

Entrepreneurial nascent behaviour: The role of causation process in opportunity discovery and creation

Cai Li, Majid Murad, Sheikh Farhan Ashraf, Nausheen Syed, Madiha Riaz

ABSTRACT

Objective: The notion of opportunities is fast becoming a dominant topic in the field of entrepreneurship research. Based on the causation process, this study aims to identify the manager's decisions to take entrepreneurial action through opportunity discovery and opportunity creation indicators.

Research Design & Methods: This empirical study tests its hypotheses by using a sample of 400 senior and middle-level managers from Pakistan and applied a SEM structural equation modeling technique.

Findings: Our findings show that opportunity discovery and opportunity creation positively and significantly influence nascent entrepreneurial behaviour. Meanwhile, results reveal that the causation approach partially mediates the relationship between opportunity discovery, opportunity creation, and nascent entrepreneurial behaviour.

Implications & Recommendations: The results of this study elucidate senior and middle level managers from a SME sectors of Pakistan. On the basis of our findings, policy makers, managers and entrepreneurship researchers may better understand how to discover and create an opportunity in starting a new business.

Contribution & Value Added: This study is the first attempt that contributes to the field of entrepreneurship by taking the causation approach as a mediator and identifying the role of opportunity discovery and opportunity creation on developing nascent entrepreneurial behaviour among senior and middle-level managers in Pakistan.

Article type: research article

Keywords: opportunity discovery; opportunity creation; causation; nascent entrepreneurial behaviour; structural equation modeling

JEL codes: L26, M13

Received: 10 May 2020

Revised: 1 September 2020

Accepted: 4 September 2020

Suggested citation:

Li, C., Murad, M., Ashraf, S.F., Syed, N., & Riaz, M. (2020). Entrepreneurial nascent behaviour: The role of causation process in opportunity discovery and creation. *Entrepreneurial Business and Economics Review*, 8(4), 183-200. <https://doi.org/10.15678/EBER.2020.080410>

INTRODUCTION

Identifying an opportunity for launching a new venture is the greatest significant capability of the successful entrepreneur, and it is an essential issue in the study of entrepreneurship (Short, Ketchen Jr, Shook, & Ireland, 2010). Globally, it is acknowledged that entrepreneurship is a critical driver of employment creation and innovation, but it also contributes to the economic growth of nations (Li, Murad, Shahzad, Khan, & Ashraf *et al.*, 2020; Neneh, 2019). Many governments and private organizations are depending on entrepreneurial start-ups because this minimises the unemployment rate by providing job opportunities to individuals (Fuller, Liu, Bajaba, Marler, & Pratt, 2018). The process of creating a business is no easy task; ordinary practices begin with the ambition of an individual with capital and resources, an entrepreneur who identifies an opportunity (Edelman & Yli-Renko, 2010). The needs of an entrepreneur must garner support, gather necessary capital or resources, and produce ample commitment from investors to change the idea from dream to reality (Tian, Yang, & Wei, 2019).

A new firm develops over a long period of time, a series of organising activities, preparing a business plan, securing financial resources, and hiring professional human resources (Castriotta, Loi, Marku, & Naitana, 2019; Greenberg, 2019). Opportunity discovery and opportunity creation are based on environmental factors and entrepreneurial actions (Alvarez & Barney, 2007; González, Husted, & Aigner, 2017). Prior studies explain that opportunity discovery concentrates on features of an entrepreneur, while opportunity creation focuses on organizational opportunities formed by the individual with their intellectual ideas (Chetty, Karami, & Martín, 2018; Edelman & Yli-Renko, 2010).

The relationship between discovery and creation is defined in prior literature (Alvarez & Barney, 2007; Mansoori & Lackéus, 2019; Sarasvathy, Dew, Velamuri, & Venkataraman, 2010). Moreover, previous researchers explain that discovery and creation lead to improved entrepreneurial action and long-term influence on business performance (Foss & Klein, 2017; Sine & David, 2003). Other entrepreneurial studies focus on entrepreneurial alertness, proactive personality, and creativity towards measuring entrepreneurial intentions (Gieure, del Mar Benavides-Espinosa, & Roig-Dobón, 2020; Li, Murad, Shahzad, Khan, & Ashraf *et al.*, 2020; Neneh, 2019). Extant research identifies the importance of entrepreneurship with social cognitive theory, the theory of planned behaviour, social identities, alertness theory, and effectuation theory – so as to measure entrepreneurial intentions and behaviours (Baron & Ensley, 2006; Dutta & Thornhill, 2008). Among several theoretical perceptions in the literature, causation approach is neglected in the study of opportunity discovery, opportunity creation; but there also is no empirical research that would examine the mediating role of the causation approach on entrepreneurial intention in nascent entrepreneurial behaviour. In previous studies, causation approach appears as a positive indicator in the relationship between opportunity discovery and opportunity creation (Alvarez & Barney, 2007; Alvarez, Barney, & Young, 2010; Sarasvathy, 2001).

