

MODERATING ROLE OF ORGANIZATIONAL INNOVATIVE CULTURE IN THE RELATIONSHIP BETWEEN ORGANIZATIONAL STRUCTURE AND ORGANIZATIONAL INNOVATION

Maryam Moula Bakhsh¹, Zahid Kamal², Tasmia Abeer Billoo³, Syed Muhammad Salman⁴,
Atif Aziz^{*5}

¹Assistant Professor, Dow University of Health Sciences; ²Ph. D. Scholar, Karachi Institute of Economics and Technology; ³Medical Director and Head Pharmacovigilance SMS Pakistan (SMS Global); ⁴Assistant professor, Iqra University Karachi; ^{*5}Professor, Iqra University

¹maryam.bakhsh@duhs.edu.pk; ²zk_tco@yahoo.com; ³drtasmiabiloo@gmail.com;
⁴smsalman@iqra.edu.pk; ^{*5}atif.aziz@iqra.edu.pk

Corresponding Author:*

Received: 10 January, 2023

Revised: 15 February, 2024

Accepted: 27 February, 2024

Published: 03 March, 2024

ABSTRACT

The aim of the study is to analyze the influence of multi-dimensions of organizational structure on organizational innovation through the moderating role of organizational innovative culture. The research has been motivated from the potential impact of the intrinsic elements of organizational structure such as departmentalization, decentralization, and formalization on ability of the organization to engage actively in innovation activities. Also, this study examined the moderating impact of the organizational innovative culture on organizational innovation. Since the SMEs are less organized structurally and susceptible to unethical organizational practices, therefore, this study focused SMEs of Karachi, Pakistan. The collection of data was done through a survey instrument for a sample of 400 respondents on the basis of non-proportion quota sampling. SPSS 23 version was used to test the hypothesis. Out of 400, 370 duly filled in questionnaires were received. The findings of the study supported the relationship of decentralization and formalization with organizational innovation. However, study does not support the relationship between departmentalization and organizational innovation. The study was further extended to analyze the moderating impact of organizational innovative culture. The findings supported the moderating impact of organizational innovative culture for decentralization. The managers may adopt the aforementioned structure from their present structure of organization. Furthermore, the managers should think about the efficacy of each element of the organizational structure.

1.INTRODUCTION

The severe competition and turbulent external environment has pressurized companies to view the significant elements that help organization to achieve better performance (Iranmanesh et al., 2020). The evidence from the past literature suggest that well-developed organizational structure is the main driver for any organization to achieve better performance (Morgan et al., 2019; Liu et al., 2017). Since the best practices e.g. departmentalization, decentralization, formalization have proved to be of significance importance and valuable through the empirical evidence therefore, the paradigm of the

studies may shift from justification of the value to the in-depth understanding and its effectiveness in contextual framework (Liu et al., 2017). The key element that plays active role in formulating the innovative capabilities of the organization has been pointed out to be organizational innovative culture with aspect to contextual factor (Iranmanesh, Kumar, Foroughi., Mavi., & Min, 2021; Botelho, 2020). The findings of the past studies show contradictory and inconsistent results for relationship of organizational structure on organizational innovation. The study of Daugherty et al., (2011) shows the non-significant

relationship of departmentalization with innovation capability. In the context of the in-consistent findings of the past research work and realizing the potential part of organizational innovative culture in development of organizational innovation, the current study aims to analyze the moderating impact of organizational innovative culture on the relation of organizational structure and organizational innovation. The work of the present study will be helpful to develop knowledge of contextual circumstances that effectively trigger organizational structure towards organizational innovation.

The main contribution of the present study is to fill the theoretical gap since the proposed framework is based on Organizational learning Theory. Further, the mutual impact of organizational structure and organizational innovative culture on organizational innovation has not been performed, to the best of my knowledge, particularly in the developing country like Pakistan. Moreover, the findings of the result will be beneficial to the executives and managers to shape the organizational structure for development of organizational innovation in accordance with the organizational innovative culture of the firms.

2 Literature review

2.1 Organizational structure

An organization is defined as the systematic coordination of the actions among individuals and groups having difference in level of knowledge, priorities, interest, and information (Lam, Nguyen, Le & Tran, 2021). The structure of the organization depicts the delegation of authority and responsibilities besides the implementation of the work procedures (Chang, Liao & Wu, 2017). The four main impediments in organizing the structure are distribution of work, distribution of rewards, allocation of work and provision of information (Bayhan, & Korkmaz, 2021). Further, the organizational structure clearly illustrates the coordination activities and process that are to be followed in true spirit (Liu, Hu & Kang, 2021; Aman, Noreen, Khan Ali & Yasin, 2018).

