

RESEARCH ARTICLE

Fostering Digital Entrepreneurship Through Entrepreneurial Perceptions: Role of Uncertainty Avoidance and Social Capital

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Abstract: Technology has transformed the business model of simple entrepreneurship into a new form of digitalization. Technology has revolutionized business methods with innovative practices in the entrepreneurship world. Previous studies have identified various factors that support the concept of digital entrepreneurship. Still, the role of social capital and uncertainty avoidance requires further explanation through a path of entrepreneurial perceptions. Therefore, this study tries to identify the effect of social capital and uncertainty avoidance on digital entrepreneurship through entrepreneurial perceptions (collaborative, operational and planning). Data were collected from 316 managers of small and medium enterprises. The findings explain that social capital and uncertainty avoidance significantly impact operational and planning perceptions of digital entrepreneurship. The findings provide various theoretical, practical, and policy-making implications and directions to the future researcher.

Keywords: Technology; digital entrepreneurship; innovative practices; social capital; uncertainty avoidance; entrepreneurial perceptions; innovation.

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1 Introduction

The rapid advancement of the internet and mobile technologies has completely changed people's perception of information gathering, communication, and shopping during the last few decades (Nambisan, 2017). Due to this ever-changing culture of advancement in technologies, the world is moving towards digitalization and innovation (Kraus et al., 2020). This phenomenon has given birth to a new form of entrepreneurship, i.e. digital entrepreneurship (Hommel & Bican, 2020). Digital entrepreneurship emerged through innovative resources like web and data innovation (Guthrie, 2014). It affects the new entrepreneurial ventures and changes the existing business processes by creating new opportunities in devising strategies and changing existing business processes for better productivity (Turner & Pennington, 2015). The use of technology and innovative practices has changed the way of conducting business activities (Priyono et al., 2020). Rising digital entrepreneurship is described as a pattern of situations for an organization to re-organize the procedures, services, and marketing tools to become accustomed to the digital platform of performing businesses (Hur et al., 2017).

Researchers and human resource practitioners are highly involved in how an entrepreneur identifies these rising digital platform opportunities (Zaheer et al., 2019). Such transformations enable entrepreneurs to re-evaluate their latest commerce platforms and make organizations re-construct their functional procedures and inter-organizational connections. As a consequence of identifying and using growing digital opportunities, organizations reinforce and co-produce the client association, reach new markets to appeal to the broader clients base and bring original or innovative goods or services (Terjesen et al., 2016). In the current period, numerous electronic business organizations have initiated the data-driven inventive commerce framework and digital service procedures to alter their policies in their organizations and increase their service know-how for their online and societal clients (Zhang et al., 2016). Online transactions have steadily restored the share of the market of offline business dealings. The organizations in the conventional segments have experienced great exterior strains from digital commerce business dealings and hold higher tactical and functional threats than in the past (Batra et al., 2018). In order to react to intense competition from other digital business organizations, entrepreneurs in offline organizations attempt to discover digital platforms to enhance their online business deals.

However, not all organizations can alter their business processes to digital technology to expand sales. Mokhber et al. (2016) stated that to capture digital platforms for reorganizing the existing trade models and functional procedures for the online contest, entrepreneurs must acquire entrepreneurial perceptions. According to Santos et al. (2016), managers' perceptions play a vital role in understanding how the organization interrelates with its context and resources. As recommended by the entrepreneurship theory, such entrepreneurial perceptions of organisational management show an imperative character in recognizing the platforms for establishing digital business models and functional procedures (Shahzad et al., 2021).

The notion of social capital has rooted in sociology to describe specific actions happening in particular domains (Maksum et al., 2020). It was primarily established on an individual level to narrate a societal event like cultural values, social events and social involvement. Social capital plays a significant part in deciding where entrepreneurship activity develops (Westlund et al., 2014). With the social capital factor, the resource assessment from various networks occurs, which builds formal or informal channels, ultimately

deciding the strength of business development. Undoubtedly, entrepreneurship is not only based on alliances and contracts of formalized, but it is also a process of the social base that relies on an informal network of social capital that provides significant resources (Sleutjes & Schutjens, 2013). In social capital, the assets are required to start up the business or maintain the business position within a social network structure and social rules, norms, and interaction (Williams et al., 2017).

Uncertainty avoidance helps start new firms, generating more resources and proliferating businesses (Chae & Goh, 2020). So, it substantially impacts entrepreneurship practices, which boosts up with less uncertainty avoidance. To promote entrepreneurship culture, the perception of entrepreneurs plays an important role. Among the entrepreneurship perceptions include the collaboration perception (Alghatam, 2019), which with digital technologies allow the entrepreneur to achieve the best ways of skills, talent, and ideas due to which entrepreneurship activities grow with progress. But knowledge about these activities is still unexplored in Pakistan (Mokhber et al., 2016). Digital collaboration allows the entrepreneur to rise in markets, and the enterprises get access to modern ideas, markets, new skills, and talent. Collaborative perception with digital techniques allows entrepreneurship to increase their business with innovation.

The findings of the digital collaboration index stated that collaborative perception with digital knowledge shows the effectiveness of enterprise and how it involves innovation and revenue growth. Planning perception of digital entrepreneurship highlights the plans and methods for business effectiveness. It includes the ideas of the enterprise and how effective investment occurs to make practical entrepreneurship (Dees et al., 2002). The third perception of entrepreneurship is operational, highlighting the notion that includes alertness, ideas, and perception of customers related to firm services and products. Operational perception is generally impacted by social capital, reviews, promotion, social media, individual experience, and networking (Zhu & Lin, 2019).

