Linking Entrepreneurial Satisfaction with elements of entrepreneurial ecosystem

Amanullah Parhyar*
Waqar Ahmed Sethar**
Dodo Khan Alias Khalid Malokani***
Muhammad Shoaib Khan Pathan****

Abstract
The entrepreneurial ecosystem in developing countries is not as vibrant as in the developed countries, this is because of the inherent institutional, organizational, and framework conditions that exist in these countries, bureaucracy is one of the reasons that affects entrepreneurship in these countries and especially startups, this study aims to investigate these hypotheses, for this study 214 owners and founders of companies and startups were selected randomly from different areas of Sindh, Pakistan. Using PLS-SEM we investigated how different domains affect entrepreneurial satisfaction including bureaucracy. Our findings suggest that bureaucracy significantly affects the entrepreneurial satisfaction region as this study suggests in the case of Pakistan. These results indicate the need for changing the model of the entrepreneurial ecosystem where bureaucracy should be incorporated to make this model work in the context of developing countries.
Keywords: Entrepreneurial Ecosystem, Bureaucracy, Entrepreneurship

1.   Introduction
The regions and their economic development have now gained increased scholarly attention, scholars are increasingly using the entrepreneurial ecosystem approach due to its holistic and dynamic approach for understanding regional entrepreneurship and their environment (Mason, 2019); this approach also provides a systematic and interactive overview of different institutions, entrepreneurs, and their regional contexts (Beltiski & Heron, 2017). The study of the entrepreneurial ecosystem requires addressing significant theoretical and conceptual challenges before embarking upon its applications (Stam, 2015).

The purpose of the entrepreneurial ecosystem is to support new startups, exploring the dynamics of a supportive environment and job creation and subsequently regional economic development (M. Mubarak et al., 2019).

Previous researchers have not investigated the effect of the entrepreneurial ecosystem elements, linkages, and bureaucracy on the entrepreneurial satisfaction of the founders of firms and startups, in this research.

Cao & Shi (2020) using a systematic review of the entrepreneurial ecosystem of advanced and emerging economies, authors find three dynamics of each entrepreneurial ecosystem i.e resource, interaction, and governance. Their findings reveal three differences between advanced and emerging economy entrepreneurial ecosystems; these are resource scarcities,

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* Lecturter, Department of Business Administration, Government College University Hyderabad.
Email: Amanullah.Parhyar@gcuh.edu.pk Parhyaramanullah786@gmail.com
** Lecturer, Institute of Science, Technology and Development, Mehran University of Engneering and Technology, Jamshoro.
*** Assistant Professor, Department of Buisness Adminstration, Government College University Hyderabad.
**** Director ORIC, Government College University Hyderabad.

structural gaps, and institutional voids.

Torkkeli & Laine (2020) used the bibliometric process technique and carried out a review study on entrepreneurial ecosystem research; by summarizing key journals, scholars, publications, and countries, they found exponential growth in research; they further found that entrepreneurial ecosystem research is largely practitioner-based, their research has found six themes i.e complexity perspective, context perspective, governance perspective, geography perspective, agency perspective, and network perspective.

The question is whether bureaucratic practices and entrepreneurial ecosystem domains affect the practice of entrepreneurship. We hypothesize that bureaucracy negatively impacts entrepreneurial satisfaction.

We begin with the description of the proposed research framework and definition of constructs used in the model; results will be discussed using SmartPLS, discussion and a conclusion and recommendation for future research will be discussed.

2. Literature Review

The research by Stangler and Bell-Masterson (2015) have suggested guidelines to measure entrepreneurial ecosystem using systems theory, using indicators of density of firms, diversity of diversity, connectivity, fluidity.

According to (Stam & van de Ven, 2019) the concept of entrepreneurial ecosystem is loosely defined and measured, they argue that systems perspective should be taken into account and have developed measurement instrument and developed entrepreneurial ecosystem index and used this index to study the quality of entrepreneurial ecosystem of Netherland.

Liguori E. et al., (2019) has developed the perception based multidimensional scale of entrepreneurial ecosystem based on Isenberg's entrepreneurial ecosystem concept, this scale consists of elements of entrepreneurial ecosystem i.e markets, policy, human resource, finance, support, culture, this papers presented the case for perception based scale to assess the entrepreneurial ecosystem of any region.

