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Drivers of Sustainable Entrepreneurship Among SMEs in Pakistan: Does Entrepreneurial Knowledge Matter?

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ABSTRACT

Developing the concept of sustainable entrepreneurship from upper echelons theory and resource-based view theory, this research explores the impact of sustainable entrepreneurship among small and medium-sized enterprises. Sustainable entrepreneurship pursues a motivating approach to the economic, social, and environmental objectives of the society. The purpose of the study is to delve into the influencing factors of sustainable entrepreneurship among SMEs. The research is based on a quantitative approach via survey to address the sustainable entrepreneurship among SMEs (e.g., Punjab) in Pakistan. Data were obtained from 330 employees working in manufacturing SME's. Additionally, structural equation modelling (SEM) was tested to examining the hypothesized relationship. The results confirm a positive effect of sustainability orientation and entrepreneurial orientation on sustainable entrepreneurship and the moderating effect of entrepreneurial knowledge was found significant. Moreover, the results confirm a negative effect of entrepreneurial bricolage on sustainable entrepreneurship, and the moderating effect of the entrepreneurial knowledge was found to be insignificant. However, these researches carry-out the context of entrepreneurial bricolage acts as a moderator in sustainable entrepreneurship research. Based on the findings, this research provides implications for the policymakers to promote sustainable entrepreneurship to facilitate new markets and getting the foremost advantage of sustainable development in SME's.

INTRODUCTION

Over the past decade, the concept of sustainable entrepreneurship has become a relatively known term in the global economy. Around the world, the Small and Medium Enterprises (SME's) sector was either in recession or close to recede (Cervelló-Royo et al., 2019, Lüdeke-Freund, 2020, Schaltegger et al., 2019, Eller et al., 2020). Hence, the SME sector started losing hold of entrepreneurship, dashing hopes pinned by some countries, notably among them is Pakistan (Muneeb et al., 2020) Lack of resources and global environmental issues have pushed the world's economy towards sustainable development in the SME sector (Schaltegger et al., 2016b, Fossen

and Sorgner, 2019, Pieroni et al., 2019, He et al., 2020). Globalization has raised eyebrows of many in this sector (e.g., manufacturing sector) as fears of recession looms large in shanty towns, making it a reality for the SMEs (Zhu et al., 2019). At present, sustainable entrepreneurship has become a foreseeable choice for SME's to gain sustainable development and pursue sustainability under increasing global environmental problems (Schaltegger et al., 2016b, Nave and Franco, 2019). Sustainable entrepreneurship is a major cause for SME's distress, e.g., lack of environmental care, chain management failure, lacking eco-efficiency mechanism, lack of green products and sustainable technology development, lack of collaboration with

sustainable industry and eco-design issues (Bonfanti et al., 2016). The notion of a fast-spreading recession in SME's is penetrating densely populated slum dwellings and becoming a nightmare for the environment and society that is already facing the mammoth challenge of containing this recession. Globalization has tendered some sustainability challenges like climate change, biodiversity and ecosystem degradation (Schaltegger and Burritt, 2018, Davies and Doherty, 2019, Tiba et al., 2019).

Despite the prevailing circumstances, the sustainability challenges have grown very rapidly, and it looks difficult for SMEs to maintaining the balance among environmental, social, and economic challenges, the role of the entrepreneur is dominant as visionary and solution maker. Progressively, entrepreneurs begun to provide support, not only for the solving crisis even provides the core sustainability issues (Sannino et al., 2020) At the start of core ecosystem problems, organization begun to explore "sustainable entrepreneurship" business model to identify, assess and engage the ecosystem adverse impacts (Schaltegger et al., 2016b, Tiba et al., 2019) Sustainable entrepreneurship seeks to focus on social, economic and environmental entrepreneurship including sustainability in businesses in terms of wealth creations and sustainable development (Shams and Kaufmann, 2016) Even though environmental and social entrepreneurship are two different streams of knowledge. Likewise, sustainable entrepreneurship is considering as key concerning factor whereas it allows to similitude and digitize the both environmental and social entrepreneurship (Pironi et al., 2019). Going forward, sustainable entrepreneurship stimulus to widen the future well-being, value creation of the society, and the upcoming results would set the tone for the market. It is believed that sustainable entrepreneurship can only be mitigated the sustainability crisis exacerbates by the environmental uncertainty and divert the requisite of organizational resources to support sustainable development (Roy and Karna, 2015) In the context of sustainable entrepreneurship, the organization should bring all the relevant resources and knowledge to ensure and extent of sustainable development among the organization. When contacted, the organization appeared to be dominant and competitive. Sustainable entrepreneurship, when assumed the

charge and ride out the adverse challenge of sustainability distress (Davies and Doherty, 2019).

In developed economies, the government acknowledges that SME's are the main drivers of economic growth, bringing evolutions in income distribution, job creation, and formation of economic structure (Anbarasan, 2018, Freudenreich et al., 2019). But in the case of developing countries, like Pakistan, SME's have an under-developed market mechanism where organizational structure lacks innovation and limited resources have created difficulties for SME's to achieve their true economic potential (Schaltegger and Wagner, 2011, Muñoz and Cohen, 2018). It is crucial to understand that how SME's can maintain a competitive advantage with limited resources and achieve sustainable development without creating an adverse impact on the environment in general and the society in particular (Belz and Binder, 2017, Schaltegger et al., 2019). In previous research, the sustainable entrepreneurship framework developed for the SME's gave hopeless results e.g., lack of desertification, soil exploitation and overbuilding, wastage of food and hazard material, damage of biodiversity, increasing pollution mechanism (Cervelló-Royo et al., 2019, Dwyer et al., 2009, Yang et al., 2020, Latif et al., 2020), as the structure developed for multinational companies are producing different results (Schaltegger and Wagner, 2011, Stubbs, 2017). Therefore, sustainable entrepreneurship was considered as a mechanism for the ecological problems arising among the SMEs while the identification of problems required strong entrepreneurial knowledge and bricolage to contribute and address such ecological problems. Resultantly, lack of entrepreneurial knowledge causes disappointing results within SME sector (Lans et al., 2014).

