





Article

Linking Entrepreneurial Orientation with Innovation Performance in SMEs; the Role of Organizational Commitment and Transformational Leadership Using Smart PLS-SEM

Shuja Iqbal ¹, José Moleiro Martins ^{2,3,*} , Mário Nuno Mata ^{2,4} , Shumaila Naz ⁵ , Shamim Akhtar ¹ and António Abreu ⁶ 

¹ School of Management, Jiangsu University, Zhenjiang 212013, Jiangsu, China; shujaiqbal88@hotmail.com (S.I.); shamimakhtar92@hotmail.com (S.A.)

² ISCAL (Instituto Superior de Contabilidade e Administração de Lisboa), Instituto Politécnico de Lisboa, 1069-035 Lisbon, Portugal; mnmata@iscal.ipl.pt

³ Instituto Universitário de Lisboa (ISCTE-IUL), Business Research Unit (BRU-IUL), 1649-004 Lisbon, Portugal

⁴ Polytechnic Institute of Santarém, School of Management and Technology (ESGTS-IPS), 2001-904 Santarém, Portugal

⁵ Faculty of Business Administration, Iqra University, Karachi 75500, Pakistan; shumaila.superior@gmail.com

⁶ Mechanical Engineering Department, ISEL (Instituto Superior de Engenharia de Lisboa), 1959-007 Lisbon, Portugal; ajfa@dem.isel.pt

* Correspondence: zdmartins@gmail.com



Citation: Iqbal, S.; Moleiro Martins, J.; Nuno Mata, M.; Naz, S.; Akhtar, S.; Abreu, A. Linking Entrepreneurial Orientation with Innovation Performance in SMEs; the Role of Organizational Commitment and Transformational Leadership Using Smart PLS-SEM. *Sustainability* **2021**, *13*, 4361. <https://doi.org/10.3390/su13084361>

Academic Editor: Ermanno C. Tortia

Received: 27 February 2021

Accepted: 6 April 2021

Published: 14 April 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Abstract: Entrepreneurial orientation has become an enormously significant construct in the innovation studies literature. Predominantly for SMEs, its role has been widely recognized in almost all regional contexts across the globe. The present study is aimed at investigating the effects of entrepreneurial orientation, transformational leadership and organizational commitment on innovation performance. The data for the present study were collected from 1095 employees working at various levels in SMEs. The present study used partial least square structural equation modeling to examine the constructed hypotheses. The findings suggested the significantly positive direct relationships among entrepreneurial orientations, organizational commitment and innovation performance. Besides, organizational commitment positively mediated the relationships between entrepreneurial orientation and innovation performance. Additionally, this study also found the significant moderation of transformational leadership among entrepreneurship orientation and organizational commitment. Leaders of small and medium-sized enterprises should practice entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) and transformation leadership (articulating a compelling vision, focus on goal achievement, and creative problem solving) to enhance the innovation performance of their firms. Moreover, this study provides a robust mechanism for leaders at SMEs to develop strategies for enhancing the willingness of the firms to bring innovation and offer new products and services. The policymakers should enhance the emotional attachment of employees with their firms, sense of moral obligation to remain with the firm which will, in turn, increase the organizational commitment of employees for innovation performance. The study provides empirical evidence to the resource-based view in the context of SMEs. The study delivers solid theoretical and practical implications to experts, leaders and policymakers.

Keywords: entrepreneurial orientation; innovation performance; organizational commitment; transformational leadership; small and medium-sized enterprises

1. Introduction

Small and medium-sized enterprises (SMEs) of any developing country are a key instrument in providing job opportunities and escalating economic growth. Likewise, in Pakistan, SMEs contribute more than 99% of the business, consisting of a major share in manufacturing exports (25%). The major portion of the country's gross domestic product

(GDP) (Approximately 40%) maintained through SMEs—and they share the 30% net exports—optimizes the value addition by 28% and provides a huge amount of employment opportunities [1,2]. SMEs create job opportunities, support innovation, minimize income differences and support industrializations. Hitherto, SMEs are considered as one of the major poverty reduction sources as they create employment opportunities for the highly sensitive cluster (i.e., low income) of the country [3].

Recently, entrepreneurship has emerged as a critical contributor to economies, where entrepreneurial orientation is fundamental for success. Entrepreneurial orientation refers to the actions, procedures, policies, methods, decision-making strategies and practices within an organization, and supports entrepreneurial decisions in SMEs [4]. The literature has fairly maintained that entrepreneurial orientation is significantly associated with innovation performance [5,6], and organizational commitment [7] of firms. The firm's innovation level depicts the entrepreneurial orientation of the firm [8]. Many studies have elaborated the instrumental components of entrepreneurial orientation. For instance, Omerzel [9] mentioned risk-taking, proactivity, aggressive competition, customer orientation and autonomy. Whereas, Jambulingam, Kathuria [10] maintained six critical dimensions: reactivity, innovativeness, aggressive competition, risk-taking, autonomy, and motivation as essential entrepreneurial orientation factors. Bringing it together, these emerging studies [11–17], mainly recommended the use of three most cited dimensions of entrepreneurial orientation, namely innovativeness, means the willingness to support innovation, risk-taking for innovation [10] and proactiveness, in seeking new opportunities to tackle market challenges and responding with innovative solutions [18]. This present study is based on the foundational theory, which is the “resource-based view (RBV)” developed by Barney [19]. RBV focuses on the resources as internal components of the organization and enhances the firm performance and competitiveness [20]. The previous literature is indicative that RBV is closely related to entrepreneurial orientation and its innovation abilities by identifying novel ideas, risk-taking, and proactive skills that enhance the SMEs' performance [8].

Sriviboon [21] suggested that technology adoption and innovation performance are critical for organizations' success, which can be significantly predicted through entrepreneurial orientation [22,23]. According to Wu and Gong [24], innovation performance consists of the firm's indulgence in technology, development of economic and innovation goals and attaining them through technology evolution, proficient business policies and advanced research and development capabilities. Studies in the past have critically examined the process and product innovation (levels of innovation) and further suggested a comprehensive measurement scale, including five critical factors of innovation performance, such as the quantity of manufactured goods, technological methods, development feat ratio, industry response and usage of advanced technology in production processes [25,26]. Hence, SMEs must adopt entrepreneurial orientation characteristics to enhance their innovation performance [22,27,28] and OC [7,29]. The present study concentrates on three characteristics of entrepreneurial orientation, “innovativeness, risk-taking and proactiveness” [8].

Leaders play a vital role in adopting entrepreneurial orientation's characteristics and positively influencing innovation performance and organizational commitment of SMEs. Literature has established that characteristics of transformational leadership, “including idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration”, significantly influence the innovation performance of SMEs [30]. Few past studies also examined transformational leadership's positive impacts on organizational commitment [31,32]. Tian, Shuja [33] discussed that transformational leadership emphasizes practical issues, sets benchmarks, establishes understandings, shapes, and encourages attaining employees' goal attaining behavior. Therefore, the present study projects the moderating role of transformational leadership among entrepreneurial orientation and organizational commitment. According to Lambert, Kelley [34], organizational commitment refers to a positive relationship between the employees and firms, and affective commitment refers to a psychological connection with the firm [35,36]. Following the direct and indirect relationships among entrepreneurial orientation, innovation performance and

organizational commitment, the mediation mechanism of organizational commitment between entrepreneurial orientation and innovation performance relationships is essential to explore. For instance, Freixanet, Braojos [37] studied open innovation as mediation between international entrepreneurial orientation and innovation performance. Akbar, Bon [38] found the mediating role of innovation (radical and incremental) between entrepreneurial orientation and innovation performance. However, there is an observable gap between the intervening role of organizational commitment among entrepreneurial orientation and innovation performance within the context of SMEs in developing economies.

Entrepreneurial orientation is critical for SMEs, because all SMEs are striving to survive in the industry and face fierce competition from the big players. To compete with the big firms and gain a competitive position in the industry, SMEs have to take risks to invest in innovative products and services, enter into new potential markets and take rigorous innovative interchanges. Additionally, SMEs need to innovate and be proactive in designating their strategic goals and practices to compete in the industry. Such objectives could only be achieved through the entrepreneurial orientation [8,39,40]. Entrepreneurial orientation has the potential to heighten the level of organizational commitment to a large extent. Organizational commitment is essential to develop inner drive in employees to participate in innovation activities [41,42] and improve SMEs performance [43,44]. In addition, it is also vital to notice the role of the leadership support in enhancing the commitment level of employees. The literature advocates that transformational leadership is best suited to bring pivotal changes in employee behaviors and firm strategies to achieve a firm's innovation performance goals [45,46]. Therefore, this study investigates the direct effects of entrepreneurial orientation on innovation performance and indirect effects of organizational commitment (mediating) and transformational leadership (moderating) on the relationships between entrepreneurial orientation and innovation performance.

