

Nexus between Digital Entrepreneurship and Entrepreneurs' Innovative Predisposition with the Moderating Role of Social Capital

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ABSTRACT

To cope with the challenges of the digital era, entrepreneurs hunted a novel version of entrepreneurship i.e. digital entrepreneurship. Digital entrepreneurship is the process of hunting opportunities by using the digital technologies and information communication technologies (ICTs) for launching startups and revolutionizing existing corporations. Aim of the current research is to find out the moderating role of social capital in the relationship of digital entrepreneurship with entrepreneurs' innovative predisposition. Researcher collected primary data (cross-sectional) from the digital entrepreneurs of Pakistan by distributing well-structured developed and adapted questionnaire. Current study applied various descriptive and inferential tests to analyze the phenomenon. Results elaborated that the instrument used for data collection is reliable, valid and the data collected through the scale is normal. Results also revealed that there is significant relationship among digital entrepreneurship, entrepreneurs' innovative predisposition and social capital. Furthermore, it is revealed that there is significant influence of digital entrepreneurship on entrepreneurs' innovative predisposition. Analysis also identifies that social capital does act as enhancing moderator in between predictor and criterion variable. It is concluded from the findings of the study that digital entrepreneurship plays an important role in improving the innovative predisposition of entrepreneurs that are pivotal for the economic growth of the region as well as country. So, this study contributes in actor network theory by inclusion of social capital as moderator and analyzed its effect on relationship of digital entrepreneurship with entrepreneurs' innovative predisposition to make decisions for the betterment of digital entrepreneurs and society.

INTRODUCTION

The development of information and communication technologies (ICTs) and progress in digital era is changing the scientific approach and scope of domestic as well as international businesses. Due to ICT and digitization, entrepreneurs transform their conventional business practices toward contemporary entrepreneurship (digital entrepreneurship) which creates multiple associated entrepreneurial opportunities. Many developed and developing countries recognized digital entrepreneurship as a crux

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of economic growth and employment (Block et al., 2018). Along with its importance, it also creates hindrances for well-established companies and industries to adopt these developed technologies and train their employees for transformation of conventional entrepreneurial activities to digital entrepreneurship (Shen et al., 2018 & Veit et al., 2014). Hitherto, Digital Entrepreneurship Monitor (2014) identified five main pillars/factors of digital entrepreneurship including (Digital knowledge base and ICT market, Digital business environment, Access to finance, Digital skills and e-leadership and Entrepreneurial Culture) to elaborate the framework of digital entrepreneurship.

Hence, literature argued that digital entrepreneurship has a great potential in the modern world to enhance the innovation (innovative predisposition) of entrepreneurs and provide new ways of hunting opportunities that ultimately lead towards self-employment by the proper use of social capital (Block et al., 2018 & Anckar, 2016). This modern world despite of great development still many countries (developing and underdeveloped) facing the problem of conventional approaches used in businesses that ultimately lack innovation. This lack of innovation is due to lack of entrepreneurs' innovative predisposition because of conventional entrepreneurship. So, to solve the issues i.e. lack of innovative predisposition of entrepreneurs in developing and underdeveloped countries that left these countries from the race of quick development and growth, is an alarming situation around the globe for people. Literature argued that digital entrepreneurship is a new phenomenon that may enhance the innovative predisposition of entrepreneurs via proper use of social capital these entrepreneurs have.

Many studies have been conducted on digital entrepreneurship by scholars (O'Reilly, 2007; Davidson & Vaast, 2010; Onetti, Zucchella, Jones & Covin, 2012; Singer & Zalmanson, 2013; DEM, 2016 & Anckar, 2016). But majority of them were conducted to measure the digital entrepreneurship concept (DEM, 2016 & Anckar, 2016), the relationship between entrepreneurship and innovation (Hamid & Khalid, 2016) its nature in digital economy (Davidson & Vaast, 2010).

In developing countries like Pakistan there is a big issue regarding lack of innovation (innovative predisposition) due to which there is a little development in the country that left behind Pakistan from the race of developed countries is one of the major issues of Pakistan. There are numerous opportunities for the people to start new businesses through entrepreneurship (Digital Entrepreneurship) and this can bring significant change in the innovative predisposition of entrepreneurs. If digital entrepreneurship grows at par it can solve these problems and leads the nation towards prosperity. Current research adopted the actor network theory that elaborate the bond of human and material actors. Leading that

when human actors interact with material actors it enhances the performance of individual as well as organization (Latour, 2005).

Current literature is still quite on the relationship of digital entrepreneurship, social capital, entrepreneurs' innovative predisposition. So, the aim of the current study is to elaborate the moderating role of Social Capital in Relationship of Digital Entrepreneurship with Entrepreneur Innovative Predisposition in Pakistan. The fulfillment of this objective helps in improving the living standard of people and economic growth of Pakistan through digital entrepreneurship and social capital.

So, this leads to answer some important questions which are remained unanswered in the current literature. How digital entrepreneurship is related to entrepreneurs' innovative predisposition and social capital? How digital entrepreneurship influence the entrepreneurial innovative predisposition? How social capital act as moderator in relationship of digital entrepreneurship with entrepreneurs' innovative predisposition?