Although there exist enormous opportunities for traditional firms to take advantage of online growth, not every firm can do so. Entrepreneurs need to have entrepreneurial perceptions to take advantage of these online opportunities. This study plans to recognize the major challenges that aid to direct the future entrepreneurial perceptual study towards more productive research paths that have not been studied before (Zhu & Lin 2015) and social capital and cultural variables suggested by Wang et al. (2019). Entrepreneurship in Pakistan lacks digital knowledge due to people's perception of digital innovation. This research proposes to target the small and medium business managers in Pakistan. It aims to impact the academic study, HR practitioners, and entrepreneurs by adding to the existing body of the literature. In addition, this research will have a constructive influence on the entrepreneurial corporations functioning in Pakistan and aspires to assist the young entrepreneurs in improving their entrepreneurial perceptions, social capital, and avoiding uncertainty. Although entrepreneurial perception plays a significant role in western firms, emerging nations like Pakistan do not benefit from its significance (Shafique & Kalyar, 2018).

This research proposes fulfilling almost four research gaps by emphasizing four major objectives. First, this study performs a methodical examination of the mediating impact of entrepreneurial perceptions of management and business studies to collect theoretical and experimental growth and recognize social capital, uncertainty avoidance, and digital entrepreneurship study themes and developmental outcomes. The literature review generally relies upon the pre-described themes and patterns frequently utilized in conven-

tional and methodical literature reviews to draw out the developmental outlines concerning theoretical perspectives, entrepreneurial settings, social capital, culture, approaches, and unit of analysis (García-Villaverde et al., 2018). This research offers an overview of the entrepreneurial perception study and a basis for future researchers to construct on. As stated, periodical research in a specific area is vital for obtaining a great advantage from the future study (Fayolle & Liñán, 2014). This study plans to recognize the major challenges that aid to direct the future entrepreneurial perceptual study towards more productive research paths which have not been studied before (Zaremohzzabieh et al., 2019). By examining the three dimensions of entrepreneurial perceptions and the main challenges related to the entrepreneurial network, this research further approaches entrepreneurship, uncertainty avoidance, and social capital experiences to develop the new entrepreneurs' success rate. The researcher also adds to the entrepreneurship literature by debating how these entrepreneurial perceptions assist in comprehending and recognising the vital challenges in entrepreneurship businesses. Consequently, this research assists in further cross-fertilizing the digital entrepreneurship, culture and social capital literature in addition to advancing e-business research. Overall, our central research gap that the current study aims to fill is to consider the stock of business entrepreneurial perception study to offer a comprehensive base for future entrepreneurial research to reproduce and thrive whilst identifying its existing culture and entrepreneurial individuality in the Pakistani context.

2 Literature Review

2.1 Social Capital and Digital Entrepreneurship

During the last few years, a new concept of social capital has emerged to demonstrate digital entrepreneurship. Zhou and Kaplanidou (2018) explained that social capital and digital entrepreneurship have a significant relationship because it helps in the growth of information-driven and promotes economic factors. Digital entrepreneurship understands in a group where links, interactions, and communications among digital network members enhance mutual trust (Rauniar et al., 2019). Social capital assists digital entrepreneurs to collect resources from different regions and, in a meaningful manner, merging them (Setini et al., 2020). In other words, most researchers emphasize strengthening social capital as an essential factor in promoting digital entrepreneurship. The pressure on the social capital part in digital entrepreneurship activities and procedures significantly affects social links and relationships on digital entrepreneurship properties. Social capital has a crucial role in digital entrepreneurship procedures and activities since digital entrepreneurship is a socio-economic process that mainly relies on social conditions and situations. In terms of two ways, digital entrepreneurs are individuals who are the product of their social environment (Sultana et al., 2019). Second, digital entrepreneurs are a fundamentally social activity, and thus absence or presence of social links and digital communications affects business nature. According to recent studies, social capital is significantly effective in digital entrepreneurship. The study has also illustrated that links and trust between companies and individuals are effective in digital entrepreneurship, and shared objectives and views of the company individuals are effective in digital entrepreneurship.

Social capital has three types: structural, relational, and cognitive, affecting digital entrepreneurship. Giudici et al. (2018) stated that social capital sometimes increases and

sometimes decreases the potential of digital entrepreneurship. Social capital encourages and enhances digital entrepreneurship when individuals access necessary resources via social networks and connections. Membership in multiple social connections also increases an individual's mental capability to receive the opportunity and enhance their digital entrepreneurship. Social capital's obstruction to digital entrepreneurship occurs when closed social connections eliminate prospective digital entrepreneurs from essential resources. Social capital also helps many digital entrepreneurs to overcome resource constraints. This is crucial in small organizations lacking market-oriented institutions such as venture capital companies. Digital entrepreneurs gain social capital via club memberships (Theodoraki et al., 2018). Social capital can be defined as a combination of resources with the help of possessing social ties.