The contingency theory suggests that the capability of the organization is based on the structure of the organization that is in-accordance with the environment. Further, Zahoor and Al-Tabbaa, (2020) in their research proposed comprehensive list after detail literature review on

organizational innovation. The research work further hypothesized that researchers mostly employed the various elements of organizational structure in order to analyze the linkage with the organization innovation. Such in-depth list of the organizational determinants is also put forwarded by Ali, Hao & Aijuan, (2020) that included professionalism, centralization, formalization, complexity, specialization, hierarchy of authority and ratio of personnel. Joseph and Gaba, (2020) focused the elements of organizational structure i.e. specialization, centralization and integration in studying the impact on the organizational innovation. In the earlier studies, the researchers have focused on various sub-dimensions of the organizational structure e.g. performance control, centralization, specialization and integration (Shi & Kim, 2021), participation, formalization and centralization (Eva, Sendjaya, Prajogo, & Madison, 2021), complexity, formalization & centralization (Eketu, Ogbu Edeh, Ule, Fern, Kumari & Eder, (2020), specialization, link mechanism, informal social mechanism, formalization and decentralization (Iranmanesh et al., 2020). In the context of the previous research work, the frequently used sub-dimensions of organizational structure are departmentalization, decentralization and formalization which seem applicable to the objective of the current study. Therefore, the present work analyzes the impact of dimensions of organizational structure i.e. departmentalization, decentralization and formalization on the organizational innovative via moderating effect of organizational innovative culture.

2.2 Organizational Innovation

The innovation is the key element for an organization to gain competitive advantage (Azeem, Ahmed, Haider & Sajjad, 2021). However, the major difference in achievement of the goals and objectives of organization involved in innovative activities. Dias, Pereira and Lopes da Costa, (2023) revealed the importance of the organizational capability to successfully develop and implement the innovation (Daronco, Silva, Seibel & Cortimiglia, 2023). Innovation is the ability of the organization to add novelty (Than, Le, Le & Nguyen, 2023). The procedure to be adopted for engagement in innovation activities necessitates various elements

and mechanism of organizational structure to ensure that adequate interactions are existing among the various departments of the firm to develop spatial system of innovation (Purwanto, Fahmi & Sulaiman, 2023). Despite having extensive potential in innovation capability, the earlier researcher focused on the characteristics, features and formation of the Innovation (Yun, Zhao, Jung & Yigitcanlar, 2020). Some predictors of innovation used in the previous studies are employees training and motivation (Rampa & Agogu e, 2021), organizational culture (Zeb, Akbar, Hussain, Safi, Rabnawaz & Zeb, 2021), organizational structure (Mahmood & Mubarik, 2020), management support (Haefner, Wincent, Parida & Gassmann, 2021), use of technology (Chan, Krishnamurthy & Desjardins, 2020) and knowledge management (Lam, Nguyen, Le & Tran, 2021). Since the innovative capability of the organization is its ability of innovation to generate innovative outcomes that are valuables for the organization, therefore, the aim of the current study is to investigate the linkage of organizational structure with organizational innovative capability.

2.3 Organizational Innovative Culture

Innovative culture is defined as a collection of organizational cultural principles, rules and artifact that serve as base for the firms to engage in innovative activities (Yun et al., 2020). In such circumstances, the organizations make frequent investment in research & development activities and projects in order to provide opportunity to the talented employees of the firm to transform their ideas into creation by adding novelty (Hock-Doepgen, Clauss, Kraus & Cheng, 2021). It puts emphasis on the shared participation and responsibility of all employees in order to maximize the value and encouragement of human capital to seek and engage in innovative activities (Easa & Orra, 2021). The organizational innovative culture is key element to drive innovative activities in an organization (Lam et al., 2021). The innovative culture has synergizing impact on other factors of organization that tends to develop innovative capability within the organization (Lam et al., 2021). However, it is worth mentioning here that in-depth analysis is required to determine the contexts of the organization that support the development of innovative of the firm.

2.4 Grounding Theory and Conceptual Framework

The underpinning theory for the current study is Organizational Learning (OL) theory as its theoretical model. The theory proposes that organizational learning is the systematic development of knowledge through experience within the organization. The rate of this knowledge development is greatly affected by the skills and abilities of employees, enhancement in technological level, organizational structure, and coordination activities among the various departments of an organization (Zeb et al., 2021). The research work of Audretsch & Belitski, (2020) found that the productivity level of an individual employee enhances with learning specialized skills which improves over time with experience of such specialization. Since the teamwork promotes development and enhancement of inter-departmental coordination activities and the knowledge of new ideas and skills are shared among members of the team, therefore, it results in augmentation of the innovation of the organization (Easa & Orra, 2021). With the improvement in organizational structure, the performance level of an individual employee is enhanced which in turn promotes the innovation of an organization (Zeb et al., 2021).