The objective of this research is to investigate the drivers of sustainable entrepreneurship, especially in the context of Pakistani SME's. The focus of this research is to report the influence of entrepreneurial bricolage, entrepreneurial orientation, and sustainability orientation on sustainable entrepreneurship and examines the moderating effect of entrepreneurial knowledge. This research is organized like the subsequent section two which presents theoretical & hypothesis development and conceptual framework, while section three demonstrated research method and

data collection. Section four presented data analysis and section five showcased discussion, conclusion, implication, and future research.

METHODS

Data Collection and Sample

This research is based on a quantitative approach method with primary data collected through a structure questionnaire. The target population was SMEs operating in the major state of Pakistan (i.e., Punjab). According to SME Annual 2018 Report, Punjab has the highest SMEs concentration, operating more than 179,271 SMEs and 19.8% of the total SME’s operating in Pakistan. Moreover, Punjab has the highest GDP contribution 38.3% in 2018 from 37.8% in 2017. In addition, the report highlighted that SME’s GDP contribution

stood at (PKR) 521.7 billion versus Pakistan’s total GDP (PKR) 1.36 trillion during the 2018 year.

Research Design

In October 2019, 500 SMEs were selected from SMEs list provided by the SME Annual 2018 Report. Respondents were asked to assess their perception about the sustainability orientation, entrepreneurial orientation, and entrepreneurial bricolage. Questionnaires were distributed to the selected SMEs (especially business owners and CEO). For getting a quick response, we made up several emails and phone calls. In the end, 380 questionnaires were received. Out of 380 questionnaires, 50 questionnaires were incomplete, and they were removed from the final list. Total 330 questionnaires were finalized and ready for the data analysis with a response rate of 66% (330/500). Table 1 indicates the demographic information feature of the respondent according to the variables.

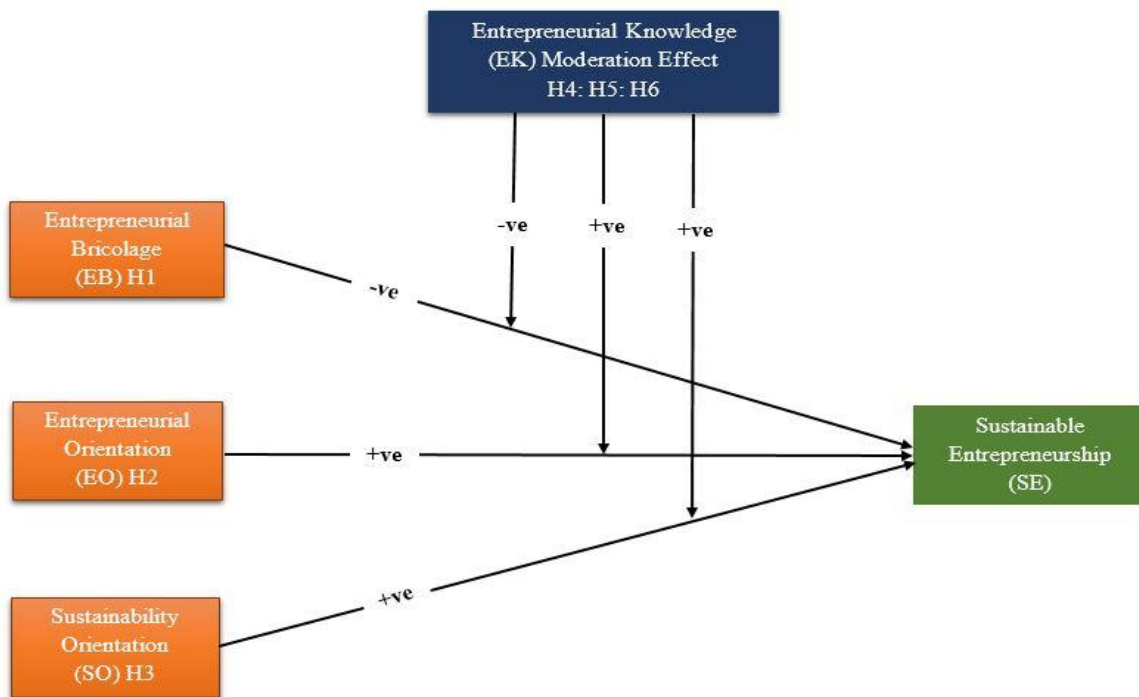


Figure 1. Research Framework

Measurement Development

The study contains 20 questionnaire items and each item has a Five-point Likert scale, numbered from 1 (strongly disagree) to 5 (strongly agree). Four items of entrepreneurial orientation were measured by research adopted from (Knight, 1997). Four items of sustainability orientation were measured by research adopted from (Kuckertz and

Wagner, 2010). Four items of entrepreneurial bricolage were measured by research adopted from (Gundry et al., 2011). Four items of entrepreneurial knowledge were measured by research adopted from (Roxas et al., 2014). Four items of sustainable entrepreneurship were measured by research adopted from (Turker and Selcuk, 2009).