Sternberg et al.(2019) has attempted to measure EES at the sub-national level of any region, since entrepreneurial activity usually occur at an specific region, using Erik Stam's interpretation of EES based on conditions and to develop specific variables and authors have developed index along with sub-national indices using 10 conditions. Authors have tested this index on Germany and Spain.

3. Methodology

Using the positivist approach we used the questionnaire survey including some interviews from the entrepreneurs to unearth other constructs to be used in the analysis and conceptual model, using the explanatory approach we have developed the research framework, this approach is used to test how one variable affects the other variable (Creswell & Creswell, 2017). Using deductive reasoning hypotheses have been developed to test the model.

This used quantitative technique to test the proposed research framework involving 450 founders and co-founders of firms and startups in Pakistan, in this study we intend to assess the effect of entrepreneurial ecosystem domains and bureaucracy on entrepreneurial satisfaction using variance-based technique i.e. PLS-Sem in SmartPLS (3.3.3); PLS-SEM is

used to assess the theoretical and measurement model of the proposed research framework.

The survey was administered between April 2021 to May 2021 using convenience sampling. Hair et al.(2017) suggest a power analysis technique to determine the effective sample size using PLS-SEM if the predictors are high. A total of 700 questionnaires were administered online and hard prints out of 700 we received 400 usable questionnaires. Cohen(1992) suggested 103 sample sizes for PLS-SEM, we fulfill this criterion for the analysis.

3.1 Construct Measures
The study has adopted the Likert scale from the existing literature from 1 to 5 (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree), all questions have positive statements. Items of the entrepreneurial ecosystem are divided into culture, support, market, finance, policy, human resource are adopted from Liqouri E. (2019), items on entrepreneurial satisfaction are adopted from (Giancarlo Lauto et al., 2020, while items on bureaucracy adapted from Mishra S.S. (2019)
Support: Supports for entrepreneurship go a long way to enabling and empowering a community to truly facilitate entrepreneurial behavior, more support to the entreprenurs more satisfied he is with support he/she receives from institutions/governements.
H1: Support has a positive effect on entrepreneurial satisfaction
Culture: Culture is largely individually driven by people advocating values that promote innovation and venturing as viable career opportunities, enabling culture and openness is good for entrepreneurship hence:
H2: Culture has a positive effect on entrepreneurial satisfaction
2.3 Finance: It includes financing available at the startup state, micro-loans, wealth of individuals in a community, venture capitalists, inventors, traditional lenders and it also includes zero stage capital finance as well, therefore, following hypotheses is suggested.
H3: Finance has a positive effect on entrepreneurial satisfaction
H4: Zero-Stage capital has positive effect on entrepreneurial satisifaction
Markets: Markets include access to early adopters, distribution channels, diaspora networks
H4: Market has a positive effect on entrepreneurial satisfaction
Policy: Policy is the extent to which government and leadership not just support and advocate for entrepreneurial activity, but they actively introduce policies and programs to facilitate entrepreneurs and entreprneurical acidity in their countries and regions
H5: Policy has a positive effect on entrepreneurial satisfaction.
Human Resource: Access to human capital by entrepreneurs
Bureaucracy and Entrepreneurship: It is a formal organization structure whose members share common attitudes, values, beliefs, orientations, and sentiments which are distinguished from others.
H6: Bureaucratic practice has a negative effect on entrepreneurial satisfaction.
Entrepreneurial Satisfaction: The extent to which entrepreneur is satisfied doing entreprneurship in a certain regional environment

3.1 Demographic profile of the sample
The sample consists of 90% male and 10% females, most of the participants were in the age

group of 20-40 years, most of the owners had the business experience of <10 years, 65% were from an urban background and 35% had the rural background, over 60% of the participants had bachelor or masters.77% of participants business experience while 33% had no experience at all (see Table 1)