Social capital focuses on accessing untouchable resources such as goodwill from the social network and enhancing connections and relationships as a critical component. Cao et al. (2018) stated that social capital is the sum of current and potential resources constructed by the relationship network. Social capital mainly refers to understanding, rules, shared knowledge, norms, and expectations about the patterns of connections that people bring to a recurrent activity (Gleasure & Morgan, 2018). Social capital can also be defined as trust, the willingness to live by the rules that one's community requires. There is a significant and positive relationship between digital entrepreneurship and social capital. It establishes digital entrepreneurs as leaders and provides value to the networks via social media and in-person events. It also contributes to the work of others in the network. With the help of social capital, digital entrepreneurs construct stronger social media teams and construct honest and strong relationships within the company's boundary. At the same time, the following relationship is also supported by social capital theory. The theory explains that social capital factors have helped to enhance engagement and corporation among people. Therefore, the social capital theory has a great impact on the development of technology as well as digital entrepreneurship. Thus, the study has introduced the first hypothesis:

H1: There is a significant relationship between social capital and digital entrepreneurship.

2.2 Uncertainty Avoidance and Digital Entrepreneurship

Generally, uncertainty avoidance is the process of dealing with society's tolerance for uncertainty and ambiguity (Afsar & Masood, 2018). Uncertainty avoidance is commonly found among people and individuals. Moreover, it affects the individual's perception and affects the organizational values and perception. A study recently has examined that uncertainty avoidance has a significant impact on society's characteristics and the use of information technology. The studies in the past have examined the relationship of uncertainty avoidance with digital technology and entrepreneurship. Putnik et al. (2020) have illustrated that uncertainty avoidance positively affects the cultural aspects and dimensions. There is a significant relationship between digital entrepreneurship and uncertainty avoidance. The study has explained that uncertainty avoidance affects digital technology and the social entrepreneurship process because it comes with the tolerance of unpredictability. The study has also examined that the people in greater uncertainty avoiding nations incline to capture an open business with accessible goods, market share and a recognized firm.

An entrepreneur with a lesser uncertainty avoiding nation begins a new organization that ought to produce such resources eventually (Valliere, 2019). Therefore, culture plays a vital part in an entrepreneurial attitude. This has shown that uncertainty avoidance has

helped all individuals and corporate firms to deal with the challenges. Similarly, individuals' entrepreneurial attitude helps avoid unfavourable circumstances and absorb positive certainty (Shahzad et al., 2021). Thus, digital entrepreneurship increases when companies avoid negative ideas and promote positive ones. Thus, uncertainty avoidance has a significant or positive impact on digital entrepreneurship. The social capital theory also supports the relationship between uncertainty avoidance and digital entrepreneurship. The social capital theory has examined and evaluated that entrepreneurship is related to uncertainty, including novelty and suppleness. Therefore, the decrease and increase in certainty avoidance affects the process of digital entrepreneurship. Thus, the second hypothesis of the study is:

H2: There is a significant relationship between uncertainty avoidance and digital entrepreneurship.

2.3 The Mediating Role of Collaborative Perception

It has already been discussed above that collaborative perception has a significant role in the relationship between social capital and digital entrepreneurship. Nambisan et al. (2019) said that it could not be denied that digital entrepreneurship is the process of bringing new technology or innovation in existing technology. While capital significantly affects the process of digital entrepreneurship. Social capital impacts the digital entrepreneurship process because it helps to generate new ideas. Furthermore, collaborative perception also plays a significant role in enhancing the relationship between social capital and digital entrepreneurship. The collaborative perception significantly mediates the relationship between social capital and the digital entrepreneurship process because it engages many people to act and think. It has examined that collaborative perception brings innovative ideas and fosters critical thinking. A recent study has also examined and illustrated the role of collaborative perception positively.

Balocco et al. (2018) illustrated that collaborative perception mainly acts as an engagement process to engage many people and is influenced by other people's behaviour. The study has demonstrated that the collaborative perception is based on the spontaneous process, which somehow means the planned process. The individuals or a large number of people under this process collect the ideas through discussions, equal engagement and, more likely, by the collective behaviour of others. The collaborative perception through this way affects social capital behaviour, and social capital further affects digital entrepreneurship. The evidence from previous studies and literature has also examined that collaborative perception refers to the set of behaviours that form through different people's contributions (Jiang & Tornikoski, 2019). This is a modern era of technology; the individuals as a collaborative perception contribute to technology and innovation. Therefore, this cannot be denied that the collaborative perception affects social capital and the digital entrepreneurship process.

The social capital theory also supports the above relationship of collaborative perception as a mediating variable. The social capital theory has demonstrated that different interpersonal factors affect the generation of ideas and thinking perception. Moreover, the social capital theory also analyzes that individuals with the same thinking and perception mainly work about development. Thus, it has been examined that the social capital theory also provides evidence that collaborative perception affects or mediates the relationship between social capital and digital entrepreneurship. This discussion forms the following hypothesis:

H3(a): The collaborative perception has a significant mediating role in the relationship between social capital and digital entrepreneurship.