The current study is a significant addition in the development of an inclusive mediating mechanism of organizational commitment on innovation performance using Resource-Based View as foundation theory. Few previous studies are relative to the context in terms of the moderating role of organizational commitment on innovation [47], leaving intentions [48], employee innovation and participative leadership [49], leaders' behavior, performance and job satisfaction [50]. However, the present study advances the mediation model of organizational commitment among the relationship of entrepreneurial orientation and innovation performance in the context of the developing economy. Moreover, few past studies have examined transformational leadership's moderation role on the correlation among entrepreneurial orientation and firm performance and entrepreneurial orientation and firm performance and effectiveness [51]. However, transformational leadership's moderating role in entrepreneurial orientation and organizational commitment relationships has rarely been explored in the past. This present study investigates the moderation effects of transformational leadership to fertilize the body of literature on chosen factors.

2. Literature Review

2.1. Theoretical Foundation

The foundational theory for the present study is the "resource-based view (RBV)" developed by Barney [19]. The theory focuses on the resources as internal components of the organization and enhances the firm performance and competitiveness [20]. Previous literature posits that RBV is closely related to entrepreneurial orientation and its innovation abilities by identifying novel ideas, risk-taking, and proactive skills that enhance the SMEs' performance [8]. RBV significantly relates to the SMEs' performance because it assumes that internal capabilities are essential for firms' enhanced performance and competitive edge. The theory describes that the firms' internal resources include tangible assets, financial resources, organizational and human resources [19]. SMEs must utilize these resources innovatively to enhance performance [52].

2.2. Hypotheses Development

2.2.1. Relationship between Entrepreneurial Orientation and Organizational Commitment

Entrepreneurship has been categorized as an organizational trait, expounded primarily through entrepreneurial orientation. This advancement particularly followed the empirical course [53,54]. Numerous concepts of entrepreneurial orientation have amplified the existing literature [55,56]. The most projecting opinions are drawn by studies of Miller [57], Covin and Slevin [58]. The key difference in both schools of thought typifies entrepreneurial orientation built on a set of dimensions; for instance, “risk-taking, proactiveness, innovativeness, autonomy and competitive aggressiveness”. According to Miller and Covin and Slevin, risk-taking, innovativeness and proactiveness are critical covariant factors for the existence of entrepreneurial orientation. However, Lumpkin and Dess broadened these covariant factors by adding autonomy and competitive aggressiveness, and linked these dimensions with the contextual dependences of the firms. Furthermore, Wales, Covin [59] suggested three incipient concepts of entrepreneurial orientation such as “entrepreneurial top management style, new entry initiatives and organizational configuration” (p. 2) to resolve these intersecting factors of entrepreneurial orientation [59]. However, Jambulingam, Kathuria [10] tested six dimensions of entrepreneurial orientation such as innovativeness, which means the willingness to support innovation, by developing organizational clusters taking entrepreneurial orientation as an intangible asset that ultimately enhances a firm’s performance. Based on the recommendation of numerous studies and amid the context of the present study, risk-taking, innovativeness and proactiveness have been appointed as dimensions of entrepreneurial orientation [11–17]. Additionally, RBV significantly enhances SME’s performance by considering the internal capabilities of the firm including financial, organization and human resources [19]. Soomro and Shah [7] adopted a deductive approach to investigate entrepreneurial orientation’s effects on organizational commitment and found a significant association among the aforementioned variables [9]. However, the present study proposes within the context of Resource-Based View that the strengths (internal resources), including innovativeness, risk-taking, and pro-activeness capabilities, enables SMEs to enhance employees’ commitment. Besides tangible assets, RBV supports intangible assets (human resources) to attract, train, develop and retain individuals and enhances their organizational commitment [60]. Therefore, on the basis of above discussion, the present study proposes that (see Figure 1).

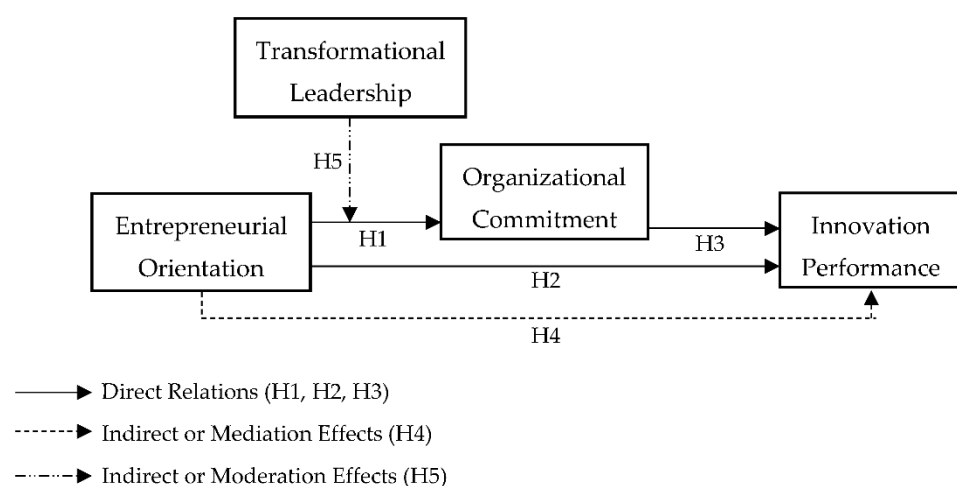


Figure 1. The proposed research framework.

Hypothesis 1 (H1). *Entrepreneurial orientation positively and significantly affects organizational commitment.*

2.2.2. The Relationship between Entrepreneurial Orientation and Innovation Performance

The development of creative ideas and behavior of firms leads to innovation performance. Innovation has several dimensions explained through the breadth and depth of innovation activities. Breadth includes the systems, strategies, processes, management, products and services. Whereas, innovation's depth comprises the significance and impact of innovation on the long-term profitability of firms [61]. Firms also aim at the administrative and technological innovation performance [61,62]. Technological innovation involves product and process innovation [61]. Product innovation contains the creation of innovative goods to fulfill customer requirements, while process innovation concentrates on changes to the current (i.e., prevailing) process. [63]. Product and process innovation have equal aptitude for enhancing effectiveness, performance, problem-solving, value addition and competitive advantage for firms [64,65]. Moreover, entrepreneurial orientation along with learning and marketing orientation was found to be positive concerning optimization of innovation and particularly, the business performance of SMEs. Besides the direct effects, these constructs also indirectly affected business performance through knowledge and innovation competencies of firms [66]. Isichei, Agbaeze [8] concluded a positive link between entrepreneurial orientation and firms' innovativeness. Preceding studies have found capricious effects of entrepreneurial orientation on firm performance. The literature also shows effects of related predictors on the innovation culture in SMEs, such as Abdul-Halim, Ahmad [67], who examined that organizational culture and learning significantly enhances the innovation culture in SMEs. The study of Isichei, Agbaeze [8] established the positive impact of innovativeness and proactiveness and the insignificant role of risk-taking on SMEs' performance. Moreover, past studies have examined entrepreneurial orientation's effects on innovation performance of SMEs [68,69], and the effects of entrepreneurial orientation on radical innovation [70]; however, much less is known about the aforementioned relationship in the context of SMEs working in developing countries using an RBV approach (entrepreneurial orientation's dimensions acts as internal resources).

Hypothesis 2 (H2). *Entrepreneurial orientation positively and significantly affects innovation performance.*

2.2.3. Relationship between Organizational Commitment and Innovation Performance

The phenomenon of organizational commitment is gaining popularity continuously in management studies. Organizational commitment refers to "the relative strength of an individual's identification with and involvement in a particular organization and can be characterized by a strong belief in and acceptance of the organization's goals and values, willingness to exert considerable effort on behalf of the organization and a strong desire to maintain membership of the organization" [36]. Meyer, Stanley [71] discussed three dimensions of commitment such as "affective commitment", which refers to "the employee's emotional attachment to, identification with, and involvement in the organization, continuance commitment as awareness of the costs associated with leaving the organization, and normative commitment referring to a perceived obligation to remain in the organization" (p. 21). The essence of organizational commitment lies within the truth that committed employees are highly involved in interlinked behaviors such as innovation performance [72], and enhance the performance and productivity of the firms [73]. Organizational commitment significantly correlates with organizational justice and employee sustainability [74], job behavior, employee fitness, welfare and turnover intentions [71], and especially, with innovation performance [68,69,75].

Firms need to employ satisfied, unstressed and committed employees to optimize organizational commitment, which leads to enhanced organizational innovation [76]. Being an essential element of organizational behavior, organizational commitment is multidimensional involving loyalty, willingness to make effort, value coherence and desire to keep members within the organization, which further improves individual and organizational innovation [72]. Moreover, employee commitment is linked with personal and organiza-

tional consequences [77,78]. For instance, [55], pro-activeness and innovativeness act as alternates and should be shared with the “commitment” to enhance the performance of firms. Likewise, Yeşil, Sözbilir [72] examined the positive effects of organizational commitment on innovation performance. Organizational commitment significantly enhances both product and process innovation (process innovation affects product innovation), which affects the functional performance of the organizations [79]. However, this study examines the effects of organizational commitment on innovation performance concerning RBV’s intangible resources (commitment), affecting innovation performance.