The gap identified by this study elaborates into two perspectives; firstly, most of the entrepreneurial studies use students as samples, and very few use non-student samples in entrepreneurial behaviour research (Schlaegel & Koenig, 2014; Shirokova,

Osiyevskyy, & Bogatyreva, 2016). For example, Bird (2015) finds that there are differences between students and non-students in how they form entrepreneurial behaviours. Meanwhile, existing studies indicate that research is needed to determine the employee entrepreneurial intention (Katsikea, Theodosiou, & Morgan, 2015; Pearce II, Kramer, & Robbins, 1997; Rosin & Korabik, 1991).

Secondly, this study covers the research gap with respect to entrepreneurial behaviour and manager's entrepreneurial intention to search for opportunity discovery and opportunity creation. Previous researchers focus on job satisfaction, characteristics, and manager intention towards resignation; few studies examined manager intention towards entrepreneurial behaviour. Krasniqi (2014) suggests that future research should be conducted on how individuals change their minds from job status to entrepreneurial action and when do they perceive good opportunity in the market. Accordingly, our study fills this gap in the literature of entrepreneurship by using the sample of senior and mid-level managers from the SME sector of Pakistan. Specifically, the objective of our study is to differentiate opportunity discovery vs opportunity creation through the causation approach, whether they develop a nascent entrepreneurial behaviour among managers or not.

The rest of the paper is divided into four sections: literature review, material and methods, results and discussion, and conclusion.

LITERATURE REVIEW

Opportunity Discovery (DIS) and Opportunity Creation (CRE)

According to Alvarez *et al.* (2010) opportunity discovery and opportunity creation are associated with entrepreneurial actions that entrepreneurs take to identify and exploit opportunities. Opportunity discovery highlights the high level of discovery view regarding search and scanning of the environment for competitive advantages (Brush, Greene, & Hart, 2001). On the other hand, the creation approach is related to entrepreneurial actions and is considered as a source of opportunities that would not be recognised without the actions of entrepreneurs (Burgelman & Hitt, 2007).

Numerous researchers note that opportunity discovery is independent of entrepreneurs, and it can be discovered by alert entrepreneurs (Cha & Bae, 2010; Upson, Damaraju, Anderson, & Barney, 2017). The nature of opportunities is the result of external shocks such as industry or market and technology changes. This kind of shocks leads to developing alertness in entrepreneurs to discover opportunities by conveying information regarding existing opportunities. However, proper planning and searching for information about the features of opportunities might be help to accomplish discovery. According to Leyden (2016), opportunity creation is a concept of a new combination of thoughts, awareness, and resources. Some scholars state that opportunities are not independent of entrepreneurs but created with the accrual of entrepreneurial intentions and actions (Smith & Gregorio, 2017).

Opportunity Discovery (DIS) and Entrepreneurial Nascent Behaviour (ENB)

Opportunity discovery contains entrepreneurial actions started by individuals and teams engaged to recognise an unkempt opportunity (Shu, Ren, & Zheng, 2018). Opportunity is associated with new products, goods, and materials, which show that the opportunity is greater

than the cost of production (Ren, Shu, Bao, & Chen, 2016). The literature suggests that individuals with the ability to discover an opportunity in the competitive market are more inclined to start a new business (González *et al.*, 2017). According to Miles *et al.* (2017), opportunity discovery refers to the identification of opportunity and taking action to exploit the opportunity so as to become an entrepreneur. Moreover, in the discovery view, individuals identify and exploit an opportunity with the help of prior knowledge and cognitive ability of individuals (Tabares, Chandra, Alvarez, & Escobar-Sierra, 2020). Accordingly, an individual opportunity discovery can influence their ability to create entrepreneurial intentions.

H1: Opportunity discovery is positively related to nascent entrepreneurial behaviour.

Opportunity Creation (CRE) and Entrepreneurial Nascent Behaviour (ENB)

Prior research finds that opportunity creation is a positive predictor for starting a new business venture (Mergemeier, Moser, & Flatten, 2018; Welter, Mauer, & Wuebker, 2016). In the creation process, opportunities for constructing products and services do not exist until entrepreneurs make them. In opportunity creation, entrepreneurs do not form the opportunity first and then take the necessary action, but they take an action and then wait to hear the outcome of their actions that they undertook in the market only then to re-take corrective actions based on feedback (Edelman & Yli-Renko, 2010). Therefore, opportunities require individual actions for the formation and social agreement for sustainability. According to Alvarez and Barney (2007), there are two methods of discovery and creation that inform the entrepreneurial behaviour. Firstly, the creation approach is to study market failure, which is to generate the opportunity by individual action. Thus, individuals with a greater level of opportunity creation are more likely to engage in forming an entrepreneurial business venture.