Control Variable

In this research, we investigate the impact of firm size, firm age, and industry type in sustainable entrepreneurship, and we opted for these variables as a control variable. While, the selection of these variables was based on a traditional acknowledgment of these variables and their influences on sustainability research (Lumpkin and Dess, 1996, Michailova et al., 2013, Van Doorn et al., 2013, Wales et al., 2013). Firm size has been calculated by the number of employees working in the organization while firm age has been calculated by the number of years the organization actively performs its operations since its establishment (De Coning et al., 2002, Balabanis and Katsikea, 2003, Luo et al., 2005, Etchebarne et al., 2010). Industry type has been calculated by the categories of the organization concerning production such as manufacturing, construction, retailers, services (Balabanis and Katsikea, 2003, Luo et al., 2005, Real et al., 2014).

RESULTS AND DISCUSSION

Assessment of Model Using PLS-SEM

Partial Least Square (PLS-SEM 3.2.9) software is applied to analyze the statistical primary data (Hair et al., 2019). PLS-SEM is the most appropriate software that enabling the statistical complex models, indicators variables, and structural paths without imposing distributional assumptions on the statistical data. However, PLS-SEM is recognized as a causal predictive approach where it predicted the statistical models for providing a causal explanation. PLS-SEM predicted statistical models in academic research and developed managerial implications (Hair et al., 2019). However, PLS-SEM is widely applicable in many businesses and management-related disciplines, such as the application of PLS-SEM is widely recognized in organizational management and international management. While the human resources management and management information system are also recognized PLS-SEM applications in their statistical models. Moreover, operations management and marketing management are shed light on the significance of PLS-SEM in their statistical models. In the end, management accounting, strategic management, hospitality management, and supply chain management are also widely recognized as the contrition of PLS-

SEM (Hair et al., 2012, Ramayah et al., 2016, Avkiran and Ringle, 2018). In addition, PLS-SEM shed light on the serving as guidelines to evaluates the result of statistical models (Henseler et al., 2010, Hair Jr et al., 2017). Figure 2 indicates the reflected measurement model.

Table 1. Demography Attributes of respondents

	Frequency	Percentage (%)
Gender		
Male	275	83%
Female	55	17%
Age		
18-22	35	11%
22-25	60	18%
25-35	150	45%
More than 35	85	26%
Highest Level of Education		
Diploma	50	15%
Undergraduate	100	30%
Postgraduate	180	55%
PhD	-	0%
Industry Types		
Manufacturing	95	29%
Construction	32	9%
Retailers	78	24%
Services	125	38%
Number of Full time Employees		
Less than 30	60	18%
30 to 74	198	60%
75 to 200	72	22%
Age of Company (Year of Establishment)		
Less than 10 Year	35	11%
10 to 20 Year	195	59%
More than 20 Year	100	30%

Measurement Model Assessment

The measurement model assessed the validity and reliability by using the approach proposed by (Hair Jr et al., 2016). The results of the measurement model are shown in Table II. Step 1 reflected the measurement model assessment; it involved the examination of indictor loading. Table III. Loading above 0.708 is considered significant, as they explained that construct explains more than 50% of the indictor’s variance. Step 2 reflected internal consistency reliability. Higher values of

internal consistency indicate higher level of reliability. In below Table II, values of internal consistency between 0.717 and 0.892 are considered as acceptable significant (Drolet and Morrison, 2001).

Step 3 reflected the measurement model assessment address the convergent validity of each construct. While average variance extracted is evaluating the convergent validity for all the items on each construct. In Table II, the value of average variance extracted between 0.506 to 0.755. As a result, entrepreneurial bricolage, entrepreneurial orientation, sustainability orientation, entrepreneurial knowledge, and sustainable entrepreneurship are considered as significant because their values of AVE are 0.518, 0.703, 0.506, 0.569, and 0.755, respectively. An acceptable AVE is 0.50 or higher values considered significant. Step 4 reflected the discriminant validity, which examines the empirically distinct of each construct in the structural model. According to (Fornell and Larcker, 1981), Table IV. each construct average

variance extract (AVE) should be equal with inter-construct correlation in the same structural model. The share variance should not exceed the value of their AVE's. As a replacement, according to (Henseler and Dijkstra, 2015) suggested Heterotrait-Monotrait (HTMT) ratio of the correlation (Voorhees et al., 2016).

Heterotrait-Monotrait (HTMT) ratio is defined as each item's mean value and correlations among relatives constructs to the means value and correlations for the item measuring the same construct (Henseler and Dijkstra, 2015). However, the greater value of HTMT reflected discriminant validity problems. According to (Henseler and Dijkstra, 2015), the threshold value of 0.90 for structural models are conceptually very similar. Moreover, HTMT value greater than 0.90 would reflect that discriminant validity is not present. In below Table V, the values of HTMT between 0.255 to 0.702 which reflected the HTMT value is significant (Henseler and Dijkstra, 2015).