Hypothesis 3 (H3). *Organizational commitment positively and significantly affects innovation performance.*

2.2.4. Mediating Role of Organizational Commitment

There is an interrelation between entrepreneurial orientation, organizational commitment and innovation performance. The same is found by Covin, Rigtering [55] in their study where entrepreneurial orientation and organizational commitment, jointly engendered, improved innovation performance. Commitment influences both individual and organizational outcomes [77,78]. When innovativeness, pro-activeness and commitment are combined, the organizational performance is optimized [55,72]. The functional performance of firms is also enhanced through the product and process innovation of firms [79]. Moreover, Soomro and Shah (2019) indicated the positive influence of entrepreneurial orientation on organizational commitment using a deductive approach of analysis. When linked with RBV, the internal resources of firms such as innovativeness, risk-taking abilities and proactive capabilities encourage firms to enhance organizational commitment. RBV also enhances the intangible assets such as human resources and to attract them, train and develop their abilities and retain them by enhancing their organizational commitment [60]. Focusing direct relationships among entrepreneurial orientation and organizational commitment [7,8], and organizational commitment and innovation performance [55,72], the present study proposes the intervening role of organizational commitment on innovation performance and proposes the relationships as follows (see Figure 1).

Hypothesis 4 (H4). *Organizational commitment positively and significantly mediates the relationship between entrepreneurial orientation and innovation performance.*

2.2.5. Moderating Role of Transformational Leadership

The four features of transformational leadership “idealized influence, inspirational motivation, intellectual stimulation and individualized consideration” significantly affect performance [54,80,81], innovation performance [82] and organizational commitment [83]. Engelen, Gupta [84] found that entrepreneurial orientation and innovation performance were moderated by transformational leadership using RBV, highlighting the importance of the transformational leadership’s moderation mechanism on entrepreneurial orientation and organizational commitment. Transformational leadership inspires and attracts the followers by practicing moral ideas and values [85], and significantly enhances commitment [45]. Keeping in view RBV’s tangible resources (transformational leaders as human assets) and intangible resources (transformational leaders’ skills), the present study proposes that transformational leadership moderates the relationship between entrepreneurial orientation and organizational commitment. Therefore, we propose that (see, Figure 1).

Hypothesis 5 (H5). *Transformational leadership positively moderates the relationship among entrepreneurial orientation and organizational commitment.*

3. Materials and Methods

This study aimed to investigate three main research questions including (1) what are the direct effects of entrepreneurial orientation on organizational commitment and innovation performance, and direct effects of organizational commitment on innovation

performance of SME. (2) How organizational commitment mediates the relationship between entrepreneurial orientation and innovation performance of SMEs. 3) What is the level of moderating effects of transformational leadership on the relationship between entrepreneurial orientation and organizational commitment in SMEs.

3.1. Measures

The study adopted entrepreneurial orientation's three dimensions, namely risk-taking, innovativeness and proactiveness. The study adopted three items to measure innovativeness (e.g., "My firm shows the willingness to support creativity"), two items for risk-taking (e.g., "My firm takes the risk to venture into new unknown markets"), and two items for proactiveness (e.g., "My firm looks for market opportunities"), with $\alpha = 0.901$, adopted from the study of Lumpkin and Dess [86]. Four items were taken from the study of Wang and Ahmed [87] to measure innovation performance (e.g., "My firm has a highly responsive attitude towards environmental changes") with $\alpha = 0.922$. Seven items were adopted from the study of Ugaddan, Oh [88] to measure organizational commitment (e.g., "I feel a strong sense of belonging to my firm") with $\alpha = 0.940$. To measure transformational leadership, we adopted a five items scale from Bass and Avolio [89] (e.g., "My leader articulates a compelling vision") with $\alpha = 0.955$.

3.2. Population and Sampling

This study selected four significant SME sectors (services, manufacturing, high-tech and construction; one from each industry) as the study population. There are approximately 0.4, 0.6 and 1 million manufacturing, service and trading sector SMEs in Pakistan. We collected the data using the survey data collection method from September 2019 to February 2020 (in six months) with a time-lag of two months to elude common method bias (CMB), as recommended by Podsakoff, MacKenzie [90]. Primarily, we approached 1450 employees working in SMEs via personal visits and emailed them to share the survey, and for this purpose, we sent 2–3 soft reminders for every round. Before asking the variable's responses, we added a consent declaration, details about the nature of the research, and assured the respondents that their responses would only be used for academic research purposes and their confidentiality will be maintained using all predetermined protocols. In the first phase of data collection, data related to entrepreneurial orientation and demographic characteristics such as age, location, industry, and the number of SMEs' employees were collected. Data concerning organizational commitment, transformational leadership and innovation performance were collected in the second and third phases. A total of 1198, 1156, and 1126 responses were collected in the first, second, and third phases, respectively. However, 31 responses were rejected due to missing information. Thus, 1095 responses yielding a 75.5% response rate were further processed for data analysis [91]. To match the responses of three phases, we placed a computer-generated code on each response. The descriptive statistics showed that 81 (7.40%), 257 (23.47%), 331 (30.23%), 299 (27.31%), and 127 (11.60%) respondents were from SMEs aged from less than one year, 1–5 years, 6–10 years, 11–15 years and higher than 15 years, respectively. Moreover, the location of the SMEs was from Azad Jammu Kashmir, Punjab, Baluchistan, Sindh, Gilgit Baltistan and Khyber Pakhtunkhwa, with frequencies of 54 (4.93%), 561 (51.23%), 37 (3.38%), 59 (5.39%), 81 (7.40%) and 303 (27.67%), respectively. The descriptive analysis also reflects that 212 (19.36%), 677 (61.83%), 27 (2.47%) and 179 (16.35%) SMEs were from construction, manufacturing, high-tech and services industries. Finally, the number of employees in the SMEs within the ranges of 10 to 35, 33 to 99 and 100 to 250 employees were 311 (28.40%), 473 (43.20%) and 311 (28.40%), respectively (see Table 1).

Table 1. Descriptive statistics of Small and medium-sized enterprises' employees.

Controls	Range	Frequency	%
Location	Azad Jammu Kashmir	54	4.93%
	Punjab	561	51.23%
	Baluchistan	37	3.38%
	Sindh	59	5.39%
	Gilgit Baltistan	81	7.40%
	Khyber Pakhtunkhwa	303	27.67%
Age of SMEs	Less than 1 Year	81	7.40%
	1–5 Years	257	23.47%
	6–10 Years	331	30.23%
	11–15 Years	299	27.31%
	Higher than 15 Years	127	11.60%
Industry	Construction	212	19.36%
	Manufacturing	677	61.83%
	High-tech	27	2.47%
	Services	179	16.35%
No. of Employees	10 to 35 Employees	311	28.40%
	36 to 99 Employees	473	43.20%
	100 to 250 Employees	311	28.40%

3.3. Data Analysis

The present study used Smart PLS (3.2.8), a statistical tool to examine the data through partial least square equation modeling (PLS-SEM). The reason for choosing this analysis approach is based on the data/sample features and the moderation and mediation analysis. Similarly, this approach has gained much prominence in studies about human resource management, marketing and related fields [33,92–96]. Hair, Ringle [96] suggested using PLS-SEM to predict dependent variables' effects. Likewise, Davari and Rezazadeh [97] suggested that this method is suitable for predicting a group of equations simultaneously for the proposed research model and develops the relationship between variables. This study uses PLS-SEM as a verified reporting approach to conduct robust analysis in the management sciences domain. SEM is a second-generation multifaceted data investigation method that examines theoretically developed linear and additive casual relationships [98]. It allows researchers to examine the relationships between constructs. SME is considered as the best approach to measure the direct and indirect paths because it analyzes the difficult to examine and unobservable latent constructs. SEM consists of inner and outer model analyses, which examine the relationships between independent and dependent variables and relationships between latent constructs and their observed pointers. PLS focuses on variance analysis, which could be done using Smart PLS [99]. Therefore, this approach is selected for the present study.

4. Results

4.1. Measurement Model

The current study analyzed the measurement model approach to assess the reliability, composite reliability (CR) and average variance extracted (AVE) of the constructs. To measure the reliability, we have used Cronbach alpha (CA) and composite reliability. The results for CA and CR are presented in Table 2 for entrepreneurial orientation (0.901, 0.922), innovation performance (0.922, 0.944), organizational commitment (0.940, 0.952), and TL (0.955, 0.965) respectively. According to Hair, Ringle [96], CA and CR values should be higher than 0.70, and this study found the values to be in an acceptable range. We assessed the Fornell Larcker and heterotrait –monotrait (HTMT) ratio to test the discriminant validity [100]. The HTMT ratio has recently gained preference over Fornell and Larcker [101,102]. Fornell and Larcker's tests in Table 3 exhibit values greater than the correlations among the variables. The HTMT ratio results are lower than the 0.090 thresholds

(see Table 4). Additionally, we examined the convergent validity to obtain AVE values, and all the values were greater than the 0.50 threshold (for entrepreneurial orientation, organizational commitment, innovation performance and transformational leadership the AVE values were 0.628, 0.769, 0.810, and 0.846, respectively), as suggested by Henseler, Hubona [101] (see Table 2). Furthermore, we examined the variance inflation factor (VIF) to assess the problem of multicollinearity in the data. Aiken, West [103] suggested that the values of VIF must be <10, and this study found VIF values within the suggested range, depicting no issue of multicollinearity in the data (see Table 5).