H2: Opportunity creation is positively related to nascent entrepreneurial behaviour.

Causation (CAU) and Entrepreneurial Nascent Behaviour (ENB)

According to Fisher (2012) two approaches are discussed in theories of entrepreneurship: causation and effectuation. The causation approach shows that results are achieved by beginning with ends, analysing estimated results, and performing competitive analyses (Alvarez *et al.*, 2010). In the effectuation process, a set of targets is given by choosing the appropriate effect, applying the affordable loss principle, and forming and leveraging strategic relationships. Therefore, in the causation process, individuals identify opportunities with the lower level of uncertainty while, in the process of effectuation, individuals identify opportunities with the high level of uncertainty. This study takes the causation approach to identifying the new business opportunities in the market. The causation approach helps entrepreneurs in the new business development process (Sarasvathy, 2001).

The causation approach refers to the planning and strategy approach containing such actions that create opportunity identification and new business formation (Chandler, DeTienne, McKelvie, & Mumford, 2011). The causation approach may help for those entrepreneurs start new businesses who bring resources together effectively and efficiently and work according to strategy (Delmar & Shane, 2004). Entrepreneurial behaviours are physical actions of an individual or team tasks essential to start and develop a new business venture. While several studies investigate entrepreneurial intentions models, there

are few studies available that reflect the entrepreneurial behaviour aspects and the implications of combined entrepreneurship theories such as causation, discovery, and creation (Fuller *et al.*, 2018; Neneh, 2019). Prior study by Chandler *et al.* (2011) develops and validates measurement scales to evaluate the application of causation and effectuation approaches in new business creation, and some items that they develop are directly associated with nascent entrepreneurial behaviour.

H3: Causation is positively related to nascent entrepreneurial behaviour.

Causation as a Mediator

The causation approach is associated with a specific result and focuses on choosing the means to create an effect (Chandler *et al.*, 2011). As cited by previous researchers, the causation approach is related to a strategy to initiate a new business through opportunity recognition and proper business plan development (Alsos, Clausen, Hytti, & Solvoll, 2016; Laskovaia, Marino, Shirokova, & Wales, 2019). According to Frese, Geiger, and Dost (2019), in the formation of new business, entrepreneurs must ensure a causation approach and clearly define objective-oriented tasks to accomplish a systematic search goal. Those entrepreneurs are engaged in opportunity discovery and opportunity creation to exploit their pre-existing resources and knowledge in the industrial market. Furthermore, in the process of causation, entrepreneurs divide prearranged aims and select between the means to achieve prearranged goals (Sarasvathy, 2001).

Moreover, causation involves the process of opportunity discovery, creation, search, and evaluation, along with the exploitation of opportunities. The principal perception of causation is associated with 'opportunity recognition, scanning, evaluation, and exploitation of opportunities. Therefore, individuals with a high level of causation process engage in meaningful planning outcomes and purposeful searches, among other casual behaviours' (Tryba & Fletcher, 2019). A study by de la Cruz, Jover, and Gras (2018) finds that effectuation theory positively and significantly affects entrepreneurial business performance and nascent behaviour. Therefore, to the best of our knowledge, prior studies did not explore the influence of causation approach on entrepreneurial intention and actions.

H4a: Causation will positively mediate the relationship between opportunity discovery and nascent entrepreneurial behaviour.

H4b: Causation will positively mediate the relationship between opportunity creation and nascent entrepreneurial behaviour.

RESEARCH METHODOLOGY

Conceptual Model

Based on the above hypotheses development, Figure 1 shows the proposed research model that indicates four factors, starting from opportunity discovery and opportunity creation to entrepreneurial nascent behaviour.

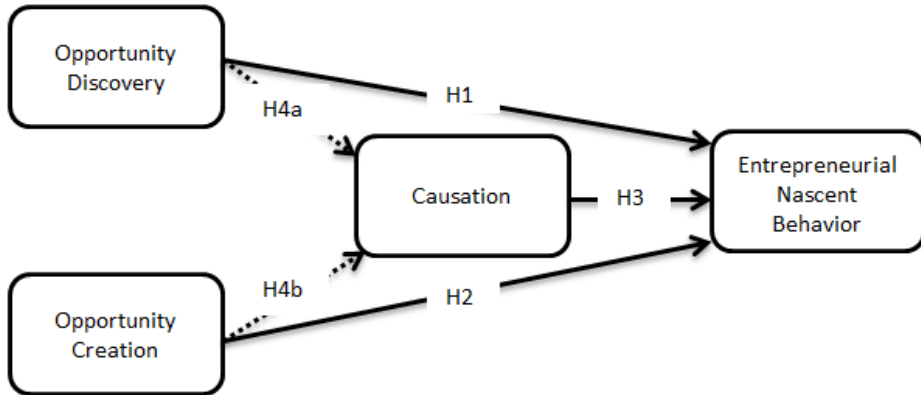


Figure 1. Research model

Source: own elaboration.