The collaborative perception also has a significant positive role in the relationship between uncertainty avoidance and digital entrepreneurship. The collaborative perception mediates the relationship of these variables because it helps to enhance the creativity among the groups and individuals (Shemla & Wegge, 2019). At the same time, it significantly helped in collective engagement and creativity in tasks. This has shown that collaborative perception acts as a process of collective engagement to fulfil the tasks through collective engagement. A study recently has illustrated that collaborative perception helps organize the individuals' efforts that directly affect the performance of the individuals. To understand the role of individual work and participation, the collaborative perceptual act enhances the knowledge and perception of the individuals. As a result, collaborative perception affects uncertainty avoidance. It affects uncertainty avoidance because this is one of the primary tools to work in a group and avoid inevitable negative consequences. The relationship of collaborative perception as a mediating variable is also supported by social capital theory. It illustrates that the theory of social capital helps to avoid and neglect the negative thinking from the individuals. It has examined that social capital produces positive collaboration and thinking perception outcomes. Thus, this discussion has formed the following hypothesis;

H3(b): The collaborative perception has a significant mediating role in the relationship between uncertainty avoidance and digital entrepreneurship.

2.4 The Mediating Role of Planning Perception

Planning perception is the fundamental management function in the relationship between social capital and digital entrepreneurship. The mediating role of planning perception mainly involves deciding what is to be done and when to be done. Eiteneyer et al. (2019) illustrated that planning perception is an intellectual mechanism that enhances and mediates the relationship between social capital and digital entrepreneurship. Because planning perception mainly involves the selection of a good course of action, which helps digital entrepreneurs to make new services that are globally accessible and provide much capacity as needed. The mediating role of planning perception also decreases costs by separating the need to buy tools and equipment for digital entrepreneurs and enhancing the social capital environment. The positive role of planning perception also enhances the flexible mindset of digital entrepreneurs in the presence of an effective social capital environment. Planning perception also establishes business agility in the relationship of digital entrepreneurs and social capacity (Ravichandran, 2018).

The mediating role of planning perception also focuses on explaining the objectives of an organization and identifying the alternative course of actions and procedures. The relationship between social capital and digital entrepreneurship can be enhanced and positively affected by the planning perception. The plans are made for a specific and short term considering the firm's present and future conditions and demands. Planning perception is a mental process that involves explicitly applying thinking, forecasting, and imagining intelligently. Pérez-Macías et al. (2019) said that the planning perception increases and enhances the relationship between social capital and digital entrepreneurs by reducing uncertainty and risks and facilitating engineering and procedures. Thus, it

minimizes the overlapping among processes and removes unproductive work. Planning perception is almost present in all types of firms, companies, sectors, and economies because planning perception uncovers and shows future opportunities and risks. So, planning perception's mediating role positively affected and enhanced the relationship between social capital and digital entrepreneurship. The above discussion has formed the following hypothesis:

H4(a): The planning perception has a significant mediating role in the relationship between social capital and digital entrepreneurship.

Garengo et al. (2005) explained that planning perception is a fundamental process of critically thinking about the activities needed to achieve a desired aim and objective. Planning perception is the primary and foremost process to achieve desired goals and objectives. The mediating role of planning perception vastly increases and enhances the relationship between uncertainty avoidance and digital entrepreneurship. Because planning perception mainly involves constructing and maintaining the digital entrepreneurs' plans to avoid uncertainty and risks from their social networks and projects. Planning perception is a fundamental property of uncertainty avoidance, and during the handling of risks, it plays a crucial role for digital entrepreneurs. It also enhances the property of intelligent behaviour during uncertainty avoidance. So, planning perception is crucial and plays a significant role in the relationship between uncertainty avoidance and digital entrepreneurs. Planning also enhances and improves the process of uncertainty avoidance for digital entrepreneurs to achieve efficiency and effectiveness in their digital projects (Scuotto et al., 2019). Planning perception also enhances and helps allocate limited resources and procedures like staff and time in an orderly and systematic manner to reduce uncertain conditions and terms for digital entrepreneurs. Planning perception generates a framework for decision making to reduce the uncertainty conditions. Digital entrepreneurs often take crucial decisions in implementing many activities and processes, which are much simpler to take. They are less susceptible to mistakes if backed by efficient planning done earlier. So, the mediating role of planning perception plays a significant and positive role in the relationship between uncertainty avoidance and digital entrepreneurship. The above discussion has formed the following hypothesis:

H4(b): The planning perception has a significant mediating role in the relationship between uncertainty avoidance and digital entrepreneurship.

2.5 The Mediating Role of Operational Perception

Operation perception plays a crucial role in social capital and digital entrepreneurship (Nambisan et al., 2019). The operation perception significantly mediates the relationship between social capital and digital entrepreneurship because it creates the highest efficiency level and smoothens the business process. A study recently has examined and illustrates that operation perception has a crucial role in business processes and management. (Hategan et al., 2018) Collected information has examined that it is concerned with maximizing the profit and achieving the business's goals. The process of operation perception affects the collaboration and working engagement of individuals. It helps to develop a positive relationship between the technology process and social capital dimensions (Goodale et al., 2011).

Moreover, the operation perception also affects the operations of corporate management and organizations in terms of high collaboration and teamwork (Kickul et al., 2011). It is well known and cannot be denied that teamwork enhances the collaboration among team members because they show a better and significant performance. Thus, it can be said that the operation perception mediates the relationship between social capital and digital entrepreneurship. The theory of social capital also explains the relationship between operation perceptions. The social capital theory has examined and provided evidence that group or team performance is enhanced. At the same time, the operation perception has also signified the relationship of social capital through people's engagement. Thus, the whole discussion forms the following hypotheses;

H5(a): The operational perception has a significant mediating role in the relationship between social capital and digital entrepreneurship.