Since organizational learning is predicted by knowledge, therefore, it may be entrenched in the elements of organizational structure in work instructions, routine works, procedures and policies. According to Silva & Di Serio (2021), the employees of an organization are well aware to whom to approach in presence of written rules, work instructions or work procedures if any problem occurs. Thus the formalization in the organization has double impact in an organization. It not only saves times but also promotes the capability of an organization to bring in new ideas to solve the problem (Rampa & Agogu e, 2021). Further, the learning of an organization is affected by the experience, therefore, it is necessary to analyze the context of the organizational culture specifically organizational innovative culture. Since the organizational learning is driven by three means of creation of knowledge, retention of knowledge and transfer of knowledge, therefore the acquisition of knowledge is linked to creativity (Lam et al., 2021). The adaptation of an organization to the acquisition

of knowledge brings modification in the context with the dimensions of innovative capabilities to engage in innovative activities Parida et al., 2021). In accordance with the above discussion, the current study uses innovative culture as moderating variable in the relationship between organizational structure and organizational innovation.

The conceptual framework proposed in the study is elaborated in Fig. 1. Three elements of organizational structure- departmentalization, decentralization, formalization- and organizational innovative culture are theorized to be related to the organizational innovation.

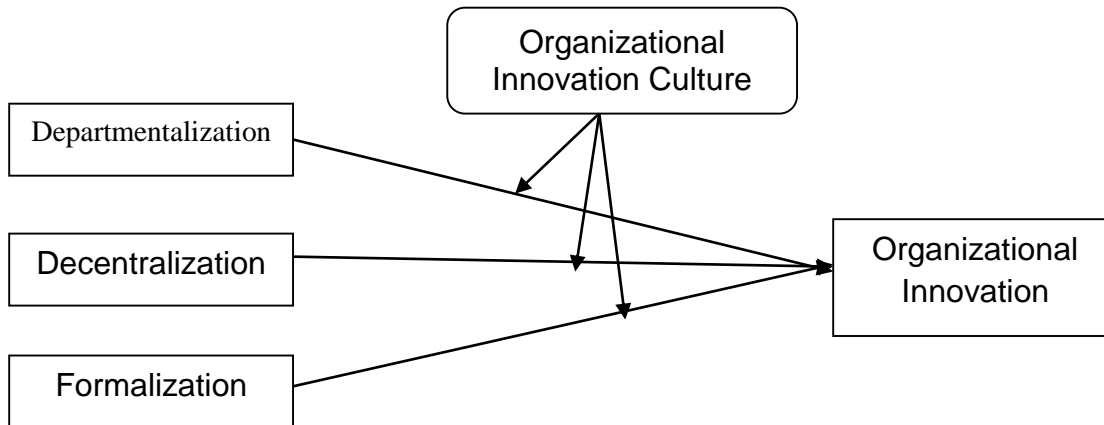


Fig. 1 Conceptual Framework

2.5 Hypotheses Development

Departmentalization and Organizational Innovation

Departmentalization is “the process of grouping jobs according to some logical arrangement, which effectively integrates work by allocating people to a department so they can communicate easily with and learn from their department” (Eketu et al., 2020). It refers to “the ways and the criteria adopted to organize positions into the organizational units and the departments, to make the work and the criteria taken in structuring the interaction and the process of communication center on the unit and set them apart from others” (Munawar, 2021). Prior research has indicated that departmentalization and sustainability culture are the most significantly correlated, and as such, should receive the greatest attention in terms of moving forward (Ugoani, 2021). A study reported that “Departmentalization of innovative organizational structure has significant relation with SME’s performance” (Udayanga, 2020). By reviewing the existing literature of Departmentalization, Organizational Culture, Innovation, we proposed the following hypothesis:

H1 Departmentalization has a significant positive relationship with the organizational innovation.

Decentralization and Organizational Innovation

Decentralization is referred to the delegation of the authority and responsibility from the level of top management to the bottom level management or employees in accomplishment of the goals and objectives of the organization (Argyres, Rios & Silverman, 2020). Due to decentralization, the load of decision-making is shared among various individuals through job distribution. On the contrary, the centralization in the organization usually confines the conception of new ideas and solution and hence, creates obstacles in sharing of the innovative ideas in usual communication among departments (Iranmanesh et al., 2020). Since the centralization is based on formal channel of communications and time-consuming, therefore, the flow of ideas is hindered and sharing of resource is minimized (Bellavitis, Fisch & Momtaz, 2023). Centralization adversely impacts the spreading and propagation of information and knowledge sharing (Feng, Sui, Liu & Li, 2020). In centralization, the deliberations of thoughts are curtailed which are

significant for bringing-in new and novelty ideas. An innovative activity varies from set procedure since it requires detail discussion and more time to develop new decision and evaluate the potential methods in contributing to new feasible innovations. Therefore, the centralized decisions could offer barrier even in the organizations having simple organizational structure.

On the contrary, the frequency for availability of opportunities in promoting and sharing innovative ideas is enhanced in decentralization due to unplanned cross-functional coordination (Bellavitis et al., 2023). Comparatively, the decentralized organizations have the advantages of seeking more inputs from individual employees and highly engagement in innovative activities which results in creation of more new innovative ideas (Feng et al., 2020). Such engagement in innovative activities at the bottom level of management or employees inculcate the feeling of empowerment, responsibility to judge the required improvements and freedom of creation. These internal feelings result in output like commitment to work and striving for the betterment of the organization through seeking new solution and ideas for any problem (Iranmanesh et al., 2020). It is pertinent to mention that engagement in innovative activities and generation of new ideas are intertwined in decentralized organizational structure, which enhances the innovative capability of the organization. Thus,

H2 Decentralization has a significant positive relationship with organizational innovation.