Sample and Data Collection

The data was gathered with a questionnaire survey of mid- and senior-level managers of the SME sector in Pakistan, mainly focused on big cities such as Karachi, Faisalabad, Lahore, Multan, and Sialkot. As suggested by previous studies, managers are appropriate samples when the study is focused on the prediction of individual entrepreneurial intention during job tenure, because they have some experience and working capital to begin a new business (Krasniqi, Berisha, & Pula, 2019). The sample size was set based on prior studies (Farooq *et al.*, 2018; Li, Naz, Khan, Kusi, & Murad, 2019). Moreover, in the absence of a comprehensive list of registered SME sector managers in Pakistan, we used a non-probability convenience sampling technique. An email was sent to different SMEs registered in chambers of commerce asking for their participation in the questionnaire survey and permission to contact with mid- and senior-level managers. The pen-and-paper questionnaire was developed and physically distributed to the managers who positively responded to the email request.

Furthermore, we employed a time lag approach for data collection. The duration of the data collection period was three months, completed in two rounds. In the first round, we gathered data regarding opportunity discovery and opportunity creation. In the second round, we collected data about causation and nascent entrepreneurial behaviour so as to avoid the issue of common method bias. A total of 450 questionnaires were distributed and 400 questionnaires were returned with a participation rate of 88.88%. Furthermore, 50 questionnaires were incomplete or either invalid, which eliminated them from further consideration. Among valid responses, 230 (57.5%) were male managers and 170 (42.5%) were female managers.

The majority of managers were aged between 31-40 and 18-30 years. The 220 (55%) respondents had a public sector university degree, while 180 (45%) had a private sector university degree. The participation rate of managers according to their firms location includes (24.8% from Karachi); (23.0% from Faisalabad); (19.0% from Lahore); (18.0% from

Sialkot) and (15.3% from Multan). Seventy per cent of managers worked in the manufacturing sector and 30% in the trading sector; 34% had a master's degree, 29% – a bachelor's degree, and only 10% had no university degree.

Measures

Opportunity discovery (OD) was measured using five items adapted from Ilozor, Sarki, Hodd, Craig, and Johnson (2006). This scale was tested and used in a previous study (Park, Sung, & Im, 2017); a sample item was 'I am excited by the knowledge that there are many unexploited entrepreneurial opportunities.' The questionnaire on opportunity creation (OC) contained six items and based on a five-point Likert scale. This scale was adapted from Ilozor *et al.* (2006); a sample item was 'I am a source of innovative ideas.' Causation (CAU) was measured using a seven-item scale developed by Chandler *et al.* (2011). This scale was also tested and validated by previous research (Alsos *et al.*, 2016); a sample item was 'I analysed long-run opportunities and selected what I thought would provide the best returns.' The entrepreneurial nascent behaviour (ENB) questionnaire was measured using seven items developed by Gieure *et al.* (2020), which examined entrepreneurial behaviours as a result of entrepreneurial intentions; a sample item was 'I am capable of developing a business plan.'

RESULTS AND DISCUSSION

The results were analysed using the Amos software 24.0 software package. For the prediction, structural equation modelling (SEM) methodology was applied to test the hypotheses. The SEM technique also incorporates measurement error and can reveal best-suited predictions of interaction influences such as mediation (Li, Wang, Haque, Shafique, & Nawaz, 2020). Moreover, SEM is the most appropriate technique used by prior studies for testing the relationship between indicators (Songling, Ishtiaq, Anwar, & Ahmed, 2018). However, before applying SEM, we tested the normality of data using kurtosis and skewness in the SPSS software, and we present the results in Table 1 below. As recommended by George (2011), kurtosis and skewness values must be between +/-2. Therefore, our data have normality and there is no issue of abnormality in the sample. Moreover, the mean and standard deviation was also indicated in Table 1.

Table 1. Descriptive Statistics

Factors	Mean	Std. Deviation	Skewness	Kurtosis
DIS	3.9805	0.78426	-0.800	0.344
CRE	4.1854	0.78262	-1.470	2.189
CAU	3.8946	0.76198	-0.585	0.458
ENB	3.5764	0.97777	-0.786	0.129

Note: DIS = Discovery, CRE = Creation, CAU = Causation, ENB = Entrepreneurial Nascent Behaviour.