Moreover, operation perception plays a mediating role in the relationship between uncertainty avoidance and digital entrepreneurship. The operation perception is a strong parallel between the skills required and effective management operations. It comes to the knowledge that the digital entrepreneurship process can be enhanced and managed through skills. When individuals focus on developing and enhancing the skills, the entrepreneurial process signifies. This has illustrated that operation perception has effectively affected the coordination and practices. A study has also illustrated that the common function of the operation perception is to enhance the thinking process of an individual through operations and management (Ingvarsdottir & Halldorsdottir, 2018). According to the study, three major components affect operation perception: thinking, collaboration, and organization. The higher is the collaboration among the people regarding any particular issue, the higher is the operation perception and vice versa.

Moreover, it has been concluded that operation perception positively affects uncertainty avoidance. The knowledge that the operation perception produces positive supervision functions actively involved in activities. As a result, it helps to avoid the negative behaviour and circumstances that individuals avoid. While the low level of uncertainty avoidance further affects the innovation and use of new technology. The social capital theory supports and explains the relationship of operational perception as a mediating variable that affects uncertainty avoidance and digital entrepreneurship. The social capital theory has demonstrated that individual relationships can be enhanced through operational activities and management tasks. Thus, the theory of social capital also explained the role of operation perception.

H5(b): The operational perception has a significant mediating role in the relationship between uncertainty avoidance and digital entrepreneurship.

The conceptual model is presented in fig. 1

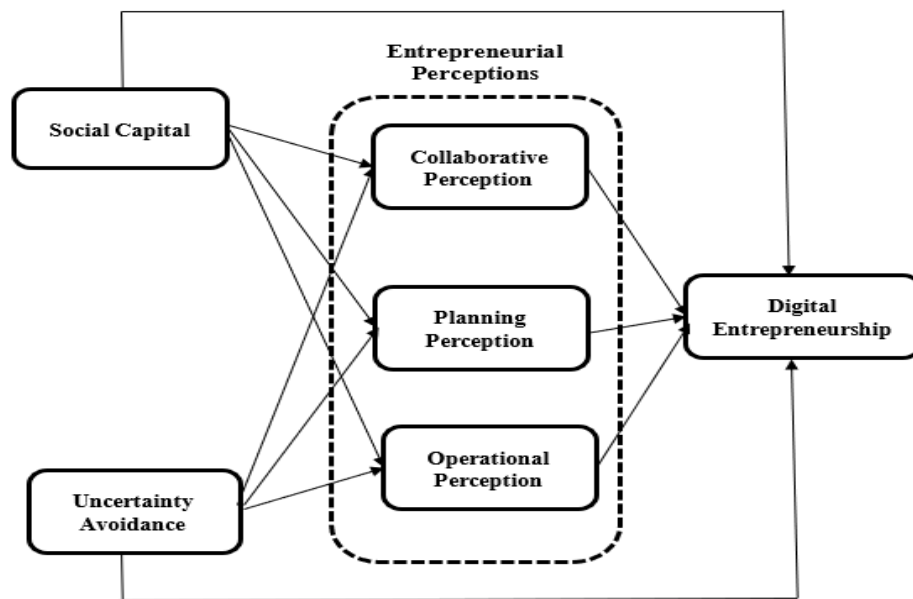


Figure 1: Conceptual Model

3 Methods

3.1 Sampling and Data Collection Procedure

A survey questionnaire was used to gather data from manager level employees of small and medium enterprises. This study used a convenience sampling method as the exact number of small and medium enterprises is unknown. The data were collected by conducting a one-time survey to get cross-sectional data on the variables of interest, i.e., social capital, uncertainty avoidance, collaborative perception, planning perception, operational perception, and digital entrepreneurship. The survey questions in the questionnaire were closed-ended to avoid the distraction of respondents. A five-point Likert-type scale was used to record the respondents' responses from strongly disagree to strongly agree. Initially, 450 questionnaires were distributed to respondents by self-administered survey methodology. The respondents filled 370 questionnaires, and after discarding the incomplete and wrong-filled questionnaires, 316 were finalized for analysis which depicted a 70

3.2 Measures

The study aims to empirically examine the impact of social capital and uncertainty avoidance on digital entrepreneurship. The mediation impact of collaboration, operation, and planning on the relationship between independents and dependent variables are investigated. Social capital is the linkages between the people who work together in a specific society to function efficiently (Aldrich & Cliff, 2003). The social capital scale is measured by emulating the scale proposed by Lins et al. (2017), based on eight measures and having

the reliability of 0.722, greater than the threshold value of 0.70. Uncertainty avoidance is the self-reported extent of ambiguity and uncertainty about the situation. It is based on the Nambisan and Baron (2019) measures, which has measured uncertainty control on four survey points with a reliability of 0.89. The mediating variables of entrepreneurship perception are based on three dimensions, i.e. collaboration, planning, and operation. These variables are measured by adopting the scale of Zhu and Lin (2019), having the reliability of 0.82, 0.79, and 0.73, respectively. Digital entrepreneurship is referred to as creating new ventures by transforming the existing business and adopting and utilizing digital technologies to enhance business efficiency. It is measured by adopting the eight items based on the scale of Nambisan and Baron (2019).