Formalization and Organizational innovation

Formalization refers to the level of unequivocally written and articulation of policies, procedures, rules, regulations, work instructions and job descriptions in an organization (Bres et al., 2019). The review of the past literature on innovation proposed that broad level of formalization in an organization adversely impact the innovation (Pesch, Endres & Bouncken, 2021). Conversely, the flexibility in work instructions and regulations tend to accelerate the innovative activities (Iranmanesh et al., 2020). It is further argued that high level of formalization in an organization can minimize the level of forcefulness which tends to promote the approach of corrective action of problem-solving rather than preventive

action in employees to explore and exploit new opportunities (Easa & Orra, 2021). The core objective of formalization is to develop, standardize and synchronize routine works and functions (Iranmanesh et al., 2020) which result in non-conducive environment for generation of new innovative ideas. On the contrary, the research work of Renkema, Meijerink & Bondarouk, (2022) proposed that innovation could emerge from formalization since the imperative knowledge generation for innovative activity is not impulsive. The formal guidelines and set procedures lead the organization towards achievement of desired goals and objectives (Pesch et al., 2021). The past literature proposed that, in the presence of formalization, the smooth flow and generation of idiosyncratic innovative ideas is hindered. However, the formalization in an organization is a system that tends to smooth the progress of communication of information and knowledge in creation and generating approaches for innovative ideas. Thus,

H3 Formalization has a significant positive relationship with the organizational innovation.

The moderating effect of Organizational Innovative Culture

According to Bendak, Shikhli & Abdel-Razek, (2020), the innovational activities are the adoption of new procedures and ideas that abandon the previous usual trends. However, the adaptation to innovative activities requires the culture in an organization that helps to encourage in innovation (Naveed, Alhaidan, Halbusi & Al-Swidi, 2022). The past studies regard innovative culture as a source of driving the level of innovative activities in an organization (Azeem, Ahmed, Haider & Sajjad, 2021). The innovative culture pertains to the working environment of the organization that foster un-traditional thinking and transforming to application, based on shared belief and common assumptions of the employees to accelerate the innovation process (Azeem et al., 2021). The innovative culture in an organization promotes the conducive environment for generation of innovative ideas, and facilitates the creativity continuously (Iranmanesh et al., 2021). With the reinforcement of innovative culture on the capacity of the generating new ideas, the impact of the organizational structure on creativity will be

significant (Iranmanesh et al., 2021). According to Khan, Ismail, Hussain & Alghazali, (2020), the innovative culture facilitates the organization in enhancement of their innovation capability (Zeb et al., 2021). Thus, it is anticipated that the linkage of organizational structure with organizational innovation is moderated by the organizational innovative culture. Therefore,

- H4a** Organizational innovative culture has a moderating impact on the relationship between Departmentalization and organizational innovation.
- H4b** Organizational innovative culture has a moderating impact on the relationship between Decentralization and organizational innovation.
- H4c** Organizational innovative culture has a moderating impact on the relationship between formalization and organizational innovation.

3. Research Methods

3.1. Population & Sample

The population of the current study comprises SMEs in Karachi. Since, the SMEs globally, particularly in developing countries like Pakistan, make a major contribution to economic growth. The sample size for the present study was calculated as per criteria outlined by hair et al. (2012). they suggested 5 to 20 sample for each item. With a total of 24 items in this study, 15 samples were considered for each indicator item, resulting in a total sample size of 360.

Furthermore, to account for potential dropouts or inappropriate responses, 20% additional data were collected, resulting in a total of 400 questionnaires distributed via non-proportional quota sampling. The population was stratified based on

SME associations in specific area. There are five SME associations in Karachi situated at SITE, Korangi, Federal B Area & North Karachi. 10 units were selected from each association, with 40 samples selected from each unit.

3.2. Scale & Measure

Using a quantitative survey technique, a structured questionnaire was employed to measure the items of the variables on a seven-point Likert scale ranging from strongly disagree (01) to strongly agree (07). All the items and scale were adapted from previous studies (Table 01).

The organization structure has been assessed via three components of Trigueiro-Fernandes (2014) proposed scale, namely departmentalization, decentralization, and formalization. Each construct comprises of four items. Prior studies reported strong reliability and validity for each construct. The values of Cronbach’s alpha, composite reliability (CR), and average variance extracted (AVE) for departmentalization are 0.78, 0.50 and 0.80, respectively. For decentralization, the Cronbach’s alpha is 0.78, CR is 0.82, and AVE is 0.53. For formalization, the values are 0.85, 0.87, and 0.63 for Cronbach’s alpha, CR and AVE, respectively (Trigueiro-Fernandes et al., 2014).