Source: own study.

Measurement Model

Conformity factor analysis was performed to check the fitness of the model, and we show results in Figure 2 below. For the prediction of measurement model fitness, we found the following results: Chi-squares= 808.696, DF=269, CMIN/DF=3.006, CFI= 0.936, NFI= 0.907,

GFI= 0.860, AGFI= 0.830, TLI= 0.929, IFI= 0.936, RFI= 0.897, RMR=0.048 and RMSEA=0.071. Hence, the measurement model meets the criteria suggested by Gaskin and Lim (2017).

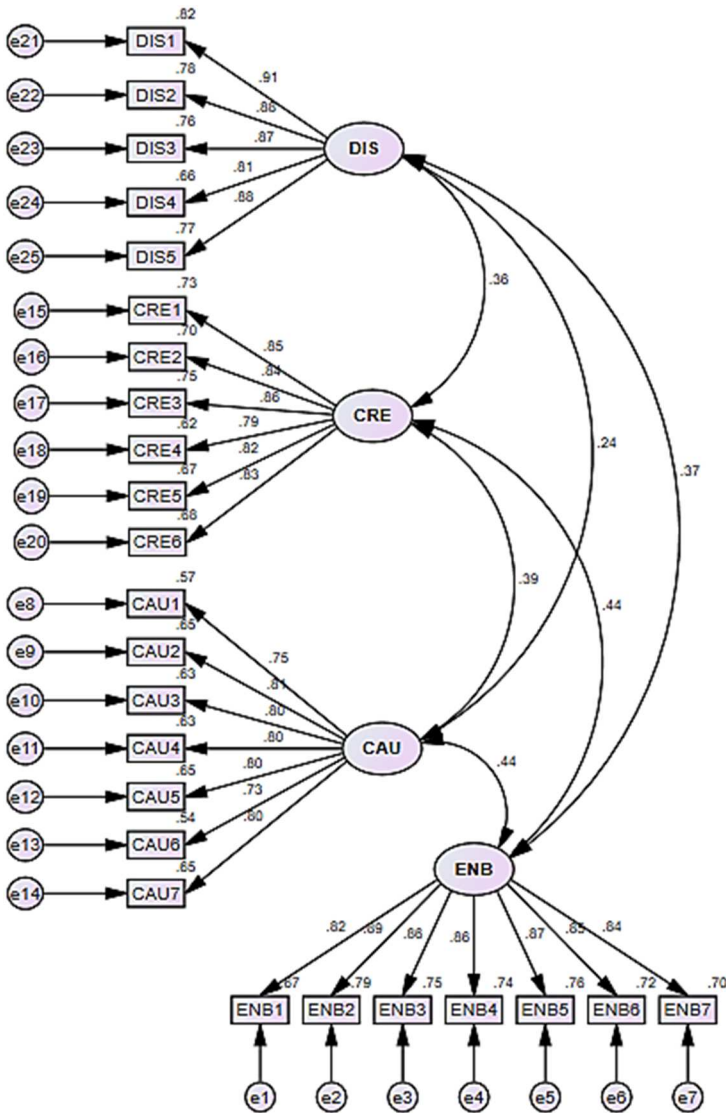


Figure 2. Measurement Model
Source: own elaboration.

Constructs reliability and validity were assessed through composite reliability, and average variance extracted (AVE). As suggested by Bagozzi and Yi's benchmark (1989), values of Cronbach's alpha must be >0.70 for composite reliability >0.80, with average variance extracted >0.50. Moreover, Table 2 shows values of Cronbach's alpha and composite reliability: entrepreneurial nascent behaviour 0.950, 0.952, causation 0.918, 0.920, op-

portunity creation 0.931, 0.940, and opportunity discovery 0.940, 0.943. Furthermore, values of AVE showed entrepreneurial nascent behaviour 0.733, causation 0.616, opportunity creation 0.693, and opportunity discovery 0.757. Thus, all the values are accepted and meet the threshold criteria.

Discriminant validity was assessed using a convergent validity test following the criteria (Fornell & Larcker, 1981). This criterion was widely accepted and used by several authors in prior studies (Li, Murad, Shahzad, Khan, & Ashraf, 2020; Li, Murad, Shahzad, Khan, Ashraf *et al.*, 2020). Table 2 represents the adequate discriminant validity because the square root of AVE was higher than values of its corresponding rows and columns. Lastly, the values under discriminant validity provided the results of positive correlations between all measurement constructs.