4 Results

First, the demographics of the study participants are explained in Table 1. The demographic profile involves the personal details about the respondents, such as the age, gender, education, position and experience of the respondents.

Table 1: Demographic Profile of the Respondents

Profile	Categories	Frequency	Percentage
Age	21-30 Year	77	24.4
	31-40 Year	93	29.4
	41-50 Year	97	30.7
	50 or More Years	49	15.5
Gender	Male	246	77.8
	Female	70	22.2
Education	Matric	38	12
	Graduate	137	43.4
	Postgraduate	105	33.2
	Others	36	11.4
Firm Size	Small (0-50)	171	54.1
	Medium (51-250)	145	45.9
Position	CEO	65	20.5
	Owner	87	27.5
	G. Manager	97	30.6
	A.G. Manager	67	21.4
Experience	Less Than 3 Years	74	23.4
	3 to 5 Years	90	28.5
	5-8 Year	94	29.7
	More Than 8 Years	58	18.4

The results showed that the highest age category ranged from 41 to 50 years, in which 97 respondents fell. The majority of the respondents were males, i.e. 246, while 70 of the respondents were females, which means that the percentage of males among the sample was higher than the females. The details of the education level of the respondents showed that 137 of the sample had completed their graduation degree, and 105 of them had their post-graduation done. The firm size to which the respondents belonged was also recorded; 171 of the respondents belonged to small firms, while 145 of them belonged to medium ones according to the definition of small and medium scale businesses. The respondents' positions were also recorded; 65 of them were CEOs, 87 of them were owners, 97 of them were general managers, and 67 of them were assistant general managers. As far as experience is concerned, 74 of the respondents had less than 3 years of experience regarding IT administration, 90 of them had 3 to 5 years of experience, 94 had 5 to 8 years of experience. In comparison, 58 of the respondents had more than 8 years of experience regarding the IT administration.

Table 2: Construct Reliability and Convergent Validity

Variables	A	CR	AVE	Mean	SD
CP	0.928	0.928	0.812	3.562	1.156
DE	0.958	0.958	0.74	3.458	1.108
OP	0.878	0.878	0.705	3.314	1.112
PP	0.922	0.922	0.746	3.563	1.084
SC	0.972	0.972	0.812	3.56	1.085
UA	0.941	0.941	0.798	3.506	1.154

Table 2 shows that all values of α are above 0.70, indicating excellent internal consistency (Khan et al., 2021). Bold values in diagonal represent the squared root estimate of AVE. It can also be observed that AVE values are above 0.50 for all the variables, which shows that these variables and their data are valid, proving the convergent validity (Malhotra et al., 1996). All of the values of the CR are above 0.70, showing that the data is valid, normal and reliable to go for further hypotheses testing.

Table 3: Discriminant Validity

Variables	CP	DE	OP	PP	SC	UA
CP	0.901					
DE	0.507	0.86				
OP	0.403	0.564	0.84			
PP	0.479	0.565	0.461	0.864		
SC	0.414	0.497	0.699	0.465	0.901	
UA	0.591	0.6	0.364	0.596	0.367	0.893

Table 3 confirmed with the help of the “Fornel–Larker criterion” which needs the values of the square root of AVE to be more than correlations among the variables. The values loaded for each variable can clearly show that each of the variables discriminates from each other, and discrimination is present among the study variables are merely overlapping, and there is an extent of distinction present between these. Also, the AVE square roots are more than the standardized correlation of all constructs with other constructs.

Table 4: Hypotheses Testing

Hypotheses	β	t-Statistics	P-Values
I. Direct Effects			
CP -> DE	0.143	1.602	0.110
OP -> DE	0.33	4.953	0.000
PP -> DE	0.189	2.095	0.037
SC -> CP	0.219	3.418	0.001
SC -> DE	0.166	3.127	0.002
SC -> OP	0.624	15.653	0.000
SC -> PP	0.276	4.228	0.000
UA -> CP	0.481	7.858	0.000
UA -> DE	0.256	3.296	0.001
UA -> OP	0.133	2.884	0.004
UA -> PP	0.474	7.476	0.000
II. Indirect Effects			
SC -> CP -> DE	0.031	1.343	0.143
UA -> CP -> DE	0.069	1.536	0.097
SC -> OP -> DE	0.206	4.656	0
UA -> OP -> DE	0.044	2.713	0.007
SC -> PP -> DE	0.052	2.159	0.03
UA -> PP -> DE	0.089	2.135	0.034

Table 4 shows the values for the path coefficient analysis. The impact cast by collaborative perception on digital entrepreneurship is insignificant, as the p values are greater than .05. It can be witnessed from the table above that the impact of operational perception on digital entrepreneurship is significant. With a 1% increase in operational perception, digital entrepreneurship will increase by 29%; with an increase of 1% in social capital, there will be a 22.8% increase in digital entrepreneurship; with a 1% increase in social capital, there will be an increase of 65.4% in operational perception. It also explains the effect of social capital on planning perception is significant as with 1% increase in social capital; there will be an increase in planning perception by 28.5%. The collaborative perception will increase by 50.7% with every 1% increase in uncertainty avoidance with every increase of 1% in

uncertainty avoidance. There will be an increase of 31.4% in digital entrepreneurship, the impact of uncertainty avoidance on operational perception is also significant, and with every 1% increase in uncertainty avoidance, there will be an increase of 49.1% in planning perception.