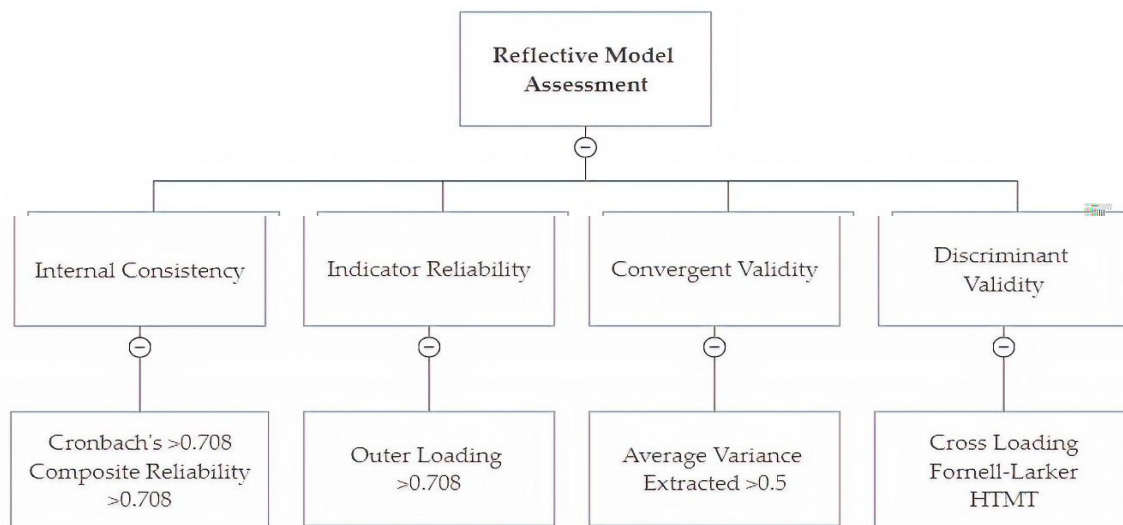


Figure 2. Reflective Measurement Model Assessment Criteria

Table 2. Construct's Validity and reliability

Constructs	Items	Standardized Factor Loading	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Entrepreneurial Bricolage (EB)	EB1	0.810	0.717	0.809	0.524
	EB2	0.887			
	EB3	0.536			
	EB4	0.606			
Entrepreneurial Orientation (EO)	EO1	0.650	0.859	0.903	0.704
	EO2	0.908			
	EO3	0.944			
	EO4	0.824			
Sustainability Orientation (SO)	SO1	0.692	0.740	0.811	0.518
	SO2	0.737			
	SO3	0.772			
	SO4	0.675			
Entrepreneurial Knowledge (KE)	EK1	0.551	0.794	0.840	0.577
	EK2	0.669			
	EK3	0.858			
	EK4	0.907			
Sustainable Entrepreneurship (SE)	SE1	0.796	0.745	0.580	0.382
	SE2	0.900			
	SE3	0.865			
	SE4	0.840			

Notes: EB=Entrepreneurial Bricolage; EO= Entrepreneurial Orientation; SO= Sustainability Orientation; KE= Entrepreneurial Knowledge; SE= Sustainable Entrepreneurship

Table 3. Discriminant Validity (Cross Loading)

	Entrepreneurial Bricolage	Entrepreneurial Knowledge	Entrepreneurial Orientation	Sustainable Entrepreneurship	Sustainability Orientation
EB1	0.810	0.103	0.198	0.183	0.213
EB2	0.887	0.147	0.140	0.196	0.217
EB3	0.536	0.273	0.171	0.017	0.215
EB4	0.606	0.211	0.338	0.183	0.160
EK1	0.192	0.551	0.156	0.164	0.515
EK2	0.177	0.669	0.086	0.123	0.252
EK3	0.201	0.858	0.183	0.250	0.236
EK4	0.141	0.907	0.185	0.529	0.279
EO1	0.224	0.248	0.650	0.105	0.304
EO2	0.278	0.177	0.908	0.306	0.418
EO3	0.260	0.172	0.944	0.251	0.429
EO4	0.221	0.160	0.824	0.241	0.534
SE1	0.199	0.499	0.197	0.796	0.254
SE2	0.251	0.392	0.276	0.900	0.319

SE3	0.209	0.275	0.243	0.865	0.283
SE4	0.207	0.303	0.245	0.840	0.294
SE5	0.018	-0.085	-0.062	-0.178	-0.015
SE6	0.014	-0.096	-0.076	-0.215	-0.086
SE7	0.022	-0.087	-0.129	-0.236	-0.072
SE8	0.013	-0.045	-0.082	-0.158	-0.115
SO1	0.139	0.143	0.647	0.188	0.692
SO2	0.051	0.195	0.502	0.100	0.737
SO3	0.165	0.242	0.407	0.193	0.772
SO4	0.258	0.363	0.130	0.338	0.675

Table 4. Discriminant Validity (Fornell-Larker)

	Entrepreneurial Bricolage	Entrepreneurial Knowledge	Entrepreneurial Orientation	Sustainability Orientation	Sustainable Entrepreneurship
Entrepreneurial Bricolage	0.724				
Entrepreneurial Knowledge	0.206	0.760			
Entrepreneurial Orientation	0.290	0.207	0.839		
Sustainability Orientation	0.259	0.372	0.507	0.720	
Sustainable Entrepreneurship	0.239	0.443	0.289	0.339	0.618

Table 5. Discriminant Validity (Heterotrait-Monotrait Ratio HTMT)

	Entrepreneurial Bricolage	Entrepreneurial Knowledge	Entrepreneurial Orientation	Sustainable Entrepreneurship	Sustainability Orientation
Entrepreneurial Bricolage	-----				
Entrepreneurial Knowledge	0.840				
Entrepreneurial Orientation	0.825	0.808			
Sustainable Entrepreneurship	0.774	0.836	0.770		
Sustainability Orientation	0.844	0.768	0.842	0.736	-----

Structural Equation Model Assessment

Evaluating the measurement model results, the next step in PLS-SEM is evaluating Table III, VI. structural equation model results. Table VII, VIII Accepted significant criteria for considered values, including coefficient of determination (R2), Blindfolding-based cross-validated redundancy

measure (Q2), path co-efficient. Step 1 reflected the examining of R2 values of endogenous constructs. R2 evaluated the variance, which described each endogenous construct and evaluated the explanatory power of the model (Shmueli and Koppius, 2011). R2 reflected the predictive power in the model (Rigdon, 2012). The value of R2 ranges from 0 to 1,

with a greater value of R2 indicating the greater explanatory power while a lower value of R2 indicating the lower explanatory power (Rigdon, 2012). As mentioned in guidelines, the value of 0.75, 0.50, and 0.25 can be considered as substantial, moderate, and weak respectively (Henseler et al., 2010, Hair et al., 2012).