Table 2. Reliability and Validity Test

Factor	CR	AVE	MSV	MaxR(H)	ENB	CAU	CRE	DIS
ENB	0.950	0.733	0.192	0.952	0.856			
CAU	0.918	0.616	0.192	0.920	0.438***	0.785		
CRE	0.931	0.693	0.191	0.933	0.438***	0.391***	0.832	
DIS	0.940	0.757	0.134	0.943	0.366***	0.237***	0.357***	0.870

***significant ($p < 0.001$).

Notes: CR = Composite Reliability, AVE = Average Variance Extracted, MSV = Maximum Shared Variance, DIS = Discovery, CRE = Creation, CAU = Causation, ENB = Entrepreneurial Nascent Behaviour.

Source: own study.

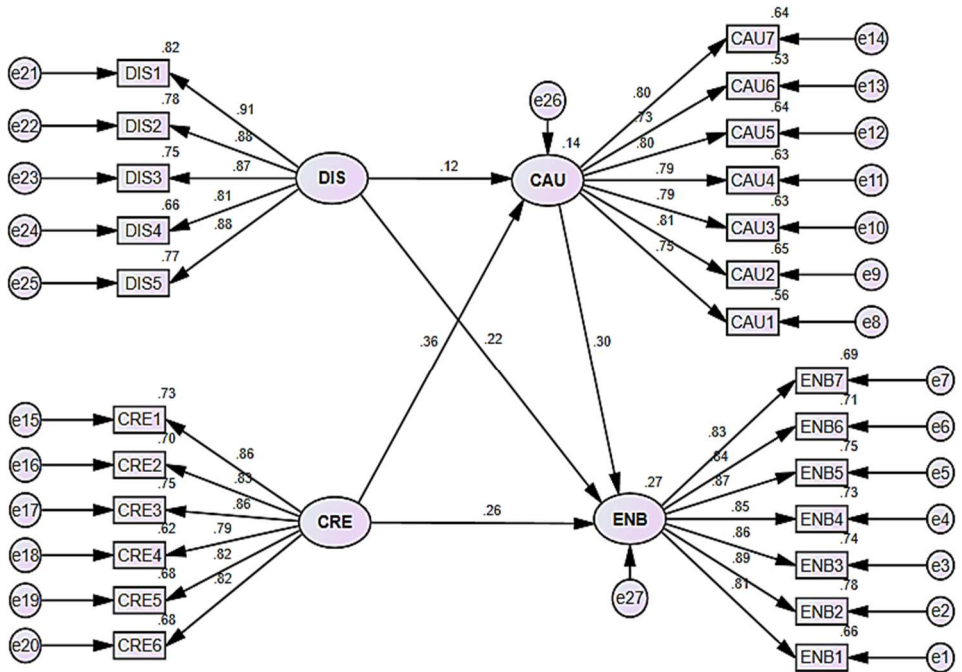
Common Method Bias

The common method variance was assessed using the method proposed by Harman's (1976) one-factor test. As per Harman's methodology, common factor variance is present when only one factor emerges from factor analysis and explains >50% of the variance (Podsakoff, MacKenzie, & Podsakoff, 2012). Therefore, we included all the measurement items introduced into the dimension reduction factor analysis using the rotated component matrix. The output of the rotated matrix created four factors with the first factor explaining the 38.85% of the total variance, which is below 50% of the total variance. Therefore, common method bias was not considered a problem in this study.

Structural Models

Before testing results for hypotheses, we examined the prediction of structural model fitness. The results were as follows: Chi-squares= 971.619, DF=372, CMIN/DF=2.612, CFI= 0.929, NFI= 0.890, GFI= 0.855, AGFI= 0.830, TLI= 0.928, IFI= 0.936, RMR=0.077, and RMSEA=0.059. To assess the variance of measures, structural model explained 16% of variance in the causation approach and 31% of variance in nascent entrepreneurial behaviour. As suggested by Chin (1998), desired R² values must be greater than 0.1 or zero. This is not surprising because most entrepreneurial behaviour models in previous studies only explained between 11% to 34% of variance in nascent entrepreneurial behaviour (Li, Murad, Shahzad, Khan, & Ashraf *et al.*, 2020; Shirokova *et al.*, 2016). Meanwhile, we tested the hypotheses and offer the results in Figure 3 and Table 3 below. The first hypothesis of our study assumes that DIS is positively related to ENB. The findings illustrate that DIS has a positive and significant effect on ENB with standardised ($\beta = 0.219^{***}$, C.R.=4.635,

$p < 0.001$). Therefore, H1 is supported. Moreover, we analysed the result of hypothesis 2 and found that CRE positively influences ENB with standardised ($\beta = 0.259^{***}$, $C.R = 5.037$, $p < 0.001$). Thus, H2 is accepted. Furthermore, we tested the impact of hypothesis 3: CAU positively related to ENB and results indicate that CAU has a positive and significant effect on ENB with standardised ($\beta = 0.296^{***}$, $C.R = 5.518$, $p < 0.001$). Hence, H3 is accepted.