The results of specific indirect effects are calculated by bootstrapping; if the confidence interval does not contain zero and the indirect effect is significant, mediation is supported (Preacher Hayes, 2004). Table 4 shows that the p-value is significant as it does not contain zero. The results shows that SC \rightarrow OP \rightarrow DE ($\beta = 0.206$, $P < 0.05$), UA \rightarrow OP \rightarrow DE ($\beta = 0.044$, $P < 0.05$), SC \rightarrow PP \rightarrow DE ($\beta = 0.052$, $P < 0.05$), UA \rightarrow PP \rightarrow DE ($\beta = 0.089$, $P < 0.05$), SC \rightarrow CP \rightarrow DE ($\beta = 0.031$, $P > 0.05$) UA \rightarrow CP \rightarrow DE ($\beta = 0.069$, $P > 0.05$). Operational and Planning perceptions partially mediate the relationship between social capital and digital entrepreneurship and uncertainty avoidance and digital entrepreneurship. In contrast, collaborative perception does not mediate as its results are insignificant.

5 Discussion and Conclusion

5.1 Discussion

It is well known that the role of digital entrepreneurship and social capital has emerged during just the last few years that have a significant impact on the business process (Balocco et al., 2019). The results have shown a positive and significant impact of social capital on digital entrepreneurship. The main reason behind this positive impact is that social capital plays a significant role in encouraging digital entrepreneurs when individuals can access essential resources through social network platforms. Social capital positively impacts digital entrepreneurship because it enhances and improves their performance and raises their reputations. Similarly, a study by Smith et al. (2017) also concludes that social capital is the most important factor for digital entrepreneurs because it helps them to attain objectives easier and gain high information about the market. Social capital has a significant impact because it mainly represents the productive advantages for digital entrepreneurs. The results have explained that collaborative perception has an insignificant impact on social capital and digital entrepreneurship.

A study by Smith et al. (2017) examines that in the case of digital entrepreneurship, most of the things and tasks have been shifted to technology, and there is significantly less need for the people involved in digital entrepreneurship. Due to the incorporation of technology, the concept of collaboration and coordination has lost much of its importance which was inevitable during general entrepreneurship. These results are in concordance with the studies that have been conducted on similar topics in the past (Hartley et al., 2013). Planning perception is the most significant factor that plays a vital role in enhancing the work structure of digital entrepreneurs (Nambisan, 2017). Many studies and research prove that planning perception significantly impacts the relationship between social capital and digital entrepreneurship. Planning perception is crucial because it minimizes the dissatisfaction presented by digital entrepreneurs and minimizes the turnover rate. Planning perception is crucial for the relationship between social capital and digital entrepreneurship because it enhances this relationship by converting raw information into useful information for digital entrepreneurs. Planning perception also generates an effective plan and strategy that provides a meaningful purpose for digital entrepreneurs and enhances social capital.

It is well known that the role of operational perception has emerged during the last few decades as it has a major impact on digital entrepreneurship. Many studies demonstrate a positive and significant impact of operational perception on the crucial relationship between social capital and digital entrepreneurship. Operational perception provides a practical operational framework that helps digital entrepreneurs operate social media effectively, enhancing the role of social capital (Theodoraki et al., 2018). Operational perception plays a significant role in enhancing the relationship between social capital and digital entrepreneurship by increasing the performance appraisal system mechanism and communication with other entities. Operational perception also helps in the process of decision making that the digital entrepreneurs take at the operational level. It is extensively proven from many studies that there is a significant and positive impact of collaborative perception on the significant relationship between uncertainty avoidance and digital entrepreneurship. The main reason behind the positive impact of collaborative perceptions is that it enhances the ability of digital entrepreneurs to avoid uncertainties during the operational process of digital entrepreneurship. Collaborative perception mainly helps many digital entrepreneurs solve digital problems by minimizing the uncertainties or avoiding uncertainties. Collaborative perception in digital entrepreneurship is an essential factor that brings many people close together and enhances the operational process of digital entrepreneurship. One of the essential advantages of collaborative perception for digital entrepreneurs is that it helps many digital entrepreneurs to learn from each other by avoiding uncertain conditions.

Many studies and research have proved a significant and positive impact of planning perception on the relationship between uncertainty avoidance and digital entrepreneurship. This positive impact is important for digital entrepreneurs because planning perception enables many digital entrepreneurs to set clear goals and objectives for the operational process. Digital entrepreneurship is full of uncertainties and also involves many uncertain conditions. Planning perception plays a significant role in minimizing these uncertainties and enhancing performance of digital entrepreneurs. Planning perception mainly helps in minimizing the uncertainties of future and future events. Planning perception mainly revolves around the objectives of digital entrepreneurship, and it also helps in directing the important activities of digital entrepreneurship by minimizing the uncertainties and uncertain conditions.

Planning perception enhances the relationship of uncertainty avoidance by focusing the attention of digital entrepreneurs on the aims and goals of digital entrepreneurship. Operational perception has a significant and positive impact on the relationship between uncertainty avoidance and digital entrepreneurship. Operational perception is essential for minimizing the uncertainties by facilitating the digital entrepreneurs to control the operational activities. Operational perception mainly facilitates the currently planned objectives and the performance of digital entrepreneurs. Operational perception is important that provides pre-determined objectives against which the actual performance is compared. Operational perception also encourages innovations in digital entrepreneurship, and it also enables many digital entrepreneurs to have the opportunity of suggesting types and important means of enhancing performance. The relationship between uncertainty avoidance and digital entrepreneurship in operational perception is improved and enhanced.