Table 1. Demographic Profile of the students

Demographic Variable	Characteristics	Frequency	Percentage (%)
Education	Non Educated	6	1.3
	Matriculation	42	8.9
	Intermediate	81	17.1
	Bachelor	188	39.7
	Masters/Mphil	150	31.7
	PhD	6	1.3
	Total	473	100.0
Experience	Yes	364	77.0
	No	109	23.0
	Total	473	100.0
Experience(Years)	<=10	384	81.2
	11-15	9	1.9
	16-20	65	13.7
	21-25	3	0.6
	>30	12	2.5
	Total	473	100.0
Age (Years)	20-25	86	18.2
	26-30	145	30.7
	31-35	109	23.0
	36-40	74	15.6
	41-45	35	7.4
	46-50	14	3.0
	> 50	10	2.1
	Total	473	100.0
Gender	Male	429	90.7
	Female	39	8.2
	Total	468	98.9
Missing	System	5	1.1

Total		473	100.0
Urban / Rural	Urban	306	64.7
	Rural	167	35.3
	Total	473	100.0

n=214 source: authors own survey

4. Results

For the analysis we have used PLS-SEM in SmartPLS 3.3, PLS-SEM is the variance-based approach that has several advantages, and it is best suited if the data is non-normal and requires complex models (Hair et al., 2017).

4.1 Assessment of measurement model

The PLS-SEM measurement model is assessed on internal consistency reliability (composite reliability), indicator reliability, convergent validity through average variance extracted, and discriminant validity (Hair et. Al, 2014). The results are given (See Table 2).

Internal consistency reliability (composite reliability) is acceptable if values are in the range of 0.60-0.70, some constructs i.e external links lower value of Cronbach's alpha, however, it is acceptable, convergent validity measured through ave of external links is 0.50 and is acceptable, constructs (culture, finance, human resource, support) have composite reliability values >0.90 and <0.95 although not good but acceptable (Hair et.al, 2014). While convergent validity of all constructs is in agreement with the recommended value of >=0.50. Indicatory reliability was assessed through indicators having a value of 0.40-0.60 retained if AVE and composite reliability decrease, and we have retained these indicators (Hair et. al, 2014). We used two criteria to assess the discriminant validity one with Forenell Larcker Criteria (1981) and now popular among scholars is HTMT ration the threshold value of HTM ration should be <0.90 ((Baloch et al., 2017); Toothaker et al., 1994), all HTMT ratio of constructs is <0.90 (See Table 4), thus HTMT ratio establishes the discriminant validity of all constructs. Furthermore, VIF (variance inflation factor) was used to assess the problems of multicollinearity issues among indicators as suggested by Toothaker et. al, (1994) that VIF should be <10, no issue of multicollinearity was found (See Table 5).

Table 2. Construct Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Bureaucractic_cost	0.720	0.725	0.843	0.642
Bureaucratic_Culture	0.692	0.711	0.811	0.521
Culture	0.896	0.896	0.916	0.578
Entrepreneurial_satisfaction	0.886	0.887	0.911	0.595
General_Finance	0.735	0.735	0.834	0.558

General_Support	0.820	0.820	0.869	0.526
Linkages	0.885	0.888	0.907	0.522
Market	0.656	0.656	0.800	0.508
Policy	0.915	0.953	0.922	0.665
Support_Professions	0.798	0.798	0.861	0.553
Zero_stage_Capital	0.670	0.670	0.802	0.503

Source: author's compilation

Table 5: Outer Loadings

	B_Culture	Culture	Entrepreneurial Satisfaction	Finance	HR	Market	Policy	Bureaucacti Cost	Support	Support Professions	Zero Capital
Brc1	0.760										
Brc2	0.902										
Brc3	0.822										
Brc4								0.534			
Brc5								0.964			
Brc7	0.717										
Culture3		0.849									
Culture4		0.854									
Culture6		0.773									
Culture7		0.842									
ES1			0.552								
ES2			0.812								
ES3			0.718								
ES4			0.758								
ES5			0.804								
ES6			0.796								
ES7			0.621								
GF1				0.716							

GF2				0.808						
GF3				0.836						
GF4				0.786						
GF5				0.780						
GF6				0.648						
GSE1								0.760		
GSE2								0.758		
GSE3								0.693		
GSE4								0.571		
GSE5								0.588		
GSE6								0.824		
GSE7								0.754		
HR1					0.830					
HR2					0.863					
HR4					0.657					
HR5					0.723					
HR6					0.752					
Market4						0.796				
Market5						0.975				