Model Fits: CMIN 971.619; DF=372; CMIN/DF=2.612, GFI; 0.855
 AGFI=0.830; CFI=0.929; TLI=0.923; NFI=0.890; RMR= 0.077; RMSEA=0.059

Figure 3. Structural model

Note: DIS = Discovery, CRE = Creation, CAU = Causation, ENB = Entrepreneurial Nascent Behaviour.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: own elaboration.

Table 3. Hypotheses results without a mediator

H	Dependent	Path	Independent	Estimate	Critical Ratio	p	Results
H1	ENB	←	DIS	0.219***	4.635	0.001	Supported
H2	ENB	←	CRE	0.259***	5.037	0.001	Supported
H3	ENB	←	CAU	0.296***	5.518	0.001	Supported

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Note: DIS = Discovery, CRE = Creation, CAU = Causation, ENB = Entrepreneurial Nascent Behaviour.

Source: own study.

Mediation Testing

To test the mediation effect bootstrapping was performed with 5.000 subsamples and 95% confidence interval of the lower and upper bounds proposed by Preacher and Hayes (2008); we show the results in Table 4 below. In the bootstrapping method, we estimated

the standardised direct effect, standardised indirect effect, and standardised total effect. A significant indirect impact specifies the presence of mediation if $p < 0.05$. Moreover, if direct impact is also significant ($p < 0.05$), it reveals partial mediation; whereas, if direct effect is non-significant ($p > 0.05$), it indicates full mediation.

Furthermore, as per hypothesis H4a, the results illustrate that CAU has a positive and significant indirect effect on the relationship between DIS and ENB standardised ($\beta = 0.037^{**}$, $p < 0.05$). Likewise, we found that CAU also has a positive and significant indirect effect on the relationship between CRE and ENB standardised ($\beta = 0.108^{***}$, $p < 0.05$). Thus, we can confirm that the CAU partially mediates in the relationship between DIS and CRE on ENB; hence, H4a and H4b are also accepted.

Table 4. Hypotheses results with a mediator

H	Path with a mediator	Standardised Direct Effect	Standardised Indirect Effect	Standardised Total Effect	p	95% Confidence Interval Bias-correlated percentile method	Percentile method
						Lower and Upper	Lower and Upper
H4a	ENB ← DIS (with CAU)	0.219***	0.036***	0.256***	0.001	0.007, 0.386	0.007, 0.380
H4b	ENB ← CRE (with CAU)	0.259***	0.105***	0.364***	0.001	0.058, 0.476	0.060, 0.478

Note: DIS = Discovery, CRE = Creation, CAU = Causation, ENB = Entrepreneurial Nascent Behaviour.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: own study.

Discussion

Concerning H1, we found that opportunity discovery has a positive and significant impact on nascent entrepreneurial behaviour. This result is similar to previous studies by (Alvarez & Barney, 2007; Foss & Klein, 2017) who reported that opportunity discovery helps individuals to identify and exploit an opportunity, because identification depends upon the prior knowledge of individuals, while exploitation depends upon the cognitive abilities of individuals, which leads to the discovery of new opportunities that form entrepreneurial behaviour. Opportunity discovery would help to identify and exploit entrepreneurial opportunities as those opportunities are formed by entrepreneurial actions. This finding is also in line with (Chetty *et al.*, 2018; González *et al.*, 2017) who state that opportunity discovery and opportunity creation views are helpful in managers' decision-making processes and in developing an entrepreneurial behaviour.

Regarding H2, our results indicate that opportunity creation has a positive and significant influence on nascent entrepreneurial behaviour. Our results are consistent with Edelman and Yli-Renko (2010) and Hmieleski, Carr, and Baron (2015) who suggest that opportunities in the creation process are not assumed, as they can be created by capabilities, actions, and the enactment of entrepreneurs, and the exploration of ways to start a new business. Managers have more experience in handling business activities and perform day-to-day tasks related to the internal and external environment so as to identify opportunity discovery and opportunity creation. Therefore, managers with the high ability to discover opportunities have more capability to create a new business.

Concerning H3, we find that causation positively and significantly impacts nascent entrepreneurial behaviour. This hypothesis is also supported and the result is consistent with the causation approach of entrepreneurship and prior findings of Fisher (2012) and Pfeffer and Khan (2018) who recommend that the causation process is engaged in entrepreneurial behaviour to make their new venture more successful and help them to find innovative opportunities from the industry or market. Therefore, individuals with the high level of causation approach in opportunity discovery and opportunity creation are more likely to get involved in entrepreneurial activities.