Table 2. Measurement model.

Construct	Item Code	Loading	Outer Weights	CA	CR	AVE
Entrepreneurship orientation (EO)				0.901	0.922	0.628
	EO1	0.799	0.196			
	EO2	0.786	0.175			
	EO3	0.756	0.169			
	EO4	0.778	0.182			
	EO5	0.798	0.181			
	EO6	0.806	0.177			
	EO7	0.821	0.181			
Organizational Commitment (OC)				0.940	0.952	0.769
	OC1	0.906	0.188			
	OC2	0.877	0.184			
	OC3	0.885	0.198			
	OC4	0.879	0.196			
	OC5	0.864	0.189			
	OC6	0.85	0.184			
Innovation Performance (IP)				0.922	0.944	0.81
	IP1	0.912	0.283			
	IP2	0.885	0.262			
	IP3	0.91	0.284			
	IP4	0.892	0.282			
Transformational Leadership				0.955	0.965	0.846
	TL1	0.928	0.217			
	TL2	0.936	0.218			
	TL3	0.919	0.22			
	TL4	0.911	0.215			
	TL5	0.907	0.217			

Note: Average variance extracted (AVE); Cronbach's alpha (CA); Composite reliability (CR).

Table 3. Discriminant validity (latent variable correlation and square root of AVE).

	EO	IP	OC	TL
EO	0.792			
IP	0.459	0.900		
OC	0.423	0.702	0.877	
TL	0.304	0.683	0.756	0.920

Note: Entrepreneurial orientation (EO); innovation performance (IP); organizational commitment (OC); transformational leadership (TL).

Table 4. HTMT (heterotrait–monotrait ratio).

	EO	IP	OC
IP	0.503		
OC	0.459	0.752	
TL	0.327	0.727	0.797

Note: Entrepreneurial orientation (EO); innovation performance (IP); organizational commitment (OC); transformational leadership (TL).

Table 5. Saturated model results.

Construct	R2	Adj. R2	VIF	Q2	f2	SRMR
IP	0.581	0.580	1.219	0.442	0.035	0.058
OC	0.625	0.624	1.414	0.448		

Note: Variance inflation factor (VIF); predictive relevance (Q2); effect size (f2); standardized root mean square (SRMR); determination of coefficient (R2).

4.2. Assessment of Structural Model

We used the Smart PLS software to assess the structured equation model using 5000 bootstraps. According to Henseler, Hubona [101] and Cho, Hwang [104], the standardized root means square (SRMR) values should be lower than 0.08 (for a sample size greater than 100). Thus, we found a significant model fit for this study (0.058). The values of determination of coefficient (R2) should be >0.1 [105]. This study found that 58% variance occurred in innovation performance, explained by entrepreneurial orientation and organizational commitment, and 62.5% variance occurred on an organizational commitment by entrepreneurial orientation. Moreover, the value of Q2 should be higher than zero. Hence, this study's results were both within the significance level, and the study model's predictive relevance was achieved (see Table 5) [106]. This study's f2 value is 0.035, which falls within the suggested range by Cohen [107]. The study suggested that the f2 values of 0.02, 0.15 and 0.35 show the small, medium and significant impacts (see Table 5).

4.3. Structural Equation Modeling

The PLS-SEM findings show that (H1) entrepreneurial orientation has positive and significant effects on organizational commitment ($\beta = 0.277$, $t = 11.375$, $p < 0.05$). (H2) entrepreneurial orientation has positive and significant effects on innovation performance of firms with values of $\beta = 0.298$, $t = 11.146$, and $p < 0.05$. Moreover, (H3) organizational commitment has significant and positive effects on innovation performance ($\beta = 0.340$, $t = 8.432$, $p < 0.05$). Thus, we accepted the direct relationships of H1, H2 and H3. Moreover, the results show that (H4) the indirect effects of organizational commitment between the relationship of entrepreneurial orientation and innovation performance were positive and significant, with $\beta = 0.094$, $t = 7.096$, $p < 0.05$ (see Table 6). The past literature suggests that the indirect relation particularly includes a third variable, which acts as an intermediating variable in the relationships between dependent and independent variables. Technically, the effects of the independent variable (X) on the dependent variable (Z) are intermediated by a third variable (Y) [108]. Moreover, the direct effects of entrepreneurial orientation on organizational commitment ($\beta = 0.277$, $t = 11.375$), OC on IP ($\beta = 0.340$, $t = 8.432$) and entrepreneurial orientation on innovation performance ($\beta = 0.298$, $t = 11.146$) were positive and significant, and the indirect effects of organizational commitment between the relationship of entrepreneurial orientation and innovation performance were significant with $\beta = 0.094$, $t = 7.096$, which shows partial mediation in the model. The mechanism of the mediation process is as follows: Y is a variable affecting as a mediator if X affects Y, X affects Z, and Y significantly affects Z when controlling for X, and the effects of X on Z reduce significantly when Y is placed in the model simultaneously with X as an interpreter of Z [109,110]. Moreover, positive and significant direct and indirect relations probe partial mediation, while significant direct effects and insignificant indirect effects

result in full mediation between the independent and dependent variables [111]. Thus, partial mediation has occurred in this study and H4 was accepted (see Table 6, Figure 2). Furthermore, this study examined the moderation role of transformational leadership on the relationship between entrepreneurial orientation and organizational commitment. The findings exhibit a positive and significant effect of transformational leadership as a moderator with $\beta = 0.096$, $t = 6.603$, $p = <0.05$. Figure 3 explains that the interaction of transformational leadership (EO*TL) on entrepreneurial orientation and organizational commitment is positive, and higher levels of transformational leadership in the firms will increase the effects of entrepreneurial orientation on organizational commitment (see Table 6, Figure 3). Thus, we accepted H5 as well.

Table 6. Hypothesis constructs.

Effects	Relationships	Beta	Mean	(STDEV)	t-Value	Decision
Direct relations						
H1	EO → OC	0.277	0.277	0.024	11.375 *	Yes
H2	EO → IP	0.298	0.299	0.027	11.146 *	Yes
H3	OC → IP	0.340	0.340	0.040	8.432 *	Yes
Indirect or Mediating/Moderating						
H4	EO → OC → IP	0.094	0.094	0.013	7.096 *	Yes
H5	EO*TL → OC	0.096	0.096	0.015	6.603 *	Yes

Note: * $p < 0.05$, Entrepreneurial orientation (EO); innovation performance (IP); organizational commitment (OC); transformational leadership (TL).

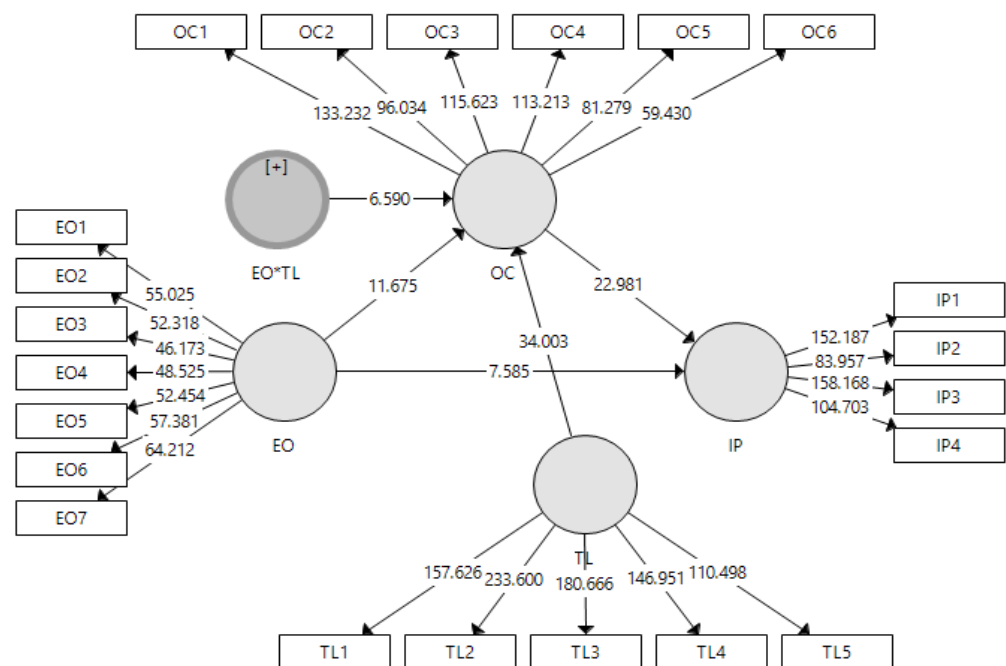


Figure 2. PLS-SEM showing positive relationships in variables.