Literature Review

Digital Technologies and Entrepreneurship

With the dawn of 20th century, development of ICTs witnessed an up lift by amalgamating all the historical, scientific, political and socioeconomic aspects of societies across the globe resultantly caused a social change along with embedded implication for entrepreneurship whilst introduction of World Wide Web came to aid this change. Due to development of ICTs digital technologies emerged, these digital technologies store, process and communicate the information for the purpose of decision making (Rao, 2004). Furthermore, Baumol (1990) reported new technologies redefine the role and nature of work for entrepreneur by simply changing the economic structures, while techno sociologist like, Castells (2010) defines it as use of ICTs transform our norms and culture through reorganizing the information technology in contemporary world at large.

Digital Entrepreneurship

Davidson and Vaast (2010) reported the socio-material nature of digital entrepreneurship, the concept of actor network theory. In this theory Latour (2005) declared that the synergy between material and human actors enhance the performance. Digital entrepreneurship also encompass digital magnitude and entrepreneurship i.e. human actors are joint actions. Furthermore, digital entrepreneurship phenomena having two main features: Entrepreneurship and digitalization. The question arises that how the concept

of digital entrepreneurship originates, for example Nambisan (2017) inspected the digital entrepreneurship and matched it with the theories of conventional entrepreneurship. Therefore, academicians are still working to measure a precise definition of digital entrepreneurship. European Commission (2015) made protruding effort to define digital entrepreneurship:

“Digital entrepreneurship embraces all new ventures and the transformation of existing businesses that drive economic and/or social value by creating and using novel digital technologies. Digital enterprises are characterized by a high intensity of utilization of novel digital technologies (particularly social, big data, mobile and cloud solutions) to improve business operations, invent new business models, sharpen business intelligence, and engage with customers and stakeholders. They create the jobs and growth opportunities of the future”.

According to Monitor European Commission (2016) the core themes of European Digital Entrepreneurship are: Digital knowledge base and ICT Market, Digital business environment, Access to finance, Entrepreneurial culture and Digital skills and e-leadership.

Entrepreneurs’ Innovative Predisposition

Innovative predisposition denotes generation and utilization of contemporary solutions, merchandise, and methods in the dwellers work or organization work. Innovative predisposition is the key to organizations and entrepreneurs’ triumph (Jafri, 2010; Miron et al., 2004; Pearce & Ensley, 2004 & West & Farr, 1989). Researchers recently started to identify the influence of entrepreneurial leadership on employees’ innovative predisposition (Bagheri & Akbari, 2018 & Miao, Eva, Newman, & Cooper, 2018). Hence, Renko et al. (2015) described entrepreneurial leaders are the dwellers who motivates and supervises the inhabitants for spotting and using entrepreneurial opportunities to achieve the desired objectives. Current study followed the model of Amir (2015) to measure the entrepreneurs’ innovative predisposition with three dimensions i.e. idea generation, idea promotion and idea implementation. Amir (2015) validated the scale of entrepreneurs’ innovative predisposition with these three dimensions by following West & Farr (1990).

Social Capital

The pivotal works of Bourdieu (1986) and Coleman (1988, 1990), compel many scholars to confer social capital. According to authors mentioned above social capital comprised of mutual anticipation of economic rewards among dwellers and clusters by collaborations. Due to this dynamic nature of social

capital it is studied by various outlooks from economic growth to the expansion of human capital, regional and national growth (Nahapiet & Ghoshal, 1998). The broad spectrum of social capital comprehends intricate network acquaintances between economic and social perceptions (Robison et al., 2002). Current study adopted the social capital model having three main dimensions i.e. structural, relational, and cognitive capital based on (Nahapiet & Ghoshal, 1998).

Digital Entrepreneurship and Entrepreneurs' Innovative predisposition

Literature provides evidence from many years that there exists a conceptual association between innovation and entrepreneurship. Recently the attention in economics of innovation increased (Stoneman, 1995; Grupp, 2001; Arora, Fosfuri & Gambardella, 2002). Legge and Hindle (1997) stated that entrepreneurship is a vibrant progression, a distinctive occurrence, and a change of state. Basically, entrepreneurs hunt opportunities while, the ways or procedures for the success of those opportunities are provided by innovation. Innovation is one of the segments or parts of entrepreneurship that help entrepreneurs to take advantage of change for multiple businesses as an opportunity. There is significant association between entrepreneurship and innovation (Kanungo, 1998; Sundbo, 1998; Drucker, 1994 & Schumpeter, 1934). Innovation is dependent on entrepreneurship for its successful commercialization (Zhao, 2001). It is believed that there are substantial commonalities in between entrepreneurship and innovation (Schumpeter, 1934; Drucker, 1994; Sundbo, 1998 & Kanungo, 1998). And innovation requires entrepreneurs to address and achieve the need and success of market (Zhao, 2001).

H1: There is a positive significant relationship among digital entrepreneurship, entrepreneurs' innovative predisposition and social capital.

H2: There is a significant effect of digital entrepreneurship on entrepreneurs' innovative predisposition.