Organizational innovative culture was assessed using 8 items from Wallach, (1983) scale. Previous studies reported strong reliability and validity of the scale, where CR is 0.728 and AVE is 0.60 (Bayhan & Korkmaz, 2021).

Nieves et al., (2014) Organizational innovation scale comprises of four items was chosen. A study found the Cronbach alpha, CR and AVE to be 0.875, 0.313, and 0.725, respectively (Nieves et al., 2014)

Table 1
SCALES AND MEASURES

Construct	Source	No of Items
Departmentalization	Trigueiro-fernandes (2014)	04
Decentralization	Trigueiro-fernandes (2014)	04
Formalization	Trigueiro-fernandes (2014)	04
Organizational innovative Culture	Wallach, (1983)	08
Organizational Innovation	Nieves et al., (2014)	04

3.3. Statistical Analysis

To analyze the data, SPSS Version 23 has been used in the current study. Percentage and frequency examined for qualitative/categorical variables. Mean and SD assessed for quantitative variables. The data have been sorted and cleaned prior to testing hypotheses, with a total of 370 usable questionnaire considered for further analysis. The preliminary statistical analysis for reliability, validity and descriptive statistics has been carried out initially. Consequently, regression analysis was carried out the effect of departmentalization, centralization, and formalization on organizational innovation in addition to moderating effect of organizational innovative culture.

4.1. Profile of Respondents

There were 70.3% (n= 260) males and 29.7% (n=110) females out of the 370 respondents. In terms of age, the respondents were 23.5% (n=87) in age range 21~30 years, 42.4% (n=157) were in the age range 31~40 years, 19.2% (n=71) in age range 41~50 years, 10.3% (n=38) in age range 51~60 years and 4.6% (n=17) reported more than 60 years. With regard to educational qualification of the respondents, 59.5% (n=220) had a master’s degree, 22.2% (n=82) had a bachelor’s degree, 9.7% (n=36) had Ph.D. degree and 8.6% (n=32) had specified other qualification.

4.2. Descriptive Analysis of Constructs

The results in the Table 2 display mean, SD, Skewness and Kurtosis of the constructs. Since all the values of skewness and kurtosis are between +1 and + 3.5, respectively. therefore, it is established that the condition of univariate normality has been fulfilled (Hair et al., 1998).

4. RESULTS

**Table 2
 DESCRIPTIVE ANALYSIS**

	Mean	Std. Dev.	Skewness	Kurtosis	Cronbach’s alpha
Departmentalization	5.52	0.95	-0.82	0.24	0.798
Decentralization	5.83	0.89	-0.92	0.60	0.791
Formalization	5.80	0.75	-0.30	-0.28	0.748
Organizational innovative Culture	5.69	0.78	-0.06	-0.85	0.782
Organizational Innovation	5.10	1.34	-0.36	-0.54	0.775

4.3. Reliability and Validity of Constructs

The results in table 04 depicted that the departmentalization, decentralization, and formalization have Cronbach’s alpha values above 0.70, therefore, the internal consistency of the adapted construct is in acceptable region.

The results in the table 3 depict that the values of composite reliability for departmentalization, decentralization and formalization are above 0.70 and all values of average variance extracted are at least 0.50, therefore, it is derived that the necessary conditions for convergent validity have been fulfilled by the constructs (Hair et al., 1998).

**Table 3
 COMPOSITE RELIABILITY AND CONVERGENT VALIDITY**

	Mean	Std. Dev.	Composite Reliability	AVE
Departmentalization	Mean	Std. Dev.	0.80	0.58
Decentralization	5.52	0.95	0.89	0.75
Formalization	5.83	0.89	0.75	0.51
Organizational innovative Culture	5.80	0.75	0.85	0.50
Organizational Innovation	5.69	0.78	0.85	0.61

4.4. Pearson Correlation

The Pearson correlation depicts a significant association between Departmentalization and Decentralization, Departmentalization and organizational innovative culture, Departmentalization and Organizational innovation. Similarly, Decentralization is significantly associated with formalization, Organizational innovative culture, and organizational innovation. Formalization is also significantly associated with Organizational innovative culture and organizational innovation. The findings showed significant association between Organizational innovative culture and organizational innovation at P-value <0.05.

	Cronbach's Alpha	Dp	Dc	Fo	OIC	OI
Departmentalization	0.702	0.76				
Decentralization	0.745	0.31*	0.86			
Formalization	0.742	0.30	0.32*	0.71		
Organizational innovative Culture	0.859	0.20*	0.27*	0.20*	0.70	
Organizational Innovation	0.878	0.19*	0.25*	0.54*	0.65*	0.78

Note: DP= Departmentalization, DC= Decentralization, FR = Formalization, OIC = Organizational Innovative Culture, OI = Organizational Innovation. P-Value < 0.05.

4.5. Path Coefficient

The findings of the study depict that Decentralization and formalization have significant impact on organization innovation. The effect of departmentalization is not significant. The variances explained by predictors are 33.4% ($R^2 = 0.340$, $F(3, 366) = 62.710$, $P\text{-value} < 0.05$). The organizational innovative culture moderates the relationship between decentralization and organizational innovation. The interaction term is statistically significant as shown in table 05.