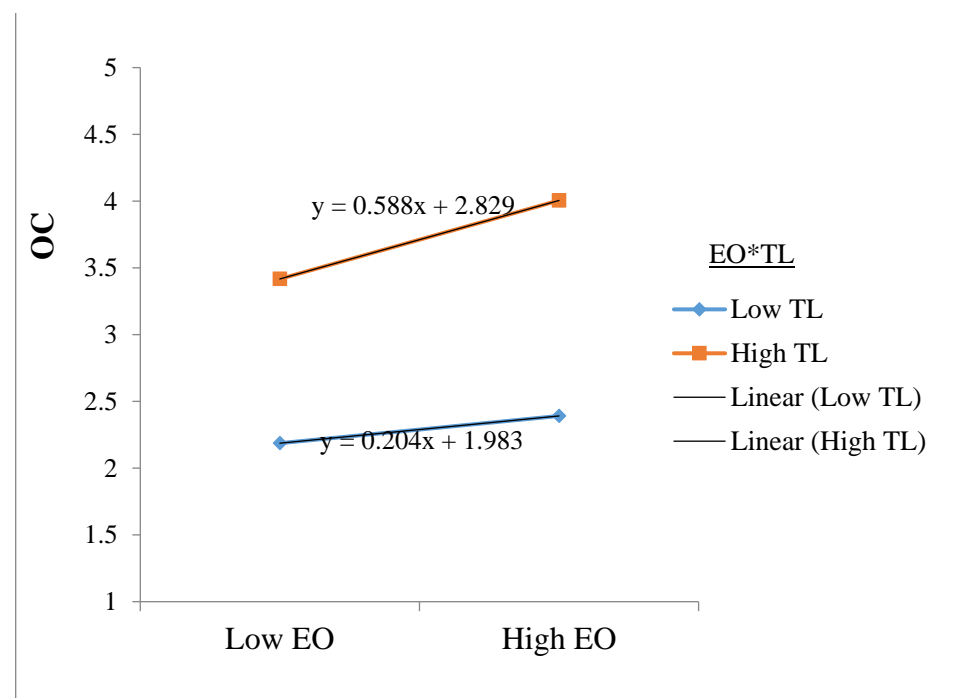


Figure 3. Interaction of TL between the relationship of EO and OC.

5. Discussion

The present study examined the mediating and moderating effects of organizational commitment and transformational leadership on innovation performance triggered by entrepreneurial orientation within the SMEs sector of a developing economy. In line with the past studies, entrepreneurial orientation positively affects organizational commitment [7,9,59,60], and entrepreneurial orientation significantly enhances innovation performance [8,61–63,65,68,75] through risk-taking, innovativeness, and reactivity. Moreover, the present study demonstrates the nature of the relationship among innovation performance and organizational commitment. Findings exhibit that belongingness and emotional affiliation enhances the commitment of employees to their firms. It is further verified that sense of belongingness and emotional attachment (organizational commitment), enhances SMEs' innovation performance [55,72,77–79].

In the modern world of fierce competition among SMEs, entrepreneurial orientation leads to the success of firms by enhancing their innovation performance. Particularly, firms need to maintain readiness to enhance innovation and experiments to launch innovative products and services in the market to meet performance standards by supporting the novelty of research and development of new processes. Firms' abilities to take risks to enter into evolving markets by investing substantial resources enable them to innovate. In doing so, SMEs should look into new market opportunities by assessing future problems and preparing for needed change [86]. Alongside the entrepreneurial orientation's developmental role, organizational commitment plays a leading mediation role in SMEs' entrepreneurial orientation and innovation performance. The emotional attachment and sense of belongingness of employees to remain with their firm enhance their affective commitment. The measure of organizational commitment also includes employees' moral obligation of remaining with the firm for a longer duration, and not leaving the firm when offered a better job position elsewhere. Moreover, employees feel that a lot will change in their lives if they leave their current firms, and the level of difficulty for being detached from the current employer enhances their organizational commitment [88]. It is hard for the employees to achieve goals of entrepreneurial orientation and higher levels of organizational commitment without the leadership of the firm. In this regard, transformational leadership provides a best-fit for enhancing the process of entrepreneurial

orientation and organizational commitment towards innovation performance through providing compelling vision, assurance of goal attainment, inventive problem-solving, training and coaching and developing a strong sense of purpose [89]. All these factors substantially help in improving the highly responsive attitude of firms concerning the product and services innovation, improvement in manufacturing processes and lowering the production costs [87]. The present study examined the positive effects of all these critical characteristics on innovation performance.

The results indicate that organizational commitment has a decisive mediating effect between the relationships of entrepreneurial orientation and innovation performance. Findings indicate that entrepreneurial orientation enhances innovation performance significantly using RBV [55]. The dimensions of organizational commitment, such as continuance, normative and affective commitment, enhance innovation performance. Moreover, the results indicate the combined effects of entrepreneurial orientation and organizational commitment on innovation performance. Additionally, this study uniquely examined the mediating role of organizational commitment between the relationship of entrepreneurial orientation and innovation performance [55]. Third, this study focused on the moderating role of transformational leadership, based on its characteristics such as leader's skills to design appealing visions, focus on goal setting and achievement, indulgence in coaching, training and development, creative problem-solving skills, and developing a complete sense of purpose [89], enhancing the link between entrepreneurial orientation and organizational commitment [7,9,52,60] and innovation performance [5,8,10,18,20,22,27,28,70,75]. Aimed at examining the direct effects of transformational leadership on innovation performance [82] and organizational commitment [83], past studies suggested the increase in performance [54,80,81]. The moderating role of transformational leadership on entrepreneurial orientation and innovation performance's relation was found to be positive [84]; therefore, this study examined the transformational leadership's moderation mechanism on the relationship between entrepreneurial orientation and organizational commitment. Thus, the results concluded that a higher level of transformational leadership of SME managers enhances the relationship between entrepreneurial orientation and organizational commitment.

Finally, the study embedded RBV into transformational leadership, where transformational leaders or human assets represent SMEs' tangible resources and leaders' particular skills as intangible assets. Thus, both kinds of resources are essential to achieve the higher impacts of entrepreneurial orientation on organizational commitment through the moderation role of transformational leadership. On the other hand, organizational commitment also has a significant link with RBV. The effective, continuance and normative commitment of employees refer to the firms' intangible resources, enhancing organizational commitment and, ultimately, the firms' innovation performance. Additionally, RBV indulges the innovation process, where both process and product innovation heavily involve RBV. Innovation and innovation performance depend on the tangible (transformational leaders, technology and resources) and intangible resources (skills of transformational leaders, and level of commitment of employees) of the firms and rely on the interlinked mechanism such as EO effects on organizational commitment and innovation performance.

5.1. Theoretical Contributions

This study has several theoretical contributions. First, the findings contribute to the literature on entrepreneurial orientation. This study validates that dimensions of entrepreneurial orientation such as innovativeness (SMEs willingness to support innovative ideas, experiments for product and service development and novel research and development), risk-taking (risk-taking capability to enter new markets and investment on new ventures) and proactiveness (SMEs' strive to explore new opportunities and pro-active approaches to issues, needs and changes) have a significant impact on organizational commitment [7,9,52,60] and innovation performance [5,8,10,18,20,22,27,28,70,75].

5.2. Practical and Managerial Implications

This study offers several practical and managerial implications based on entrepreneurial orientation's impacts on the optimization of innovation performance. First, entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) helps in achieving SMEs' innovation milestones. The results show that human resource managers can utilize the entrepreneurial orientation's characteristics to enhance the firm's innovation performance while focusing on RBV philosophy [8,70]. Second, the firms should use risk-taking, innovativeness, and proactiveness to develop internal innovation performance strategies. Third, leaders should help their firms to practice these characteristics to enhance the firm's innovation performance. Leaders should also critically assess the fact that innovative and proactive activities in the firm enhance the level of commitment within the SMEs; thus, they should practice it rigorously. Lastly, the managers should focus on transformational leadership's vital role to optimize the effects of entrepreneurial orientation on organizational commitment with the help of transformational leadership skills such as developing a strong sense of purpose, coaching and training, and formulating compelling visions for their subordinates.

5.3. Limitations

Consistent with other research studies, the current study also has some limitations. We deliberately aimed at reducing common method bias using the time-lag data collection method, which averts the unprompted interventions. Future research should develop causal links through longitudinal research models. Being a developing country, SMEs in a developing economy generally avoid high risk-taking and proactive approaches towards uncertain situations. Future studies should measure the level of risk-taking capabilities of SMEs. Moreover, keeping in mind the large number of SMEs in Pakistan (600,000 services, 400,000 manufacturing and one million trade sector units [112], future studies should enhance the sample size categorically to enhance the study scope. Finally, future studies may consider other types of leadership styles are moderators such as passive leadership [113], parental leadership [114] or servant leadership [115].

Author Contributions: All authors contributed equally in this research work. All authors have read and agreed to the published version of the manuscript.

Funding: This work was partially supported by the Polytechnic Institute of Lisbon through the Projects for Research, Development, Innovation and Artistic Creation (IDI&CA), within the framework of the project ANEEC—Assessment of the level of business efficiency to increase competitiveness, IPL/2020/ANEEC_ISCAL.