Digital Entrepreneurship and Social Capital

Cook (2011) argued that social capital whether conventional or modern helps in promoting economic growth. Kickul, Gundry, & Sampson (2007) reported that for women entrepreneurs formal social capital brought many benefits like: developing resources, financial benefits as compared to casual social capital. Researcher reported that proper training for producing quality products, proper entrepreneurial planning along with formal social capital can help the women entrepreneurs for growth elevation. Social networks in any society are important source to achieve the defined objectives of business at any level (start-up, venture development etc.) to analyze business growth (Lee, 2009). While Ramos-Rodríguez et al.

(2010) said that entrepreneurial social relations are the key elements for establishment of resources that lead the new opportunities. Furthermore, this social relation is worthy when properly managed by focusing its underlying structure (network organization, ties) to attain the business goals. For the consistent business/entrepreneurial growth utilization of the social networks aids to develop quality resources and value-added strategies through their social network potential.

H3: Social capital significantly moderates the relationship of digital entrepreneurship and entrepreneurs' innovative predisposition.

Theoretical Perspective

The theories that used in current research are Actor Network Theory, Entrepreneur Paradigm and Social Capital Theory. The Actor Network Theory was introduced by Latour (2005), as Davidson and Vaast (2010) said that digital entrepreneurship is also socio-material. The phenomenon of socio-materiality is derived from Actor-Network theory which describes the collaboration between the humans and material actors. Schumpeter (1934) was the first to abridge the association between the innovation and entrepreneurship in his theory and subjected entrepreneur as a source of innovation, the concept entrepreneur paradigm was firstly introduced in that era. As applied to current study, these theories hold that researcher would expect Digital Entrepreneurship (digital knowledge base and ICT market, digital business environment, access to finance, digital skills and e-leadership and entrepreneurial culture) influence the entrepreneurs' innovative predisposition with the moderating role of social capital.

Methodology

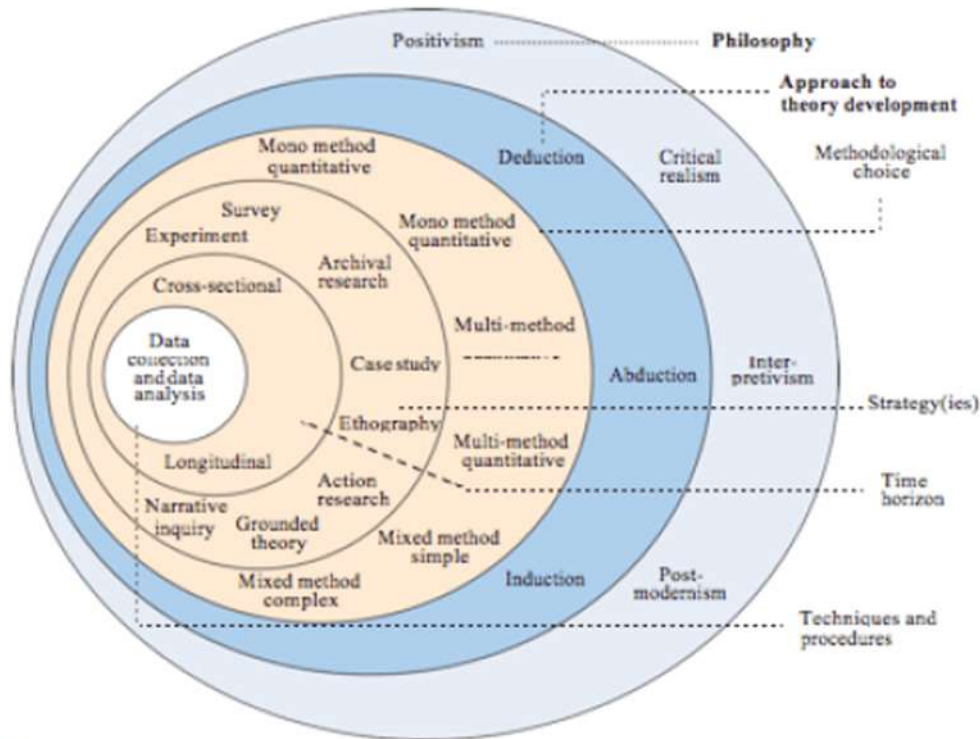


Figure 1. Research onion¹

Figure 1. Research Onion (Saunders *et al.*, 2009)

Research onion elaborates the research philosophy, approach, strategy, choice of methodology, time horizon, techniques & procedures.

Population of the Study

Grabowski, Koleonidis, Arshad, Sohail and Ibrahim (2017), reported that there are 215 digital start-ups from 2013 to 2017. Furthermore, they stated that there are 360,000 software developers and 1280 registered IT firms in Pakistan. The population of the current study included the digital entrepreneurs working in Pakistan. So, the Population of the study is 361,495.

Sampling Technique and Sample Size

The population of current study was big and the respondents were too scattered around the country and were not accessible to researcher. So, the current study used convenient sampling method (non-probability technique) for the purpose of data collection. Yamnae (1967) formula used for determining

the sample size. During this process, the ratio of web-developers/software developers, e-entrepreneurs etc. was kept in mind. The sample size calculated from formula given below is “399”, in the current study researcher floated questionnaire to “470” respondents (digital entrepreneurs) out of which researcher received “453” completely filled questionnaires.