Policy1							0.642				
Policy2							0.831				
Policy3							0.798				
Policy4							0.845				
Policy5							0.869				
Policy6							0.818				
SP4										0.963	
SP5										0.905	
ZSC1											0.607
ZSC2											0.771
ZSC4											0.777
ZSC5											0.813

Table 6 f2 (Predictive relevancy)

	E_Satisfaction
Bureacracy	0.050
Culture	0.000
Finance	0.004
Human_Resources	0.005
Market	0.001
Policy	0.000
Red_Tape	0.017
Support	0.003
Support_Professions	0.009
Zero_Capital	0.002

Source: author's compilation

Table 8 R²

Entrepreneurial Satisfaction with elements of entrepreneurial ecosystem   *July – Sep 2021*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Entrepreneurial Satisfaction	0.196	0.286	0.059	3.307	**0.001**

Source: author's compilation

4.2 Assessment of structural model

SmartPLS was used to assess the PLS-SEM model with 7000 bootstraps; according to (Henseler et al., 2016) and (Cho et al., 2020) that the value of the standard root mean square should be < 0.08, the value obtained in our model is (0.059) which shows the significant model fit. While f2 values of (0.02,0.15,0.35) show small, medium, and significance (Cohen J., 1988). Predictive relevancy obtained in our study f2 value of bureaucracy is significant (0.05) medium while all other constructs have small f2 values. The R^2 according to Chin W.W (1998) says that R2 value should be >0.10 in the PLS-SEM model, the value of R^2 in our model is (19.6%) which is the variance as explained by entrepreneurial ecosystem system domains i.e culture, policy, human resources, markets, finance, zero stage capital, support, support professions and constructs like linkages, and bureaucracy on entrepreneurial satisfaction of entrepreneurs.