Step 2 reflected the evaluation of the f2 value, where it redundant to the size of the path coefficients. (Nitzl et al., 2016). Table IX. As mentioned, greater values than 0.02, 0.15, and 0.35 reflected small, medium, and large f2 effect size, respectively. Step 3 reflected the examination of predictive accuracy of the PLS path model which can be calculated by Q2 values (Geisser, 1974). Q2 is the combination of out-of-sample prediction and

in-sample explanatory sample (Shmueli et al., 2016). As mentioned, the value of Q2 should greater than zero, thereby it is indicating the higher predictive accuracy. Q2 values greater than 0, 0.25, and 0.50 are reflected as the small, medium, and large predictive accuracy of the PLS-path model (Shmueli et al., 2016, Sarstedt et al., 2017).

Table 6. Structural Model Assessment

	Relationships	β	t- value	p- value	Sign.
H1	EB → SE	0.091	1.746	0.081	-
H2	EO → SE	0.128	3.279	0.001	*
H3	SO → SE	0.118	2.211	0.027	*

Notes: *Significance level < 0.05

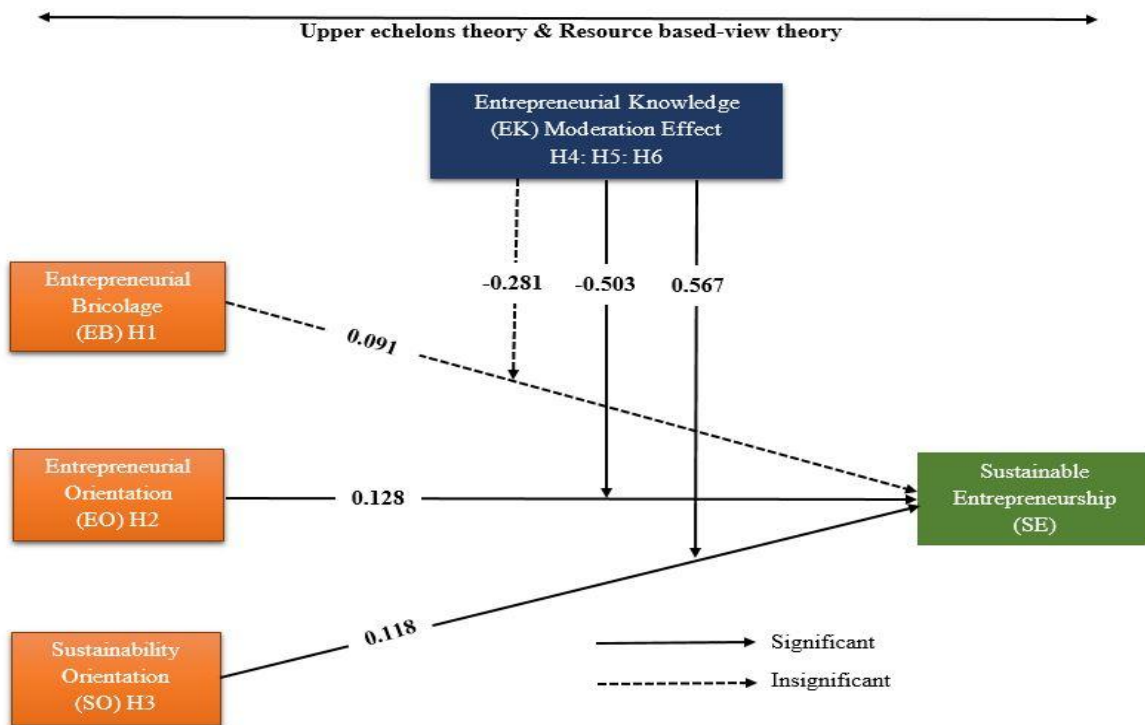


Figure 3. Structural Model Assessment

Table 7. Main Effects Model Quality Fit Indices

Model Fit Indices	Sustainable Entrepreneurship
R2	0.152
Adjusted R2	0.144
Q2 (Cross Validated Redundancy Approach)	0.053

Table 8. Interaction Effects Model Quality Fit Indices

Model Fit Indices	Sustainable Entrepreneurship
R2	0.261
Adjusted R2	0.245
Q2 (Cross Validated Redundancy Approach)	0.090

Table 9. Effect Size (f2) and Variance Inflation Factor (VIF)

	f ²	VIF
Entrepreneurial Bricolage	0.012	1.129
Entrepreneurial Knowledge	0.142	1.178
Entrepreneurial Orientation	0.016	1.397
Sustainability Orientation	0.012	1.508

Moderation Effects

It was evaluated that the hypothesized relationship between exogenous variables entrepreneurial orientation and sustainability orientation and the endogenous variable sustainable entrepreneurship were moderated positively by entrepreneurial knowledge. Moreover, the moderating effect of entrepreneurial knowledge was found insignificant with the exogenous variable entrepreneurial bricolage and the endogenous variable sustainable entrepreneurship. To examine the moderated effects, the current study followed the method suggested by (Hair Jr et al., 2016).

To examine the significance of the moderating relationship, a bootstrapping procedure with 5000 resample was run. Table X summarized the results.

The results show that hypothesis 4 which posited negative moderating impacts on the relationship between entrepreneurial bricolage and sustainable entrepreneurship were found insignificant and rejected. For hypothesis 5, the results which posited positive moderating impacts on the relationship between entrepreneurial orientation and sustainable entrepreneurship were found significant and accepted. For hypothesis 6, the results which posited positive moderating impacts on the relationship between sustainability orientation and sustainable entrepreneurship were found significant and accepted. Figure 4, 5, 6 indicates the interaction effects.