Data Collection Instrument

In this study the data was collected from digital entrepreneurs of Pakistan regarding the Role of Digital Entrepreneurship in Entrepreneurs’ innovative Predisposition with the Moderating Effect of Social Capital. Researcher collected this data by in-person visits to respondents, through e-mail and through google form. Researcher developed the questionnaire on five-point Likert scale (interval) and validate the scale as per the Guidelines for scale development and Analysis (Hinkin, Tracey & Enz, 1997).

Digital Entrepreneurship Scale

Researcher developed the questionnaire of DE by using the framework given by digital Entrepreneurship Monitor (DEM, 2014) and used by (Anckar 2016). The reason behind developing the DE scale was that no such questionnaire is found from the available literature as almost all the research on the concept was done qualitatively (Anckar, 2016 & DEM 2014). DEM (2014) gave the five dimensions of DE i.e. a) Digital Knowledge Base and ICT Markets. b) Digital Business Environment. c) Access to Finance. d) Digital Business Skills and E-Leadership e) Entrepreneurial Culture. Keeping in view the framework, researcher developed “9” question on first facet, “6” questions on second facet, “7” questions on third facet, “6” questions on fourth facet and “5” questions on fifth facet. During the process of scale validation these items reduced based on numerous thresholds.

Entrepreneur Innovative Predisposition Scale

There were many studies regarding the entrepreneurs’ innovative predisposition conducted by different scholars (Lukes & Stephen 2017; Felin et al., 2015 & Khan et al., 2019). Amir (2015) developed three factors scale (i.e., Idea Generation, Idea Promotion and Idea Implementation) of the concept, however current study revised the scale as per respondents with same dimensions and developed “16” questions for entrepreneurs’ innovative predisposition.

Social Capital Scale

Fandiño, Marques, de Menezes and Bentes (2015) worked on the Nahapiet and Ghosal (1998) Model of Organizational Social Capital Scale and developed three dimensions (Structural, Relational and Cognitive) containing “25” questions. Researcher modified the questionnaire to compact form and developed “16” questions for these dimensions.