Table 5 Path coefficients and hypotheses testing

Hypotheses	Relationships	B	SE	t-value	Results
Main Model					
H1	DP → OI	0.022	0.063	0.355	Rejected
H2	DC → OI	0.148	0.070	2.116	Accepted
H3	FR → OI	0.957	0.079	12.324	Accepted
Moderating Effect OF OIC					
H4a	IC*SP → OI	-0.125	0.066	-1.888	Rejected
H4b	IC*DC → OI	0.272	0.077	3.546	Accepted
H4c	IC*FR → OI	-2.056	0.066	-0.853	Rejected

Note: DP= Departmentalization, DC= Decentralization, FR = Formalization, OIC = Organizational Innovative Culture, OI = Organizational Innovation.

5. Discussions

The current study proposed six hypotheses. Based on the results, three hypotheses are supported. Discussion on the results in the current study and relevance with past studies are presented in the following section.

The findings showed that decentralization has a significant positive impact on organizational innovation of the SMEs. Since decentralization leads to more interdepartmental coordination and communication activities (Jansen et al., 2016; Cardinal, 2001), therefore, the employees have the opportunities of learning and gaining knowledge from the experience of other team members. Further, in the firms with centralized organization structure, the generation of new ideas and flow of knowledge & information is impeded in bottom-up management, therefore, the activities required for new initiatives and problem-solving are limited (Jansen et al., 2006). Studies reported that decentralized organizations have the advantages of seeking more inputs from individual employees and highly engagement in innovative activities which results in creation of more new innovative ideas (Germain et al., 1996; Ullrich & Wieland, 1986).

The findings in the results indicated that formalization has a significant effect on organizational innovation. These findings are consistent with the findings of Damanpour, 1991; Daughtery et al., 2011 & Iranmanesh et al., 2020. Since the organizations have written rules and regulations, work instructions and set procedures for employees to remain on the path of main aim of the company and generate innovative ideas.

The results indicated that organizational innovative culture significantly moderates the relationship between decentralization and organizational innovation. However, the moderating effect of organizational innovative culture is not significant in the relationship between departmentalization and organizational innovation as well as formalization and organizational innovation. The findings are consistent with the results of Iranmanesh et al., 2020. The decentralized organizational structure promotes the activities of interdepartmental coordination and communication and resultantly, the new ideas are supported by the managers through informal discussion for development of innovative ideas. Such culture of promoting new ideas leads to development

of innovative capabilities of the organizations while playing guiding role.

Moreover, the formalized structure of organization plays the role of directing and guiding to employees through written rules and working procedure. Thus, the importance of innovative culture is reduced to guide employees to engage in innovative activities in the presence of formalized organizational structure, since there is a risk factor of being penalized if any new idea fails to produce expected and desired results.

5.1. Theoretical implications

In terms of theoretical implications, the current study has significant contribution in literature by applying OL (Organizational Learning) Theory as guiding theory in developing conceptual framework. Several studies have been conducted in past on analyzing the impact of elements of organizational structure (most commonly used departmentalization, decentralization, and formalization) on innovation, however, limited study has been conducted on grounding theory of OL theory. The earlier study utilized RBV theory as grounding theory for measurement of impact of organizational structure on innovative capability e.g. Iranmanesh et al., (2020). Further, the moderating impact of organizational innovative culture on decentralization has been found to be significant on organizational innovation. Therefore, the present study also validated the literature on the contingency theory by presenting evidence that innovative culture plays key role to impact the efficacy of organizational elements on innovation of the organization.

5.2. Practical implications

There are several practical implications offered by the current study to managers of SMEs. The results will help managers to realize the importance of innovative culture in developing organizational innovation to be competitive in external market. The opinion of Soren Kaplan on importance of organizational structure in enhancing innovation is also validated by the current study. Moreover, the managers should get benefits from informal relation, besides formalization, to achieve innovative goals of the organization. The results further displayed that there is no best organizational structure and managers should think about the

efficacy of each element of the organizational structure.

5.3. Limitations, Recommendation for future research and conclusion

Like other studies, this study also has limitations. The current study focused on the SMEs in Karachi. To generalize the findings of the study, the same work may be extended to SMEs in other cities of Pakistan. Moreover, the scholars may extend the work to take into account the elements of organizational structure e.g. link mechanism and informal social relations etc.

The researchers may also extend the work to analyze the moderating impact of types of firms, firm size, product characteristics etc. To bring further insight to the framework of the study, future research work may incorporate variables like work behavior that varies with age and gender, which is not considered in the current study.

In the context of the role of organizational structure (departmentalization, decentralization and formalization) and moderating impact of innovative culture in development of innovative capability of the organization, the managers may adopt to aforementioned structure from their present structure of organization.