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki. The review board of Jiangsu University exempted the research for ethical approval, as it is a survey-based study. The study obtained the consent of the employees working in the SMEs and they filled the questionnaires willingly.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The original data is provided by all the authors. If there are relevant research needs, the data can be obtained by sending an email to the corresponding author. Please indicate the purpose of the research and the statement of data confidentiality in the email.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Manzoor, F.; Wei, L.; Nurunnabi, M.; Subhan, Q.A.; Shah, S.I.A.; Fallatah, S. The Impact of Transformational Leadership on Job Performance and CSR as Mediator in SMEs. *Sustainability* **2019**, *11*, 436. [[CrossRef](#)]
2. Kureshi, N.; Mann, R.; Khan, M.; Qureshi, M. Quality management practices of SME in developing countries: A survey of manufacturing SME in Pakistan. *J. Qual. Technol. Manag.* **2009**, *5*, 63–89.
3. Dar, M.S.; Ahmed, S.; Raziq, A. Small and medium-size enterprises in Pakistan: Definition and critical issues. *Pak. Bus. Rev.* **2017**, *19*, 46–70.

4. Wiklund, J.; Shepherd, D. Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strat. Manag. J.* **2003**, *24*, 1307–1314. [[CrossRef](#)]
5. Tang, G.; Chen, Y.; Jin, J. Entrepreneurial orientation and innovation performance: Roles of strategic HRM and technical turbulence. *Asia Pac. J. Hum. Resour.* **2015**, *53*, 163–184. [[CrossRef](#)]
6. Si, S.; Ahlstrom, D.; Wei, J.; Cullen, J. Business, Entrepreneurship and Innovation Toward Poverty Reduction. *Entrep. Reg. Dev.* **2020**, *32*, 1–20. [[CrossRef](#)]
7. Soomro, B.A.; Shah, N. Determining the impact of entrepreneurial orientation and organizational culture on job satisfaction, organizational commitment, and employee's performance. *South Asian J. Bus. Stud.* **2019**, *8*, 266–282. [[CrossRef](#)]
8. Isichei, E.E.; Agbaeze, K.E.; Odiba, M.O. Entrepreneurial orientation and performance in SMEs. *Int. J. Emerg. Mark.* **2020**, *15*, 1219–1241. [[CrossRef](#)]
9. Omerzel, D.G. The impact of entrepreneurial characteristics and organisational culture on innovativeness in tourism firms. *Manag. Glob. Transit.* **2016**, *14*, 93–110.
10. Jambulingam, T.; Kathuria, R.; Doucette, W.R. Entrepreneurial orientation as a basis for classification within a service industry: The case of retail pharmacy industry. *J. Oper. Manag.* **2004**, *23*, 23–42. [[CrossRef](#)]
11. Miller, D.; Friesen, P.H. Strategy-making and environment: The third link. *Strat. Manag. J.* **1983**, *4*, 221–235. [[CrossRef](#)]
12. Meynhardt, T.; Diefenbach, F.E. What Drives Entrepreneurial Orientation in the Public Sector? Evidence from Germany's Federal Labor Agency. *J. Public Adm. Res. Theory* **2012**, *22*, 761–792. [[CrossRef](#)]
13. Rattanawong, W.; Suwannon, N. Antecedents and Consequences of Service Innovation: An Empirical Study of Touring Business in the Southern Part of Thailand. *J. Entrep. Bus. Innov.* **2014**, *1*, 48. [[CrossRef](#)]
14. Kraus, S. The role of entrepreneurial orientation in service firms: Empirical evidence from Austria. *Serv. Ind. J.* **2013**, *33*, 427–444. [[CrossRef](#)]
15. Monsen, E.; Boss, R.W. The Impact of Strategic Entrepreneurship Inside the Organization: Examining Job Stress and Employee Retention. *Entrep. Theory Pract.* **2009**, *33*, 71–104. [[CrossRef](#)]
16. Entebang, H.; Harrison, R.T.; de Run, E.C. Entrepreneurial orientation of public enterprises in Malaysia. *Bus. Strategy Ser.* **2010**, *11*, 75–77. [[CrossRef](#)]
17. Usman, M.; Mat, A. Assessing the importance of entrepreneurial orientation on innovation in service sector. *Int. J. Bus. Manag. Invent.* **2017**, *6*, 2319–8028.
18. Nasution, H.N.; Mavondo, F.T.; Matanda, M.J.; Ndubisi, N.O. Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Ind. Mark. Manag.* **2011**, *40*, 336–345. [[CrossRef](#)]
19. Barney, J. Firm Resources and Sustained Competitive Advantage. *J. Manag.* **1991**, *17*, 99–120.
20. Newbert, S.L. Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strat. Manag. J.* **2006**, *28*, 121–146. [[CrossRef](#)]
21. Sriviboon, C. The Impact of Strategic Human Resource on the Innovation Performance of Pharmacy Companies in Thailand: Mediating Role of Innovation Capabilities. *Syst. Rev. Pharm.* **2020**, *11*, 434–442.
22. Nakku, V.B.; Agbola, F.W.; Miles, M.P.; Mahmood, A. The interrelationship between SME government support programs, entrepreneurial orientation, and performance: A developing economy perspective. *J. Small Bus. Manag.* **2019**, *58*, 2–31. [[CrossRef](#)]
23. Parida, V.; Pesämaa, O.; Wincent, J.; Westerberg, M. Network capability, innovativeness, and performance: A multidimensional extension for entrepreneurship. *Entrep. Reg. Dev.* **2017**, *29*, 94–115. [[CrossRef](#)]
24. Wu, B.; Gong, C. Impact of Open Innovation Communities on Enterprise Innovation Performance: A System Dynamics Perspective. *Sustainability* **2019**, *11*, 4794. [[CrossRef](#)]
25. Rui, Z.; Guijie, Q. A System Dynamics Model for Open Innovation Community. *Int. J. Enterp. Inf. Syst.* **2018**, *14*, 78–88. [[CrossRef](#)]
26. Enjun, X.; Ming, Z.; Huaijia, Z. System dynamics model of open innovation community network. *Sci. Technol. Prog. Policy* **2013**, *30*, 14–19.
27. Tang, T.W.; Zhang, P.; Lu, Y.; Wang, T.C.; Tsai, C.L. The effect of tourism core competence on entrepreneurial orientation and service innovation performance in tourism small and medium enterprises. *Asia Pac. J. Tour. Res.* **2020**, *25*, 89–100. [[CrossRef](#)]
28. Shafer, A.; Ali, K. The effect of entrepreneurial orientation on innovation performance: The mediation role of learning orientation on Kuwait SME. *Manag. Sci. Lett.* **2020**, *10*, 3811–3820. [[CrossRef](#)]
29. Sanjaghi, M.E.; Farrahi, A.; Nadali, I.Z.; Doroodi, H. The Impact of Entrepreneurial Orientations on Organizational Commitment: The Mediating Role of Organizational Justice. *Organ. Behav. Stud. Q.* **2014**, *2*, 139–154. [[CrossRef](#)]
30. Tajasom, A.; Hung, D.K.M.; Nikbin, D.; Hyun, S.S. The role of transformational leadership in innovation performance of Malaysian SMEs. *Asian J. Technol. Innov.* **2015**, *23*, 172–188. [[CrossRef](#)]
31. Bushra, F.; Ahmad, U.; Naveed, A. Effect of transformational leadership on employees' job satisfaction and organizational commitment in banking sector of Lahore (Pakistan). *Int. J. Bus. Soc. Sci.* **2011**, *2*, 261–267.
32. Jain, P.; Duggal, T. The Influence of Transformational Leadership and Emotional Intelligence on Organizational Commitment. *J. Commer. Manag. Thought* **2016**, *7*, 586. [[CrossRef](#)]
33. Tian, H.; Iqbal, S.; Akhtar, S.; Qalati, S.A.; Anwar, F.; Khan, M.A.S. The Impact of Transformational Leadership on Employee Retention: Mediation and Moderation Through Organizational Citizenship Behavior and Communication. *Front. Psychol.* **2020**, *11*, 314. [[CrossRef](#)]