Conceptual Framework

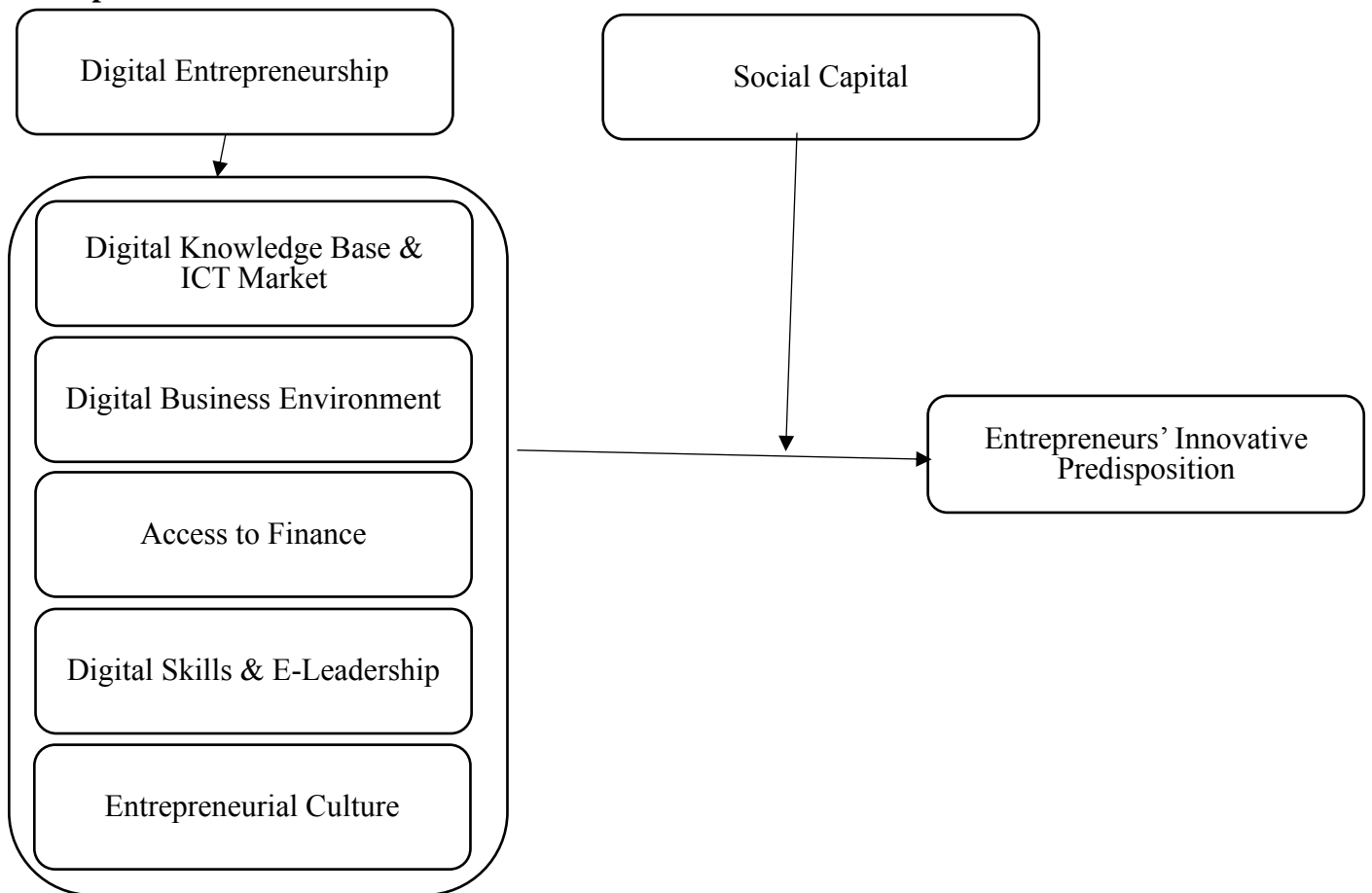


Figure: 2 Conceptual Framework

Data Analysis Techniques

The data was analyzed through Statistical Package for Social Sciences (SPSS 21) and AMOS these are most effective and largely used tool for the analysis of primary data. Current study collected data through survey approach by floating questionnaires among the respondents. Current study is quantitative in

nature, for such type of study the most important tools for analysis are reliability, normality, validity, Pearson's Product Moment Correlation, Hierarchical multiple regression.

RESULTS AND FINDINGS

Table 1: Data Normality

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis			
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	
									Std. Error	
DKBIM	453	1.25	5.00	3.2875	.90611	.078	.115		-.832	.229
DBE	453	1.00	5.00	3.0883	1.15499	-.116	.115		-1.038	.229
ATF	453	1.00	5.00	3.0044	1.14636	-.004	.115		-.958	.229
DSEL	453	1.00	5.00	3.1532	1.08519	-.282	.115		-.915	.229
EC	453	1.00	5.00	3.0625	1.11606	-.078	.115		-.791	.229
EIB	453	2.00	5.00	3.8708	.60459	-.253	.115		-.239	.229
SC	453	2.00	4.83	3.7013	.54519	-.435	.115		-.363	.229
Valid N (listwise)	453									

Many scholars like Hair et al. (2007) and Meyers et al. (2006) reported multidimensional methods to calculate/run data normality that are Skewness and Kurtosis, Q-Q plot, and Kolmogorov-Smirnov Test etc. Data normality results revealed that the variable social capital (M=3.7013, SD=0.54519) has the lowest Skewness (-.435), and the variable digital knowledge base and ICT market (M = 3.2875, SD= 0.90611) has the highest Skewness (.078). On the other hand, Digital business environment (M = 3.0833, SD= 1.15499) has the lowest Kurtosis (-1.038) and entrepreneurs' innovative predisposition (M=3.8708, SD=.60459) has the highest Kurtosis (-.239). So, from the results the constructs under study in reports of Skewness and Kurtosis are in given range and are normal (Kline, 2005 & Pallant & Manual, 2010).

Table 2: Data Reliability

Variables	Cronbach's Alpha	N of Items
Digital Entrepreneurship	.927	16
Entrepreneurs' Innovative Predisposition	.894	15
Social Capital	.619	6

Data reliability ensure the consistency/reliability of measuring concept and guide towards further data analysis Field (2013). In social sciences Cronbach's alpha estimate is used for investigating reliability of parametric data. The threshold value of Cronbach's alpha is “.6 or .7”, meaning that if the value of Cronbach's alpha is greater than “.6 or .7” then instrument is said to be reliable (Nunnally, 1978; Hinton et al., 2004; Tabachnick & Fidell, 2007; Hair et al., 2007; Pallant & Manual, 2010). Results of the data revealed that value of Cronbach's alpha for the variable digital entrepreneurship, entrepreneurs' innovative predisposition and social capital are “.927, 0.849 and 0.619”, respectively with 16 items, 15 items and 6 items. These results lie in between the acceptable range. So, it is cleared that the scale used for the measurement of digital entrepreneurship, entrepreneurs' innovative predisposition and social capital is reliable, meaning that the scale will give consistent results (Nunnally, 1978; Hinton et al., 2004; Tabachnick & Fidell, 2007; Hair et al., 2007 & Pallant & Manual, 2010).

Instrument Validity

Table 3: Exploratory Factor Analysis (EFA)

Variables	KMO	BTS	Sig	Total No: of Factors Based on Eigen Values
Digital Entrepreneurship	0.912	4125.464	0.000	5
Entrepreneurs' Innovative predisposition	0.932	2853.100	0.000	3
Social Capital	0.829	1850.275	0.000	3

Results revealed that the KMO values for all the variables is greater than 0.5 threshold with BTS given above, the p-value for all the variables is less than 0.05 threshold and the results of total variance explained elaborated total number of factors are 5 for digital entrepreneurship, 3 for entrepreneurs' innovative predisposition and 3 for social capital based on Eigen values. Results of exploratory factor analysis also revealed that all the items having the factor loadings greater than the threshold (Kaiser & Rice, 1974; Blaikie, 2003; De-vaus, 2002 & Field 2013).