Table 10: Moderating Effects Assessments

			t value	p value	Sign
H4	EB → SE	-0.281	0.712	0.477	-
H5	EO → SE	-0.503	4.463	0.000	*
H6	SO → SE	0.567	2.135	0.033	*

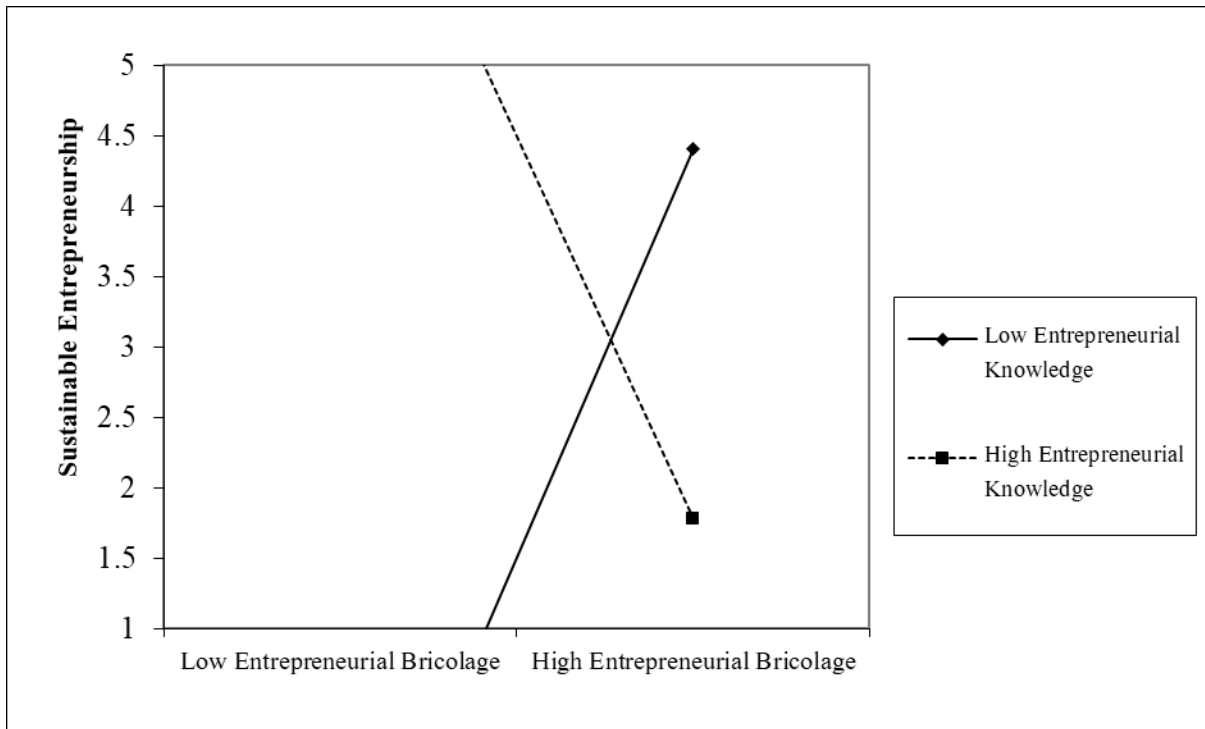


Figure 4. The Moderating effect of Entrepreneurial Knowledge on the relationship between Entrepreneurial Bricolage and Sustainable Entrepreneurship

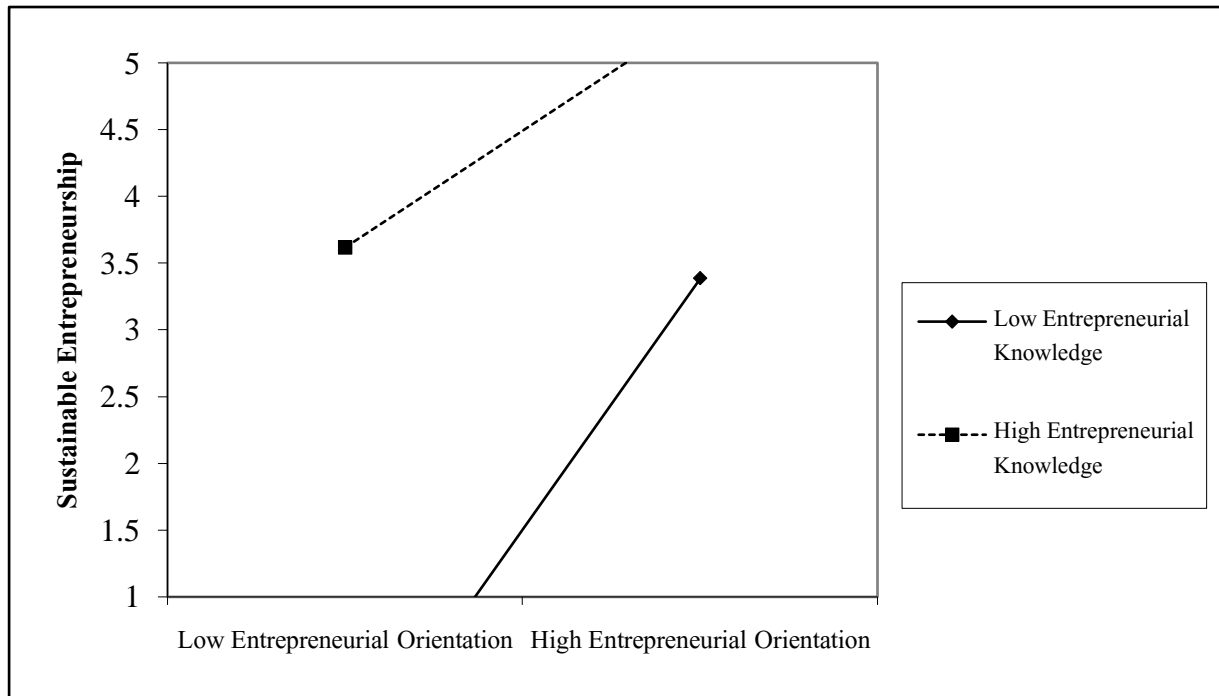


Figure 5. The Moderating effect of Entrepreneurial Knowledge on the relationship between Entrepreneurial Orientation and Sustainable Entrepreneurship