34. Lambert, E.G.; Kelley, T.; Hogan, N.L. The Association of Occupational Stressors with Different Forms of Organizational Commitment Among Correctional Staff. *Am. J. Crim. Justice* **2013**, *38*, 480–501. [[CrossRef](#)]
35. Lambert, E.G.; Keena, L.D.; Leone, M.; May, D.; Haynes, S.H. The effects of distributive and procedural justice on job satisfaction and organizational commitment of correctional staff. *Soc. Sci. J.* **2020**, *57*, 405–416. [[CrossRef](#)]
36. Mowday, R.T.; Porter, L.W.; Steers, R. *Organizational Linkages: The Psychology of Commitment, Absenteeism, and Turnover*; Academic Press: San Diego, CA, USA, 1982.
37. Freixanet, J.; Braojos, J.; Rialp-Criado, A.; Rialp-Criado, J. Does international entrepreneurial orientation foster innovation performance? The mediating role of social media and open innovation. *Int. J. Entrep. Innov.* **2021**, *22*, 33–44. [[CrossRef](#)]
38. Akbar, F.; Bon, A.T.B.; Wadood, F. The Industrial Revolution 4.0 and Entrepreneurial Orientation with Innovation as Mediation Effect on the Performance of Malaysian Furniture Industry: A Proposed Framework. In Proceedings of the International Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates, 26–27 December 2020.
39. Amin, M.; Thurasamy, R.; Aldakhil, A.M.; Kaswuri, A.H.B. The effect of market orientation as a mediating variable in the relationship between entrepreneurial orientation and SMEs performance. *Nankai Bus. Rev. Int.* **2016**, *7*, 39–59. [[CrossRef](#)]
40. Shah, S.Z.A.; Ahmad, M. Entrepreneurial orientation and performance of small and medium-sized enterprises. *Compet. Rev.* **2019**, *29*, 551–572. [[CrossRef](#)]
41. Abbas, M.; Raja, U. Impact of psychological capital on innovative performance and job stress. *Can. J. Adm. Sci. Rev. Can. Sci. l'Adm.* **2015**, *32*, 128–138. [[CrossRef](#)]
42. Waheed, A.; Miao, X.; Waheed, S.; Ahmad, N.; Majeed, A. How New HRM Practices, Organizational Innovation, and Innovative Climate Affect the Innovation Performance in the IT Industry: A Moderated-Mediation Analysis. *Sustainability* **2019**, *11*, 621. [[CrossRef](#)]
43. Phaneuf, J.-É.; Boudrias, J.-S.; Rousseau, V.; Brunelle, É. Personality and transformational leadership: The moderating effect of organizational context. *Pers. Individ. Differ.* **2016**, *102*, 30–35. [[CrossRef](#)]
44. Li, C.-R.; Lin, C.-J.; Tien, Y.-H. CEO transformational leadership and top manager ambidexterity. *Leadersh. Organ. Dev. J.* **2015**, *36*, 927–954. [[CrossRef](#)]
45. Deichmann, D.; Stam, D. Leveraging transformational and transactional leadership to cultivate the generation of organization-focused ideas. *Leadersh. Q.* **2015**, *26*, 204–219. [[CrossRef](#)]
46. Maaitah, A.M. The role of leadership style on turnover intention. *Int. Rev. Manag. Mark.* **2018**, *8*, 24.
47. Camelo-Ordaz, C.; García-Cruz, J.; Sousa-Ginel, E.; Valle-Cabrera, R. The influence of human resource management on knowledge sharing and innovation in Spain: The mediating role of affective commitment. *Int. J. Hum. Resour. Manag.* **2011**, *22*, 1442–1463. [[CrossRef](#)]
48. Guchait, P.; Cho, S. The impact of human resource management practices on intention to leave of employees in the service industry in India: The mediating role of organizational commitment. *Int. J. Hum. Resour. Manag.* **2010**, *21*, 1228–1247. [[CrossRef](#)]
49. Odoardi, C.; Battistelli, A.; Montani, F.; Peiró, J.M. Affective Commitment, Participative Leadership, and Employee Innovation: A Multilevel Investigation. *Rev. Psicol. Trab. Organ.* **2019**, *35*, 103–113. [[CrossRef](#)]
50. Yousef, D.A. Organizational commitment: A mediator of the relationships of leadership behavior with job satisfaction and performance in a non-western country. *J. Manag. Psychol.* **2000**, *15*, 6–24. [[CrossRef](#)]
51. Muchiri, M.K. Entrepreneurial Orientation and Leadership: A Review, Model and Research Agenda. In Proceedings of the 26th Annual SEAAANZ Conference Proceedings, Sydney, Australia, 11–12 July 2013.
52. Chuang, S.-H. A resource-based perspective on knowledge management capability and competitive advantage: An empirical investigation. *Expert Syst. Appl.* **2004**, *27*, 459–465. [[CrossRef](#)]
53. Anderson, B.S.; Kreiser, P.M.; Kuratko, D.F.; Hornsby, J.S.; Eshima, Y. Reconceptualizing entrepreneurial orientation. *Strat. Manag. J.* **2015**, *36*, 1579–1596. [[CrossRef](#)]
54. Rauch, A.; Wiklund, J.; Lumpkin, G.T.; Frese, M. Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrep. Theory Pract.* **2009**, *33*, 761–787. [[CrossRef](#)]
55. Covin, J.G.; Rigtering, J.C.; Hughes, M.; Kraus, S.; Cheng, C.-F.; Bouncken, R.B. Individual and team entrepreneurial orientation: Scale development and configurations for success. *J. Bus. Res.* **2020**, *112*, 1–12. [[CrossRef](#)]
56. Covin, J.G.; Wales, W.J. The Measurement of Entrepreneurial Orientation. *Entrep. Theory Pract.* **2011**, *36*, 677–702. [[CrossRef](#)]
57. Miller, D. The Correlates of Entrepreneurship in Three Types of Firms. *Manag. Sci.* **1983**, *29*, 770–791. [[CrossRef](#)]
58. Covin, J.G.; Slevin, D.P. Strategic management of small firms in hostile and benign environments. *Strat. Manag. J.* **1989**, *10*, 75–87. [[CrossRef](#)]
59. Wales, W.J.; Covin, J.G.; Monsen, E. Entrepreneurial orientation: The necessity of a multilevel conceptualization. *Strat. Entrep. J.* **2020**, *14*, 639–660. [[CrossRef](#)]
60. Luna-Arocas, R.; Valle, I.D.-D.; Lara, F.J. Talent management and organizational commitment: The partial mediating role of pay satisfaction. *Empl. Relat.* **2020**, *42*, 863–881. [[CrossRef](#)]
61. An empirical study of the construction of measuring model for organizational innovation in Taiwanese high-tech enterprises. *J. Am. Acad. Bus.* **2005**, *6*, 299–304.
62. Stock, G.N.; Greis, N.P.; Fischer, W.A. Firm size and dynamic technological innovation. *Technovation* **2002**, *22*, 537–549. [[CrossRef](#)]
63. Medda, G. External R&D, product and process innovation in European manufacturing companies. *J. Technol. Transf.* **2020**, *45*, 339–369. [[CrossRef](#)]

