexibility					.35**	12.32
F Statistics	18.567**				22.762**	
R2 Change	0.08**				0.09**	
Sobel Test						
CE → SF → FI (4.565**)						

Notes: *p < 0.001 ; ** p < 0.05

CONCLUSION

According to our hypothesis no. 1 results shows that competitive environment has positive impacts upon firm and pushes it towards innovativeness. This study conceded that every business organization operates in a competitive environment and face harsh situations due to dynamic changes. The first hypothesis has been accepted as this study proposed that competitive environment predicts firm innovativeness in service firms working in Pakistan based on the live experiences our findings shows that service firms should consider competitive environment as positive factor which influence firm innovativeness. Competitive environment provides a platform where firm face many challenges to sustain their operations, market growth, loyal customers up to the mark (Metts, 2007). Competitive environment in terms of socio-economic factor i.e., political imbalance, innovation in technology, different customer demands and needs, rival competitiveness, Cost/ Pricing technique that prosper the process of innovation. Similar results are also reported by Liu and Atuahene-Gima (2018) and Uzkurt, Kumar, Kimzan, and Sert (2018).

This study also portrays the role of strategic flexibility among competitive environment and firm innovativeness. It performs as a positive mediator and fully make firm able to sustain its overall performances, whatever competitive environment needs and gives entire support to Hypothesis no. 2 as well. In Hypothesis no. 2 it is reveals that strategic flexibility positively mediates the relationship between competitive Environment and Firm Innovation. Regarding hypothesis 2 the findings of the study acknowledged the role of strategic flexibility as bridge among competitive environment and firm innovativeness. In this crucial situation there is a need of some comprehensive approaches like effective strategies that are flexible in nature and overcome the arisen situation efficiently. The only focus of all these relevant approaches shall be firm innovativeness. Now this is where an organization could get competitive advantage over their rivals. There is highly possibility for the firm to convert all internal and external weaknesses to its strength and converting the organizational deficiencies into their efficiencies. According to our part of research these all things are possible but if a firm shows strategic flexibility according to the competitive environment.

Theoretical Implications of the study

Theoretically, the efforts in this study add to firm innovativeness research in some remarkable modes. Some are discussed as below:

1. The most important role of this research is continuously focusing on firm's innovations within competitive environment rather than conventional approaches like measuring risks and traditionally assessing techniques of market segments.
2. The findings of this study support a firm to sustain its long-lasting activities in a successful way for achieving firm innovativeness. The approaches in this research article were first time used in the perspective of Pakistan. The components of measuring competitive environment with respect to firm innovativeness were developed in this study.
3. Our study adds to the existing theory of firm innovativeness in the context of developing nations like Pakistan. Results of our study about positive impact of competitive environment on firm innovativeness support the work of Kettunen, Grushka, Degraeve and De Reyck (2015).
4. Firm could obtain positive results via this study as it is useful for every organization in today dynamic environment.
5. The other significant outcome of this research is to facilitate a firm in accordance with the arisen situations due to environmental pressures upon a firm.
6. The major theory contribution of this study is the addition of strategic flexibility in the interplay between competitive environment and firm innovativeness. Our approach is quite novel and realistic i.e., on the basis of empirical finding. Strategic flexibility acts as a drive of competitive environment to reach at firm innovativeness. In the context of Pakistan this is new addition to the existing literature of competitive environment, strategic flexibility, and firm innovativeness.

Practical Implications of the study:

Apart from theoretical implications there are various valuable practical implications of this study for Small medium enterprises. Some are discussed as below:

1. By implementing the approaches prescribed in this study could give a highly competitive advantage to organization. In this research there are several practical steps suggested to overcome the scenario of competitive environment. To get more strengthen with respect competitive environment this study is the most applicable and productive approach. It gives a firm short-term competency as well as long term sustainability performance by measuring competitive environment as an indicator of firm innovativeness.
2. Firms can easily make assessment of their performances and know about the process to be implemented for bringing firm innovativeness.
3. Moreover, it is clearly recommended in this research study that competitive environment is a positive predictor of strategic flexibility that pushes the organizations for innovativeness.

4. Competitive environment enhances organizations to adopt creativeness via integrating thing with the help of some strategic efforts and combine knowledge. This common endeavor led executives of the firms to become flexible in identifying and evaluating of new market opportunities that might be more innovative, desirable, and aligned than other rivalry firms.

Limitations and future research

Although, there are some interesting findings and valuable approaches in this research, but this study also has some limitations that might be considered as route for future oriented research. Firstly, we have specifically worked on the achievements of a targeted aspect i.e. firm innovativeness in competitive environment as it is a major issue for nowadays organization. Secondly, we have focused on competitive environment that brings positive changes in organizations and compel them for something done in a unique way. The overall process of this step was performed via practical work as well as theoretical like quantitative data, and literature. Third, this research used some cross-sectional designs for collecting the relevant data through certain sources, which avoid strong casual implication/ inferences. We recommend the concern scholars and researchers to openly check this study for casual consequence between all these variables by means of a longitude study in the prospect.

Conclusion

The goal of this study is to develop a company innovativeness model for service-oriented businesses in order to investigate the impact of the competitive environment on firm innovation. This research also considers the function of strategic flexibility as a mediating factor in the relationship between the competitive environment and business innovation. To gather all the information related to firm innovativeness, competitive environment, and strategic flexibility with respect to service industry firms in Pakistan. Data has been collected through questionnaires from 587 employees attached to service industry firms in Pakistan. All the respondents of this study's survey package were managers, executive and CEO's. Also, in this work it is discussed that how a firm strategy affect its overall performances in context of firm innovativeness. Total of 1200 questionnaires were distributed and 587 were return back completed in all respects. Although it was a low response rate but keeping in view the current pandemic situation in the country, it was acceptable. LISREL8.54 and SPSS 22 software have been used to process and analyze the collected data. Validity was also entirely checked through CFA. Model fitness was checked through SEM. The mediation effect was investigated using a three-step hierarchical linear regression analysis. The significance of the intermediary impact was further assessed using the Sobel test. The results revealed that competitive environment has positive impacts upon firm and pushes it towards innovativeness. study also portrays the role of strategic flexibility among competitive environment and firm innovativeness and found that strategic flexibility mediates the relationship between competitive environment and firm's innovativeness. Furthermore, it

was also concluded on the basis of collected data that competitive environment is positively and significantly influence firm's strategic flexibility. And there is a positive and significant relationship between strategic flexibility and firm's innovativeness. Our study adds to the existing theory of firm innovativeness in the context of developing nations like Pakistan. The study also has numerous practical implications.

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