Table 4: Confirmatory Factor Analysis (CFA)

Variables	Construct	Ave	CR
Digital Entrepreneurship	Digital Knowledge Base & ICT Market	0.422625	0.749686
	Digital Business Environment	0.61685	0.735567
	Access to Finance	0.52585	0.673933
	Digital Skills & E-Leadership	0.53354	0.826223
	Entrepreneurial Culture	0.562967	0.775804
Entrepreneurs' Innovative Predisposition	Idea Generation	0.42302	0.785468
	Idea Promotion	0.39785	0.725014
	Idea Implementation	0.432667	0.820157
Social Capital	Structural Capital	0.3865	0.548133
	Relational Capital	0.4477	0.612013
	Cognitive Capital	0.5554	0.705641

According to Hinkin, Tracey and Enz (1997), for scale validation it is important to run confirmatory factor analysis after exploratory factor analysis. The CFA also have numerous thresholds for scale validation i.e. GFI, NFI, CFI, TLI, AGFI and RMSEA (De Run, 2004; MacInnis & Jaworski, 1989; Moore & Lutz, 2000 & Muehling, et al., 1991). Results of confirmatory factor analysis revealed that scale is valid because results of CFA meet the above thresholds. Researcher also calculated convergent validity based on factor loadings and average variance extracted. Pavlou and Fyngenson (2006) reported the value of $AVE > 0.5$ reveals convergent validity, Hair et al. (2007) argued the value of $AVE > 0.4$ achieve convergent validity and (Gefen & Straub, 2005) reported that the values of factor loadings greater than 0.6 also achieve convergent validity for items measuring their respective construct. Furthermore, researcher calculated composite reliability to measure the construct reliability (Chin et al., 2003). The threshold for construct reliability is $CR > 0.5$ (Hinton et al., 2004). Results identifies that all the variables attain the convergent validity and construct reliability based on mentioned thresholds.

Table 5: Correlation Analysis

		EIB	SC	DE
EIB	Pearson Correlation	1	-.095*	.311**
	Sig. (2-tailed)		.043	.000
	N	453	453	453
SC	Pearson Correlation	-.095*	1	.203**
	Sig. (2-tailed)	.043		.000
	N	453	453	453
DE	Pearson Correlation	.311**	.203**	1
	Sig. (2-tailed)	.000	.000	
	N	453	453	453

Current study used Pearson's Product Moment Correlation as the variables under the study are bivariate. Results elaborated that all the values of correlation are positive, and the probability values of the results are less than threshold of 5%. Results elaborated that the correlation value of digital entrepreneurship and entrepreneurs' innovative predisposition is maximum. In nutshell results elaborated that digital entrepreneurship is directly and significantly proportional to entrepreneurs' innovative predisposition and social capital, hence, H1 of the study is accepted.

Table 6: Simple linear regression (Model-I)

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.311 ^a	.097	.095	.57524	48.306	.000

a. Predictors: (Constant), DE

Simple linear regression statistics is applied before moving towards moderation analysis. Results revealed that the value of $R^2 = 0.097$ with $p < 0.05$ and $F = 48.306$, meaning that there is 9.7% change occurs in entrepreneurs' innovative predisposition due to digital entrepreneurship and the overall model is significant as the probability statistics meet the threshold at 95% confidence interval, hence, H2 of the study is accepted.

Table 7: Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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		B	Std. Error	Beta		
1	(Constant)	3.268	.091		35.967	.000
	DE	.194	.028	.311	6.950	.000

a. Dependent Variable: EIB

Results of model coefficient elaborated that the beta value of digital entrepreneurship = 0.194, meaning that with the one-unit change in digital entrepreneurship there is 0.194 units change occur in entrepreneurs' innovative predisposition with $t = 6.950$ and $p < 0.05$.

Table 8: Multiple Hierarchical Regression (Model-II)

Variables	Coefficient (b)	SE (B)	R ²	R ² Change	P(Model Summary)	T	P
Constant	3.8403	.0264	.1802	.0574	.0000	145.61	.000
Social Capital	-.1519	.0438				-3.470	.000
Digital Entrepreneurship	.2801	.0296				9.465	.000
DE*Social Capital (Int)	.2566	.0458				5.604	.000

Results elaborated that $R^2 = .1802$ with $p < 0.05$, meaning that 18.02% variation in entrepreneurs' innovative predisposition due to digital entrepreneurship. The overall model is statistically significant based on probability statistics at 95% confidence interval. Current study used social capital as moderator in the relationship between digital entrepreneurship and entrepreneurs' innovative predisposition. Results of moderation analysis show the value of R^2 change = 0.0574 with $p < 0.05$ by following Jaccard et al. (1989), who reported R^2 change as a base to evaluate moderation effect supported/accepted study hypothesis H3. Model coefficient explained the beta score of digital entrepreneurship (independent variable) is 0.2801 with $p < 0.05$, beta score of social capital (moderator) is -0.1519 with $p < 0.05$ and the beta value of interaction is 0.2566 with $p < 0.05$. Results explained that with the one unit change in digital entrepreneurship there will be 0.2801 unit variation occur in entrepreneurs' innovative predisposition, beta score of social capital revealed that with the one unit change in moderator there will be -0.1519 unit variation in entrepreneurs' innovative predisposition and at last the beta value of interaction term (digital entrepreneurship*social capital) explained that with the one unit change in interaction term there is 0.2566 unit variation in dependent variable. Here the study results also confirm moderation criteria given

by Aiken and West (1991), They explained significant interaction as compulsory part for moderator to do act as moderator. Results also revealed the nature of effect that when moderator brought to the model carries enhancing effect i.e. the inclusion of social capital as a moderator increases the effect of digital entrepreneurship on entrepreneurs' innovative predisposition.