4.3 Hypotheses testing

Hypotheses is tested in boostrapping procedure perfomed in SmartPLS, the results suggest that four hypotheses are accepted bureaucratic culture (β=0.218,P=0.002) linkages (β=0.213,P=0.005), general finance (β=0.279,P=0.000) and zero stage capital (β=0.132,P=0.003) on entrepreneurial satisfaction of the entreprneurs, all other hypotheses are not accepted in our sample.
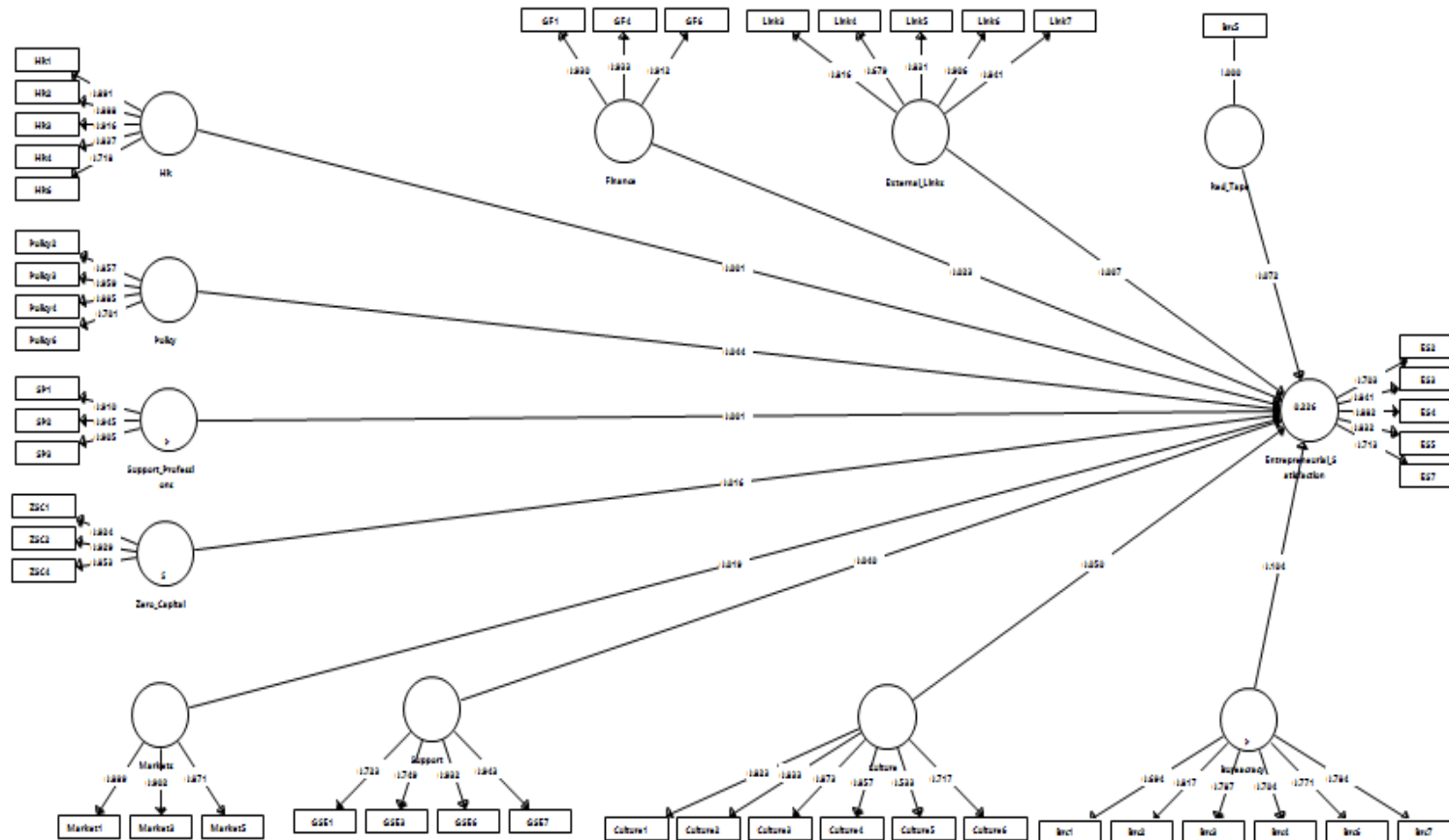
Fig 1 PLS-Path diagram

PLS -SEM Structural Model

Table 7: Bootstrapping results

Bootrapping (5000 Subsamples)	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
General_Finance -> Entrepreneurial_satisfaction	0.279	0.274	0.06	4.656	0
Bureaucratic_Culture -> Entrepreneurial_satisfaction	0.218	0.221	0.069	3.175	0.002
Zero_stage_Capital -> Entrepreneurial_satisfaction	0.132	0.129	0.044	2.976	0.003
Linkages -> Entrepreneurial_satisfaction	0.213	0.212	0.077	2.779	0.005
Market -> Entrepreneurial_satisfaction	0.082	0.08	0.051	1.615	0.106
Policy -> Entrepreneurial_satisfaction	0.065	0.068	0.047	1.378	0.168
Bureaucractic_cost -> Entrepreneurial_satisfaction	0.051	0.055	0.058	0.868	0.386
Human_Resources -> Entrepreneurial_satisfaction	0.022	0.027	0.05	0.445	0.656
Support_Professions -> Entrepreneurial_satisfaction	-0.018	-0.023	0.041	0.432	0.666
Culture -> Entrepreneurial_satisfaction	-0.011	-0.005	0.043	0.267	0.79
General_Support -> Entrepreneurial_satisfaction	0.01	0.013	0.048	0.207	0.836

Conclusion

In this research we have used multidimensional scale of entrepreneurial ecosystem elements, bureaucracy and linkages on proxy variable i.e entrepreneurial satisfaction using PLS-SEM, the results indicate that finance,zero stage capital, linkages and bureaucracy are significantly impact the entrepreneurial satisfaction of entreprneurs, founders and co-foudners of startups. This research makes contribution by linking entrepreneurial ecosystem elements with proxy variable entrepreneurial satisfaction.

Future Research directions

In this research we have covered geographical area of Karachi, Sindh, Pakistan, this could be extended to include larger regions in the future studies.

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