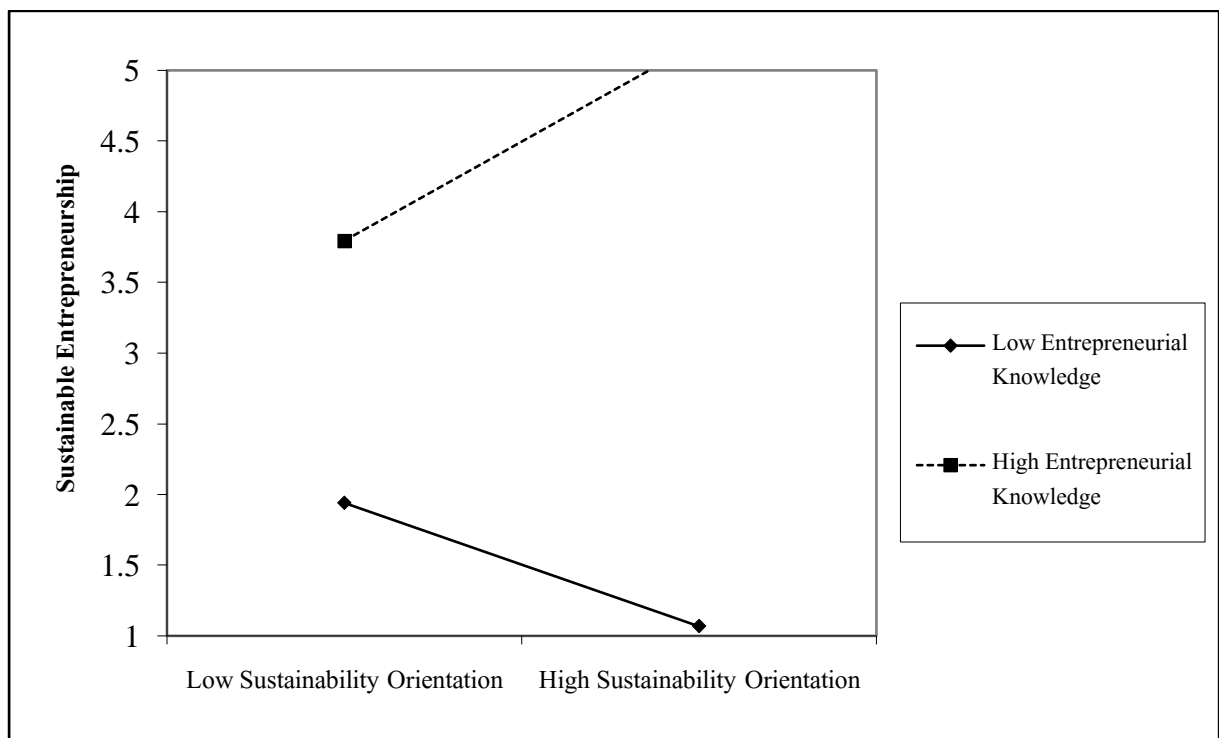


Figure 6. The Moderating Effect of Entrepreneurial Knowledge on the relationship between Sustainability Orientation and Sustainable Entrepreneurship

CONCLUSION

The motive of this research is to probe the association between several measures, including entrepreneurial orientation and sustainability

orientation, entrepreneurial bricolage and sustainable entrepreneurial entrepreneurship, moderating the role of entrepreneurial knowledge. This research is mainly focused on owners and

managers of SME's operating in Punjab, Pakistan. The results of this research suggested that the entrepreneurial orientation is playing an instrumental role in moderating the presence of entrepreneurial knowledge and the results lead significantly towards sustainable entrepreneurship among Pakistani SME's. Moreover, the results of this research suggested that sustainability orientation is significantly connected with sustainable entrepreneurship, with moderating presence of entrepreneurial knowledge. The result of this research indicates that entrepreneurial bricolage does not play a significant role in sustainable entrepreneurship. The moderating presence of entrepreneurial knowledge can also give insignificant results regarding the connections between entrepreneurial bricolage and sustainable entrepreneurship.

The results of this research suggested that actions and decisions taken by SME owners for business performances could lead towards unfavorable results of entrepreneurial bricolage. Moreover, the insignificant results of the entrepreneurial bricolage possessing SME's resources, owners are not willing to take entrepreneurial decisions. Therefore, they face challenges regarding the business operation to ensure sustainability. However, this research revealed that entrepreneurial orientation has a direct and positive relationship with substantial entrepreneurship. The results also supported the moderating effects of entrepreneurial knowledge, suggested that knowledge and expertise of management are the key elements for predicting organization outcome and ensuring sustainability (Schaltegger et al., 2019). The entrepreneurial orientation characteristics can help find a solution for any business-related issue. An entrepreneurial-orientated organization assists SME managers to face unexpected business challenges. The strength of any organization is associated with the tendency to adopt aggressive and bold decisions to support entrepreneurs. If any organization has a strong entrepreneurial orientation, it can modify and transform the innovation mechanism (Fichter and Tiemann, 2018).