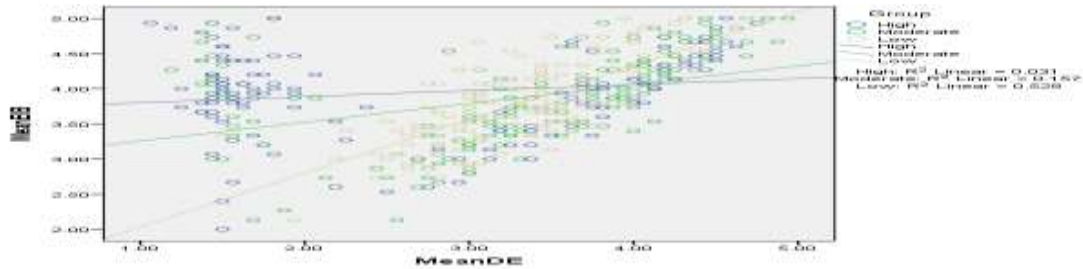


Figure: 3 Interaction Plot (DE, EIB and SC)

Aicken and West (1991) reported that for analyzing the conditional effects of moderator on dependent variable researcher should have to group the moderator into three categories (High social capital, Moderate social capital, and Low social capital). The value of R2 for high social capital is 0.031 and its under root revealed the correlation is found 0.176 with digital entrepreneurship and entrepreneurs' innovative predisposition. R2 value for moderate social capital is 0.157 with correlation of 0.396 with digital entrepreneurship and entrepreneurs' innovative predisposition and at the end the value of low social capital is 0.528 and its under root elaborated the correlation is 0.726 with digital entrepreneurship and entrepreneurs' innovative predisposition. Results also elaborated the conditional effect of digital entrepreneurship and social capital on entrepreneurs' innovative predisposition. Investigation of interaction plot revealed that as digital entrepreneurship and social capital are high the entrepreneurs' innovative predisposition is also elevated and this would be the best scenario for entrepreneurs to be adopted. Plot also elaborated that when digital entrepreneurship is low entrepreneurs' innovative predisposition is almost same for entrepreneurs with low, moderate, or high social capital.

DISCUSSION

The concept of digital entrepreneurship emerged in the start of 21st century, authors like (Hull, Hung & Hair, 2006; Davidson & Vaast, 2010; Yaghoubi, Salehi, Eftekharian & Samipourgiri, 2012; Digital

Entrepreneurship Monitor, 2014; Growth European Union, 2016; Hamid & Khalid, 2016; Leong, Pan & Liu, 2016 & Anckar, 2016) worked on various dimensions of digital entrepreneurship and observed its effect on society and economy. Current study applied descriptive and inferential statistics for the purpose of analysis. After fulfilling the thresholds of descriptive analysis, researcher run correlation analysis (Pearson's Product Moment Correlation) to check the relationship among study variables in order to meet the first study objective. Results revealed that there is positive and significant relationship among digital entrepreneurship, entrepreneurs' innovative behavior, job creation and social capital because the r-value is positive with $p < 0.05$. Based on these findings' hypothesis one "H₁" is accepted. Meaning that with the increase use of digital technologies by the entrepreneurs will enhance the innovative behavior of entrepreneurs and create more jobs in the country. So, government, non-government organizations and higher education institutes of developed, developing and underdeveloped countries should have to focus on digital entrepreneurship by giving trainings, seminars, workshops etc. to general public, entrepreneurs as well as digital entrepreneurs to provide awareness regarding the importance of digital entrepreneurship, social capital of entrepreneurs and its positive influence on innovative behavior and job creation. Results of the study are in line with the findings of (Digital Entrepreneurship Monitor, 2014; Zhao & Collier, 2016 & Anckar, 2016) and support the theory i.e. Actor Network Theory (Latour, 2005).

Researcher applied simple linear regression to check the influence of digital entrepreneurship on entrepreneurs' innovative predisposition to meet the second study objective. Results evaluated that digital entrepreneurship is significantly influencing the entrepreneurs' innovative behavior as $R^2 = 9.7\%$ and $p < 0.05$ level of confidence. The beta value revealed the influence is positive because $\beta = 0.194$, meaning that with a unit change in digital entrepreneurship there is "0.194" units change in entrepreneurs' innovative behavior. Based on findings hypothesis two "H₂" is accepted. Results of the study supports the findings of (Zhao & Collier, 2016 & Anckar, 2016). Third research objective was to find the moderating role of social capital in relationship of digital entrepreneurship with entrepreneurs' innovative behavior. Current study used process file (Model-1) for multiple hierarchical regression (Hayes, 2013). Results revealed that the overall model is significantly influencing the entrepreneurs' innovative behavior with $R^2 = 18.02\%$ and $p < 0.05$. Results of moderation analysis revealed that social capital do act as moderator (enhancing effect) on relationship of digital entrepreneurship with entrepreneurs' innovative behavior because R^2 change = 0.0574 with $p < 0.05$ (Jaccard et al., 1989).