5.2 Research Implication

This study is beneficial for the industrial sectors, including the manufacturing and the service sectors. Digital entrepreneurship is beneficial for the manufacturing sector as it improves the performance of the manufacturing sector and the products they deliver. Digital entrepreneurship is an essential factor for the growth of the manufacturing industry as it enhances the performance of the manufacturing industry and the service sector. Digital entrepreneurship enhances the rate of employment and job opportunities mainly through the introduction of communications technologies (ICT) like mobile technology, digital platforms, the internet, social computing, and other types of social media. Many organizations and firms can start their business and service operations with the help of digital entrepreneurship and sell their products online to compete with their competitors. Digital entrepreneurship has proved to be very beneficial for various manufacturing industries because it enables them to expand their business worldwide. Digital entrepreneurship directly impacts the performance of various manufacturing and services sectors. Digital entrepreneurship has proven to be very beneficial for the manufacturing sector and industry because digital entrepreneurship is mainly connected with the use of many digital processes and systems to implement entire business activities and tasks. The communication between the manufacturing company and the customer is so accessible with the help of digital entrepreneurship, and these communications are mainly done through the internet. Purchasing products online and the internet is the most significant way to buy. Nowadays, individuals are more interested in buying products through the internet than spending their time and money going to departmental stores. Thus, the digital entrepreneurship facility can enhance the number of consumers. Digital entrepreneurship has a broad future in the manufacturing and services industry because most of the manufacturing industry's business is done through the internet with the help of digital entrepreneurship. Digital entrepreneurship is proving to be very beneficial for competitive advantage. The utilization of digital entrepreneurship enables many companies to achieve more consumers and effectively meet the market's competition. In order to get over with many market competitive challenges, digital entrepreneurship is very significant for every sector to face the competition challenge and develop their business operations. Digital entrepreneurship is very beneficial for the financial part of any business, and it decreases and increases the profit level of any particular sector. The cost of products varies mainly depending on how they used to market their services and products. The cost of products and services can be mainly decreased with digital entrepreneurship technologies.

Digital entrepreneurship is very beneficial for the service and production sector because it enhances productivity and generates a meaning that provides an efficient customer experience. Digital entrepreneurship improves the performance of many sectors in Pakistan by enhancing the customer experience because digital entrepreneurship enables companies to engage with their customers. Consumer satisfaction and loyalty have always been significant for every business' survival and development. An adequate consumer satisfaction means effective consumer loyalty, larger sales volume, and greater new customers, mainly through referrals. The results and findings in this study prove that digital entrepreneurship is very significant and beneficial for Pakistan's service and manufacturing sector. Digital entrepreneurship provides an efficient method of protecting the confidential data of any particular organization as it provides a digital security method. Digital security method and technology allows the company to see entire information related to the financial aspects of the company, and it also protects confidential data from hacking. The digital se-

curity system also makes the transferring of money easy and efficient, and this system can be adopted in different ways by many organizations. There are many properties of digital entrepreneurship that overlap with digital transformation. Digital entrepreneurship is the end objective, and on the other hand, digital transformation is the method that organizations mainly undergo to get there. Digital entrepreneurship is very beneficial for the transformation of the business into digital aspects, such as its design and digitizing the consumer journeys, enhancing the speed and agility in insights, attain consumer adoption of the digital consumer journeys. This research and study helped to understand the importance of digital entrepreneurship in Pakistan's manufacturing and service sector and explains the advantages of digital entrepreneurship in these sectors.

5.3 Conclusion

The term digital entrepreneurship is a widely broad term defined as creating ventures and transforming the existing business by developing digital technologies. The purpose of the given study is to examine the role of social capital and uncertainty avoidance on digital entrepreneurship. At the same time, to highlight the importance of mediating the impact of entrepreneurial perceptions in the relationship between social capital, uncertainty avoidance and digital entrepreneurship. The relationship between social capital and uncertainty avoidance with digital entrepreneurship has been supported in this paper with the help of previous studies. The study has shown that social capital and digital entrepreneurship have a significant role in individual relations and decisions in Pakistan.

5.4 Limitation and future directions

The knowledge and new era of digital entrepreneurship lead to new inventions and technologies in other sectors. Therefore, future researchers may conduct significant research to select another sector. It is recommended that future research should analyze the role and impact of social capital on digital entrepreneurship in other emerging and large industries and services sectors, e.g. financial institutions. Future studies may highlight the importance of social capital and its impact on digital entrepreneurship in the agriculture sector regarding emerging economies. The lack of reliable data can be another limitation. Small and medium industry employees are selected as respondents. The employee biased responses can be a question on the reliability of data; especially new advancements can lead to replacing many employees and traditional ways of doing business which can lead employees to be biased. It is essential to mention that the lack of reliable data has an effect and limits the scope of the analysis. It is one of the crucial obstacles in finding trends and a meaningful relationship. Finally, future studies should also be highlighting some other variables to make research more reliable and significant. The future researcher may add variables such as online social groups, legitimacy on the digital entrepreneurship process.

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