Thus, it can nurture entrepreneurial knowledge to make stronger sustainability. Moreover, this research revealed that the relationship between sustainability orientation and sustainable

entrepreneurship is significant and positive. The moderating presence of entrepreneurial knowledge between sustainability orientation and sustainable entrepreneurship has also appeared to show significant results, particularly in the context of SME's. Sustainability orientation deals with the social and environmental issues making entrepreneurial knowledge to become an important element for sustainability orientation (Razmdoost et al., 2019). The results revealed that Pakistani SMEs are at a stage of sustainability where their owners are positioning themselves to become sustainably oriented. The outcome of this research is adhered to by two theories. Moreover, when SMEs possess entrepreneurial knowledge, they can adopt innovation mechanisms to develop business solutions ascending from economic, social, and environmental concerns. It is believed that entrepreneurial knowledge has ensured sustainable entrepreneurship. The result revealed that SME managers are considered for the entrepreneurial knowledge to understand the environmental protection and environmental performance.

The new trend has given a tremendous boost to sustainable development in SMEs such as sustainable entrepreneurship. Interestingly, the main selling point of sustainable entrepreneurship is to offer a solution for SMEs' problems. However, sustainable entrepreneurship has garnered much more attention for the SME sector. To address the research findings, sustainable entrepreneurship has emerged as the highest influencer stream with regards to sustainable development activities like entrepreneurial bricolage, sustainability orientation, entrepreneurial orientation, and entrepreneurial knowledge. The findings of this research determine the influence of sustainable entrepreneurship among SMEs in Pakistan (i.e., Punjab). In determining the factors that influence sustainable entrepreneurship such as, entrepreneurial bricolage entrepreneurial orientation, sustainability orientation, the statistical results revealed that entrepreneurial orientation, sustainability orientation, entrepreneurial bricolage were significant. Moreover, this research identifies moderating effects of entrepreneurial knowledge. The statistical finding of entrepreneurial knowledge moderating effect leads to important results. This research revealed the recognition of environmental, social, and economic aspects as an essential element for recognizing and exploring entrepreneurial

activities for sustainable entrepreneurship. This research is concerned with the learning process of sustainable entrepreneurship; therefore, a quantitative approach was arguably the most appropriate choice as close-up information was needed (Hockerts and Wüstenhagen, 2010, Kibler et al., 2015).

This research has several theoretical and practical implications. Firstly, this research is a replication of previous research which examines the relationship between EO and firm performance with cultural and institutional context. While this research addressed the concept of sustainable entrepreneurship by supporting resource-based view and upper echelons theory that makes our sustainable entrepreneurship context more sensitive. It also sheds light on the resource-based view theory and upper echelons theory showcased firm resources such as entrepreneurial orientation, sustainability orientation, and entrepreneurial bricolage that can strengthen their relationship with sustainable entrepreneurship (Cincera et al., 2018, Cervelló-Royo et al., 2019). Secondly, this research also tackles prior research calls, where entrepreneurial orientation was examined with firm's performance for cross-cultural evidence, while we have tested the entrepreneurial orientation on sustainable entrepreneurship among SME's context with overall theoretical expectations met by resource-based-view theory. Previous research elaborated on the theoretical contribution of institutional theory, specifically on institutional factors and logics (Schaltegger and Wagner, 2011), while resources based-view theory considering demonstrated multiple resources that comprise on the firm's entrepreneurial behavior and lead towards the sustainable entrepreneurship

Sustainability concerns are the growing intentions towards innovation and entrepreneurship. By making managerial discussion of sustainability concerns, a company nurtures sustainable entrepreneurship as a means of bagging improved performance (Schaltegger et al., 2016a, Nave and Franco, 2019). The study reinforces that sustainable entrepreneurship has great relevance to the companies which give directions on the innovation mechanism to achieve sustainable performance. However, managerial implications relate to the strong relevance of entrepreneurial knowledge in supporting the development of sustainability.

SME's must be cognizant of their management knowledge for the constant monitoring of environmental changes, environmental regulations, and consumer intention to possess sustainability. Meanwhile, entrepreneurial knowledge introduced the environmental training and development mechanism which are considered as innovative fundamental elements to deal with environmental change.

Despite the valuable research findings, various limitations are needed to be highlighted. The data was collected from a SME operating in Pakistan (i.e., Punjab) which leads towards a shortcoming while this research was limited to one representation of SME sector, namely sustainable entrepreneurship. Moreover, sustainable entrepreneurship is examined in terms of sustainability orientation, entrepreneurial orientation, and entrepreneurial bricolage. In the future, the link between sustainable entrepreneurship and SME's performance needs to explore. Moreover, the context of SMEs could be more towards the objective measure, asking over one participant per business. Furthermore, this research used entrepreneurial knowledge as a moderator measure for sustainable entrepreneurship. It is argued that the company's resources are a considerable tool for sustainable development in SME's sector. Thus, a link between the company's resources and sustainable entrepreneurship requires investigation for further future research. Moreover, future research should examine the direct impact of resource availability and study how it can influence sustainable entrepreneurship. Furthermore, this research deals within the SME's context from one state of Pakistan (i.e., Punjab) limiting the general applicability of the research finding. Future research should investigate the SMEs of other states in Pakistan too in a bid to make a comparison between research findings. Future research should also consider the context of firm size and get concerns of the large corporate sector that practices the sustainable entrepreneurship model. Resultantly, we investigate the establishment of sustainable entrepreneurship between SME's and large corporate sectors with different aspects of performance and environmental behaviors.

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