Model coefficients elaborated beta value = 0.2801 with $p < 0.05$ for variable digital entrepreneurship, beta value = -0.1519 with $p < 0.05$ for variable social capital and beta value = 0.2566 with $p < 0.05$ for interaction term (digital entrepreneurship*social capital) also confirm moderation (Aiken & West, 1991). Results revealed that inclusion of social capital as moderator enhanced the effect of digital entrepreneurship on entrepreneurs' innovative behavior. Based on current findings hypothesis three "H3" is accepted. Researcher also check the conditional effects of moderator and independent variable on dependent variable. Researcher used interaction plot for conditional effects (Aicken & West, 1991), results evaluated that high level of digital entrepreneurship and social capital leads to achieve high level of entrepreneurs' innovative behavior. Interaction plot also elaborated that when digital entrepreneurship is low entrepreneurs' innovative behavior is almost same for entrepreneurs with low, moderate, or high social capital.

CONCLUSION

Modern world is facing many problems in every walk of life and unemployment on world level, this leads towards many social evils in the society. In order to handle these problems and evil of unemployment digital entrepreneurship activities and social capital of people are one of the best solutions that leads people (entrepreneurs) towards innovative predisposition which ultimately find new ways to cope up problems and it also help in creating more jobs in the world to remove the evil of society. Researcher employed correlation analysis to meet first objective i.e. to check the relationship among digital entrepreneurship, entrepreneurs' innovative predisposition, and social capital. Results revealed that there is positive and significant relationship among variables under study. So, based on findings of the study objective one of the research achieved. To meet the second objective of the study i.e. to identify the influence of digital entrepreneurship on entrepreneurs' innovative predisposition, study employed simple linear regression. Results evaluated that there is significant impact of digital entrepreneurship on entrepreneurs' innovative predisposition, based on findings objective two of research is achieved. Third objective of the research i.e. to evaluate the moderating role of social capital on relationship of digital entrepreneurship with entrepreneurs' innovative predisposition, researcher run multiple hierarchical regression. Results concluded that there is significant role of social capital as moderator on relationship of digital entrepreneurship with entrepreneurs' innovative predisposition, based on findings objective three of the research is also achieved.

It is concluded from the achievement of objective one and two that digital entrepreneurship plays an important role to enhance the entrepreneurs' innovative predisposition. So, the entrepreneurs, practitioners, government, and academicians should focus on digital entrepreneurship activities practically and academically. It is also concluded from the findings of third objective that along with focus on digital entrepreneurship, all the stakeholders should also focus on social capital because it leads towards the productive use of knowledge and information of individual's social circle and becomes the social capital for entrepreneurs. Findings concluded that this social capital of entrepreneurs along with digital entrepreneurship enhanced the entrepreneurs' innovative predisposition.

Recommendations

Study recommended that digital entrepreneurship could enhance innovative predisposition of entrepreneurs that ultimately bring new ideas for recognizing more opportunities with the proper use of social capital. Entrepreneurs are recommended to use digital technologies in their entrepreneurial activities this will not only boost their business but also enhances the innovative behavior and it will help them to become market leaders around the globe. Current study recommended that digital entrepreneurs should use their social capital for enhancing their innovative behavior that ultimately led towards innovation. It is also recommended that government of Pakistan may launch different training projects and seminars for entrepreneurs, unemployed people, and students regarding the awareness of digital technologies and training for their productive use like: Digital entrepreneurship monitor of Europe.

Study implication

Overall results of study made contribution towards better insight on the concept of digital entrepreneurship, entrepreneurs' innovative predisposition and social capital. These outcomes have substantial importance to academicians, entrepreneurs, and scholars.

Theoretical implications

Study model provides a thorough knowledge of digital entrepreneurship, entrepreneurs' innovative predisposition and social capital. Findings of the study follows and endorsed the suggestions of (DEM, 2014; Zhao & Collier, 2016 & Ancker, 2016). Furthermore, this study contributes/innovates in actor network theory by inclusion of social capital as moderator and analyzed its effect on relationship of digital entrepreneurship with entrepreneurs' innovative predisposition to make decisions for the

betterment of digital entrepreneurs and society. Finally, this study is conducted directly on digital entrepreneurs with the moderating role of social capital and moderator enhances the effect of digital entrepreneurship on entrepreneurs' innovative predisposition, so the government and non-government organizations may develop such policies for people regarding recognition of opportunities by the use of digital technologies that ultimately lead the people toward growth and may compete throughout the globe.

Practical implications

Results elaborated numerous implications for entrepreneurs; knowledge of entrepreneurship along with digital technologies and role of social capital for innovative predisposition that can help entrepreneurs to get more benefits by the use digital technologies for entrepreneurship. Government is wandering to reduce the unemployment in country but did not gave attention to digital entrepreneurship concept as it is an important phenomenon to reduce unemployment, results of study help to resolve this issue. This study enrich literature using quantitative data analysis for empirical support to the findings of digital entrepreneurship monitor.

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