References

1. Ali, H., Hao, Y., & Aijuan, C. (2020). Innovation capabilities and small and medium enterprises' performance: An exploratory study. *The Journal of Asian Finance, Economics and Business*, 7(10), 959-968.
2. Aman, Q., Noreen, T., Khan, I., Ali, R., & Yasin, A. (2018). The impact of human resource management practices on innovative ability of employees moderated by organizational culture. *International Journal of Organizational Leadership*, 7, 426-439.
3. Argyres, N., Rios, L. A., & Silverman, B. S. (2020). Organizational change and the dynamics of innovation: Formal R&D structure and intrafirm inventor networks. *Strategic Management Journal*, 41(11), 2015-2049.
4. Audretsch, D. B., & Belitski, M. (2020). The role of R&D and knowledge spillovers in

innovation and productivity. *European economic review*, 123, 103391.

5. Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing and organizational innovation. *Technology in Society*, 66, 101635.
6. Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing and organizational innovation. *Technology in Society*, 66, 101635.
7. Bayhan, B. Ç., & Korkmaz, O. (2021). Relationship between Innovation Management and Innovative Organizational Culture. *Istanbul business research*, 50(1), 103-126.
8. Bayhan, B. Ç., & Korkmaz, O. (2021). Relationship between Innovation Management and Innovative Organizational Culture. *Istanbul business research*, 50(1), 103-126.
9. Bellavitis, C., Fisch, C., & Momtaz, P. P. (2023). The rise of decentralized autonomous organizations (DAOs): a first empirical glimpse. *Venture Capital*, 25(2), 187-203.
10. Bendak, S., Shikhli, A. M., & Abdel-Razek, R. H. (2020). How changing organizational culture can enhance innovation: Development of the innovative culture enhancement framework. *Cogent Business & Management*, 7(1), 1712125.
11. Botelho, C. (2020). The influence of organizational culture and HRM on building innovative capability. *International Journal of Productivity and Performance Management*, 69(7), 1373-1393.
12. Chan, Y. E., Krishnamurthy, R., & Desjardins, C. (2020). Technology-Driven Innovation in Small Firms. *MIS Quarterly Executive*, 19(1).
13. Chang, W. J., Liao, S. H., & Wu, T. T. (2017). Relationships among organizational culture, knowledge sharing, and innovation capability: a case of the automobile industry in Taiwan. *Knowledge Management Research & Practice*, 15(3), 471-490.
14. Cropley, D., & Cropley, A. (2017). Innovation capacity, organisational culture and gender. *European Journal of Innovation Management*, 20(3), 493-510.

15. Daronco, E. L., Silva, D. S., Seibel, M. K., & Cortimiglia, M. N. (2023). A new framework of firm-level innovation capability: a propensity-ability perspective. *European Management Journal, 41*(2), 236-250.
16. Dias, Á., Pereira, L., & Lopes da Costa, R. (2023). Organizational capabilities as antecedents of entrepreneurship: A basis for business practice and policy making. *Journal of African Business, 24*(1), 1-18.
17. Easa, N. F., & Orra, H. E. (2021). HRM practices and innovation: An empirical systematic review. *International Journal of Disruptive Innovation in Government, 1*(1), 15-35.
18. Eketu, C. A., Ogbu Edeh PhD, F., Ule, P. A., Fern, Y. S., Kumari, P., & Eder, J. (2020). Effects of Organizational Structure on Employee Resilience. *Prince Alamina and Fern, Yeo Sook and Kumari, Pallavi and Eder, Johnson, Effects of Organizational Structure on Employee Resilience (November 20, 2020)*.
19. Eva, N., Sendjaya, S., Prajogo, D., & Madison, K. (2021). Does organizational structure render leadership unnecessary? Configurations of formalization and centralization as a substitute and neutralizer of servant leadership. *Journal of Business Research, 129*, 43-56.
20. Feng, S., Sui, B., Liu, H., & Li, G. (2020). Environmental decentralization and innovation in China. *Economic modelling, 93*, 660-674.
21. Haefner, N., Wincent, J., Parida, V., & Gassmann, O. (2021). Artificial intelligence and innovation management: A review, framework, and research agenda☆. *Technological Forecasting and Social Change, 162*, 120392.
22. Hock-Doepgen, M., Clauss, T., Kraus, S., & Cheng, C. F. (2021). Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs. *Journal of Business Research, 130*, 683-697.
23. Iranmanesh, M., Kumar, K. M., Foroughi, B., Mavi, R. K., & Min, N. H. (2021). The impacts of organizational structure on operational performance through innovation capability: innovative culture as moderator. *Review of Managerial Science, 15*, 1885-1911.
24. Iranmanesh, M., Kumar, K. M., Foroughi, B., Mavi, R. K., & Min, N. H. (2021). The impacts of organizational structure on operational performance through innovation capability: innovative culture as moderator. *Review of Managerial Science, 15*, 1885-1911.
25. Joseph, J., & Gaba, V. (2020). Organizational structure, information processing, and decision-making: A retrospective and road map for research. *Academy of Management Annals, 14*(1), 267-302.
26. Khan, M. A., Ismail, F. B., Hussain, A., & Alghazali, B. (2020). The interplay of leadership styles, innovative work behavior, organizational culture, and organizational citizenship behavior. *Sage Open, 10*(1), 2158244019898264.
27. Lam, L., Nguyen, P., Le, N., & Tran, K. (2021). The relation among organizational culture, knowledge management, and innovation capability: Its implication for open innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(1), 66.
28. Lam, L., Nguyen, P., Le, N., & Tran, K. (2021). The relation among organizational culture, knowledge management, and innovation capability: Its implication for open innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(1), 66.
29. Lei, H., Phouvang, S., & Le, P. B. (2019). How to foster innovative culture and capable champions for Chinese firms: an empirical research. *Chinese Management Studies, 13*(1), 51-69.
30. Liu, S. M., Hu, R., & Kang, T. W. (2021). The effects of absorptive capability and innovative culture on innovation performance: Evidence from Chinese high-tech firms. *The Journal of Asian Finance, Economics and Business, 8*(3), 1153-1162.
31. Mahmood, T., & Mubarik, M. S. (2020). Balancing innovation and exploitation in the fourth industrial revolution: Role of intellectual capital and technology absorptive capacity. *Technological Forecasting and Social Change, 160*, 120248.