64. Damanpour, F. Organizational Complexity and Innovation: Developing and Testing Multiple Contingency Models. *Manag. Sci.* **1996**, *42*, 693–716. [[CrossRef](#)]
65. Shahnaei, S.; Long, C.S. The Review of Improving Innovation Performance through Human Resource Practices in Organization Performance. *Asian Soc. Sci.* **2015**, *11*, 52–56. [[CrossRef](#)]
66. Wahyuni, N.M.; Sara, I.M. The effect of entrepreneurial orientation variables on business performance in the SME industry context. *J. Work. Learn.* **2020**, *32*, 35–62. [[CrossRef](#)]
67. Abdul-Halim, H.; Ahmad, N.H.; Geare, A.; Thurasamy, R. Innovation Culture in SMEs: The Importance of Organizational Culture, Organizational Learning and Market Orientation. *Entrep. Res. J.* **2019**, *9*, 1–14. [[CrossRef](#)]
68. Musawa, M.S.; Ahmad, K. A Conceptual Framework for the Influence of Entrepreneurial Orientation and Environmental Dynamism on Marketing Innovation Performance in SMEs. *Bus. Econ. J.* **2018**, *9*, 1–8. [[CrossRef](#)]
69. Rypestøl, J.O.; Aarstad, J. Entrepreneurial innovativeness and growth ambitions in thick vs. thin regional innovation systems. *Entrep. Reg. Dev.* **2018**, *30*, 639–661. [[CrossRef](#)]
70. Sarsah, S.A.; Tian, H.; Dogbe, C.S.K.; Bamfo, B.A.; Pomegbe, W.W.K. Effect of entrepreneurial orientation on radical innovation performance among manufacturing SMEs: The mediating role of absorptive capacity. *J. Strat. Manag.* **2020**, *13*, 551–570. [[CrossRef](#)]
71. Meyer, J.P.; Stanley, D.J.; Herscovitch, L.; Topolnytsky, L. Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *J. Vocat. Behav.* **2002**, *61*, 20–52. [[CrossRef](#)]
72. Yeşil, S.; Sözbilir, F.; Akben, İ. Affective Organisational Commitment, Individual Innovation Behaviour And Organisational Innovation Performance. In Proceedings of the 10th International Conference on Knowledge, Economy and Management, Istanbul, Turkey, 8–10 November 2012.
73. Chung, R. Job satisfaction and organizational commitment among junior high school counselors in Taipei, Taiwan. 2002. Available online: <https://www.elibrary.ru/item.asp?id=5346867> (accessed on 11 March 2020).
74. Fatima, M.; Izhar, Z.; Kazmi, Z.A. Organizational Justice and Employee Sustainability: The Mediating Role of Organizational Commitment. *SEISENSE J. Manag.* **2020**, *3*, 12–22. [[CrossRef](#)]
75. Zhai, Y.-M.; Sun, W.-Q.; Tsai, S.-B.; Wang, Z.; Zhao, Y. An Empirical Study on Entrepreneurial Orientation, Absorptive Capacity, and SMEs' Innovation Performance: A Sustainable Perspective. *Sustainability* **2018**, *10*, 314. [[CrossRef](#)]
76. Lambert, E.G.; Hogan, N.L. Wanting Change: The Relationship of Perceptions of Organizational Innovation With Correctional Staff Job Stress, Job Satisfaction, and Organizational Commitment. *Crim. Justice Policy Rev.* **2009**, *21*, 160–184. [[CrossRef](#)]
77. Riaz, K. The impacts of organizational commitment on employee job performance. *Eur. J. Soc. Sci.* **2010**, *15*, 292–298.
78. Rashid, Z.A.; Sambasivan, M.; Johari, J. The influence of corporate culture and organisational commitment on performance. *J. Manag. Dev.* **2003**, *22*, 708–728. [[CrossRef](#)]
79. Tarigan, Z.J.H. *The Impact of Organization Commitment to Process and Product Innovation in Improving Operational Performance*; Petra Christian University: Surabaya, Indonesia, 2018.
80. Chen, Y.; Tang, G.; Jin, J.; Xie, Q.; Li, J. CEO s' transformational leadership and product innovation performance: The roles of corporate entrepreneurship and technology orientation. *J. Prod. Innov. Manag.* **2014**, *31*, 2–17. [[CrossRef](#)]
81. Manafi, M.; Subramaniam, I.D. Relationship between Human Resources Management Practices, Transformational Leadership, and Knowledge Sharing on Innovation in Iranian Electronic Industry. *Asian Soc. Sci.* **2015**, *11*, 358. [[CrossRef](#)]
82. Asiedu, M.A.; Anyigba, H.; Ofori, K.S.; Ampong, G.O.A.; Addae, J.A. Factors influencing innovation performance in higher education institutions. *Learn. Organ.* **2020**, *27*, 365–378. [[CrossRef](#)]
83. Avolio, B.J.; Zhu, W.; Koh, W.; Bhatia, P. Transformational leadership and organizational commitment: Mediating role of psychological empowerment and moderating role of structural distance. *J. Organ. Behav.* **2004**, *25*, 951–968. [[CrossRef](#)]
84. Engelen, A.; Gupta, V.; Strenger, L.; Brettel, M. Entrepreneurial Orientation, Firm Performance, and the Moderating Role of Transformational Leadership Behaviors. *J. Manag.* **2015**, *41*, 1069–1097. [[CrossRef](#)]
85. Burns, J. *Burns Transformational Leadership Theory*; Harper & Row.: New York, NY, USA, 1978.
86. Lumpkin, G.T.; Dess, G.G. Clarifying the entrepreneurial orientation construct and linking it to performance. *Acad. Manag. Rev.* **1996**, *21*, 135–172. [[CrossRef](#)]
87. Wang, C.L.; Ahmed, P.K. The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *Eur. J. Innov. Manag.* **2004**, *7*, 303–313. [[CrossRef](#)]
88. Ugaddan, R.; Oh, H.-G.; Park, S.M. An Exploration of Entrepreneurial Orientation and Organizational Commitment: A Focus on the Role of Public Service Motivation. *Asian Rev. Public Adm.* **2016**, *27*, 4–24.
89. Bass, B.M.; Avolio, B. *Multifactor Leadership Questionnaire: Manual Leader form (5xshort)*; Mind Garden: Redwood City, CA, USA; Palo Alto, CA, USA, 1995.
90. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.-Y.; Podsakoff, N.P. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879. [[CrossRef](#)]
91. Mandeville, G.K.; Roscoe, J.T. Fundamental Research Statistics for the Behavioral Sciences. *J. Am. Stat. Assoc.* **1971**, *66*, 224. [[CrossRef](#)]
92. Hair, J.F.; Sarstedt, M.; Ringle, C.M.; Mena, J.A. An assessment of the use of partial least squares structural equation modeling in marketing research. *J. Acad. Mark. Sci.* **2012**, *40*, 414–433. [[CrossRef](#)]
93. Kura, K.M.; Shamsudin, F.M.; Chauhan, A. Does Self-Regulatory Efficacy Matter? Effects of Punishment Certainty and Punishment Severity on Organizational Deviance. *SAGE Open* **2015**, *5*, 1–14. [[CrossRef](#)]

94. Li, W.; Qalati, S.A.; Khan, M.A.S.; Kwabena, G.Y.; Erusalkina, D.; Anwar, F. Value Co-creation and Growth of Social Enterprises in Developing Countries: Moderating Role of Environmental Dynamics. *Entrep. Res. J.* **2020**, *1*, 1–28. [[CrossRef](#)]
95. Min, J.; Iqbal, S.; Khan, M.A.S.; Akhtar, S.; Anwar, F.; Qalati, S.A. Impact of supervisory behavior on sustainable employee performance: Mediation of conflict management strategies using PLS-SEM. *PLoS ONE* **2020**, *15*, e0236650. [[CrossRef](#)]
96. Hair, J.F.; Ringle, C.M.; Sarstedt, M. PLS-SEM: Indeed a silver bullet. *J. Mark. Theory Pract.* **2011**, *19*, 139–152. [[CrossRef](#)]
97. Davari, A.; Rezazadeh, A. *Structural Equation Modeling with PLS*; Jahad University: Tehran, Iran, 2013; Volume 215, p. 224.
98. StatSoft, I. *Electronic Statistics Textbook*; StatSoft: Tulsa, OK, USA, 2013; Volume 34.
99. Vinzi, V.E.; Trinchera, L.; Amato, S. PLS Path Modeling: From Foundations to Recent Developments and Open Issues for Model Assessment and Improvement. In *Handbook of Partial Least Squares*; Metzler, J.B., Ed.; Springer: Berlin/Heidelberg, Germany, 2010; pp. 47–82.
100. Fornell, C.; Larcker, D.F. *Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics*; Sage Publications Sage CA: Los Angeles, CA, USA, 1981.
101. Henseler, J.; Hubona, G.; Ray, P.A. Using PLS path modeling in new technology research: Updated guidelines. *Ind. Manag. Data Syst.* **2016**, *116*, 2–20. [[CrossRef](#)]
102. Baloch, M.A.; Meng, F.; Xu, Z.; Cepeda-Carrion, I.; Danish; Bari, M.W. Dark Triad, Perceptions of Organizational Politics and Counterproductive Work Behaviors: The Moderating Effect of Political Skills. *Front. Psychol.* **2017**, *8*, 1972. [[CrossRef](#)] [[PubMed](#)]
103. Aiken, L.S.; West, S.G.; Reno, R.R. *Multiple Regression: Testing and Interpreting Interactions*; SAGE: New York, NY, USA, 1991.
104. Cho, G.; Hwang, H.; Sarstedt, M.; Ringle, C.M. Cutoff criteria for overall model fit indexes in generalized structured component analysis. *J. Mark. Anal.* **2020**, *8*, 189–202. [[CrossRef](#)]
105. Chin, W.W. The partial least squares approach to structural equation modeling. *Mod. Methods Bus. Res.* **1998**, *295*, 295–336.
106. Falk, R.F.; Miller, N.B. *A Primer for Soft Modeling*; University of Akron Press: Akron, OH, USA, 1992.
107. Cohen, J. *Statistical Power Analysis for the Behavioral Sciences*; Academic Press: New York, NY, USA, 2013.
108. Baron, R.M.; Kenny, D.A. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J. Personal. Soc. Psychol.* **1986**, *51*, 1173. [[CrossRef](#)]
109. Preacher, K.J.; Hayes, A.F. SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behav. Res. Methods Instrum. Comput.* **2004**, *36*, 717–731. [[CrossRef](#)]
110. Preacher, K.J.; Hayes, A.F. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav. Res. Methods* **2008**, *40*, 879–891. [[CrossRef](#)] [[PubMed](#)]
111. Nitzl, C.; Roldan, J.L.; Cepeda, G. Mediation analysis in partial least squares path modeling. *Ind. Manag. Data Syst.* **2016**, *116*, 1849–1864. [[CrossRef](#)]
112. Uzma, A.; Kiran, A. *Gallup Cyber Letter on SME in Pakistan-2004*; Gallup Pakistan: Islamabad, Pakistan, 2004; pp. 1–6. Available online: <https://www.yumpu.com/en/document/view/21072231/gallup-cyber-letter-on-sme-in-pakistan-2004-page-1-1> (accessed on 11 March 2020).
113. Chênevert, D.; Vandenberghe, C.; Doucet, O.; Ben Ayed, A.K. Passive leadership, role stressors, and affective organizational commitment: A time-lagged study among health care employees. *Eur. Rev. Appl. Psychol.* **2013**, *63*, 277–286. [[CrossRef](#)]
114. Erben, G.S.; Güneşer, A.B. The Relationship Between Paternalistic Leadership and Organizational Commitment: Investigating the Role of Climate Regarding Ethics. *J. Bus. Ethic* **2008**, *82*, 955–968. [[CrossRef](#)]
115. Drury, S.L.; Servant Leadership and Organizational Commitment. Servant Leadership Research Roundtable. Available online: https://coloweb.site/regent.edu/acad/global/publications/sl_proceedings/2004/drury_servant_leadership.pdf2004 (accessed on 11 March 2020).