32. Munawar, N. A. (2021). Literature Review the Effect of Technology, Environment and Organizational Strategy on Organizational Structure. *Dinasti International Journal of Economics, Finance & Accounting*, 2(1), 122-134.
33. Naveed, R. T., Alhaidan, H., Al Halbusi, H., & Al-Swidi, A. K. (2022). Do organizations really evolve? The critical link between organizational culture and organizational innovation toward organizational effectiveness: Pivotal role of organizational resistance. *Journal of Innovation & Knowledge*, 7(2), 100178.
34. Nieves, J., Quintana, A., & Osorio, J. (2014). Knowledge-based resources and innovation in the hotel industry. *International Journal of Hospitality Management*, 38, 65-73.
35. Pesch, R., Endres, H., & Bouncken, R. B. (2021). Digital product innovation management: Balancing stability and fluidity through formalization. *Journal of Product Innovation Management*, 38(6), 726-744.
36. Purwanto, A., Fahmi, K., & Sulaiman, A. (2023). Linking of Transformational Leadership, Learning Culture, Organizational Structure and School Innovation Capacity: CB SEM AMOS Analysis. *Journal of Information Systems and Management (JISMA)*, 2(3), 1-8.
37. Rampa, R., & Agogué, M. (2021). Developing radical innovation capabilities: Exploring the effects of training employees for creativity and innovation. *Creativity and Innovation Management*, 30(1), 211-227.
38. Renkema, M., Meijerink, J., & Bondarouk, T. (2022). Routes for employee-driven innovation: how HRM supports the emergence of innovation in a formalized context. *The International Journal of Human Resource Management*, 33(17), 3526-3559.
39. Shi, M. W., & Kim, S. (2021). To Improve Organizational Effectiveness of the Private University in China by Optimizing the Organizational Structure through Organization Development Interventions--- An Action Research Study of Zhejiang Yuexiu University of Foreign Languages (ZYUFL) in China. *ABAC ODI Journal Vision. Action. Outcome*, 8(1), 138-160.
40. Silva, G., & Di Serio, L. C. (2021). Innovation in small businesses: Towards an owner-centered approach to innovation. *Revista Brasileira de Gestão de Negócios*, 23, 519-535.
41. Than, S. T., Le, P. B., Le, T. P., & Nguyen, D. T. N. (2023, February). Stimulating product and process innovation through HRM practices: the mediating effect of knowledge management capability. In *Evidence-based HRM: a Global Forum for Empirical Scholarship* (Vol. 11, No. 1, pp. 85-102). Emerald Publishing Limited.
42. Trigueiro-Fernandes, L., Cavalcanti, J. M. M., Bila, M. V. A., & Añez, M. E. M. (2022). Scale of Organizational Structure Components (SOCS): Evidence of Validation of a Theoretical Model. *BBR. Brazilian Business Review*, 19, 309-330.
43. Udayanga, M. V. S. S. (2020) Innovative organizational structures and business performance of small and medium enterprises in Sri Lanka.
44. Ugoani, J. (2021). Understanding the Relationship Between Departmentalization and Management Performance: First Bank's Exemplary Model. *International Journal of Environmental Planning and Management*, 7(2), 59-71.
45. Yun, J. J., Zhao, X., Jung, K., & Yigitcanlar, T. (2020). The culture for open innovation dynamics. *Sustainability*, 12(12), 5076.
46. Zahoor, N., & Al-Tabbaa, O. (2020). Inter-organizational collaboration and SMEs' innovation: A systematic review and future research directions. *Scandinavian Journal of Management*, 36(2), 101109.
47. Zeb, A., Akbar, F., Hussain, K., Safi, A., Rabnawaz, M., & Zeb, F. (2021). The competing value framework model of organizational culture, innovation and performance. *Business process management journal*, 27(2), 658-683.