Regarding H4a and H4b, the results indicate that the causation positively and significantly mediates the relationship between opportunity discovery, opportunity creation, and nascent entrepreneurial behaviour. Hence, these hypotheses are accepted and findings propose that causation is a significant predictor of opportunity identification and opportunity exploitation. Therefore, this finding is similar to Chandler *et al.* (2011) who suggest that the causation process encourages individuals to create venture.

This study provides some theoretical contributions to the field of entrepreneurship. Firstly, this study adds a theoretical contribution to the discovery and creation theories of entrepreneurship and is consistent with prior work on nascent entrepreneurial behaviour (Alvarez & Barney, 2007; Sarasvathy, Dew, Velamuri, & Venkataraman, 2003). Secondly, our study findings emphasise the importance of opportunity discovery and opportunity creation theories of entrepreneurship in new venture creation processes. We found that opportunity discovery and creation were positively and significantly related to nascent entrepreneurial behaviour to create a new venture. Thirdly, in line with the discovery and creation view of entrepreneurship (Edelman & Yli-Renko, 2010), our findings support the conceptualization of opportunity over the traditional discovery view. Lastly, this study findings support the views of Kirzner (1997) and Shane (2003) who state that opportunity is an objective state that exists in the environment, which the entrepreneur discovers, creates, and then exploits.

Based on our findings, this study provides practical implications. Firstly, it offers a better understanding of individual differences that enable the scanning and searching of managers' behaviours; especially their propensity to leave their job and become self-employed through an effective opportunity of new business development. Entrepreneurship educators could provide a flexible environment for managers, from which they can search for appropriate opportunities and then exploit them. Managers must dedicate some time to scan the competitive environment. They should know from where they can find a good opportunity for entrepreneurial setup. This kind of knowledge informs managers about various types of businesses that cover existing gaps and show potential upcoming future trends. Educators should arrange some entrepreneurial-based seminars and lectures to introduce popular examples of renewed entrepreneurs who discovered and created innovative businesses through innovative opportunity recognition.

The present study has some limitations. Firstly, our research focuses only on 400 SME's sector of senior and mid-level managers in Pakistan. Secondly, we used self-report questionnaires that may lead to common method bias. Therefore, we suggest that future research conducts a longitudinal study on different samples with effectuation theory on opportunity discovery and opportunity creation so as to measure business performance and contribute to the literature on entrepreneurship. Future research can also incorporate

cross-sectional investigation from other theories of entrepreneurship – e.g. social identity theory or social cognitive theory – to measure nascent entrepreneurship behaviour.

CONCLUSIONS

This study aimed to identify the role of causation process in opportunity discovery and opportunity creation in developing nascent entrepreneurial behaviour among managers from the SME sector. We found that opportunity discovery and opportunity creation positively and significantly affect nascent entrepreneurial behaviour through the causation process. This study examined the causation approach as a mediator with entrepreneurial behaviour. Prior studies paid more attention to the essential features of attitudes, perceptions, and intentions, while progress entrepreneurial behaviour on student samples and non-student samples were neglected, such as studies on manager entrepreneurial intention and action towards starting a new business (Gieure *et al.*, 2020; Neneh, 2019; Shirokova *et al.*, 2016). Thus, this study concludes that opportunity discovery, opportunity creation, and causation process can help managers to become an entrepreneur.

REFERENCES

- Alsos, G.A., Clausen, T.H., Hytti, U., & Solvoll, S. (2016). Entrepreneurs' social identity and the preference of causal and effectual behaviours in start-up processes. *Entrepreneurship and Regional Development*, 28(3-4), 234-258. <https://doi.org/10.1080/08985626.2016.1155742>
- Alvarez, S.A., & Barney, J.B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), 11-26. <https://doi.org/10.1002/sej.4>
- Alvarez, S.A., Barney, J.B., & Young, S.L. (2010). Debates in entrepreneurship: Opportunity formation and implications for the field of entrepreneurship. In Acs Z., Audretsch D. (Eds.) *Handbook of Entrepreneurship Research. International Handbook Series on Entrepreneurship*, (pp. 23-45, vol 5). New York: Springer. http://doi-org-443.webvpn.fjmu.edu.cn/10.1007/978-1-4419-1191-9_2
- Bagozzi, R.P., & Yi, Y. (1989). On the use of structural equation models in experimental designs. *Journal of Marketing Research*, 26(3), 271-284.
- Baron, R.A., & Ensley, M.D. (2006). Opportunity recognition as the detection of meaningful patterns: Evidence from comparisons of novice and experienced entrepreneurs. *Management Science*, 52(9), 1331-1344. <https://doi.org/10.1287/mnsc.1060.0538>
- Bird, B. (2015). Entrepreneurial intentions research: A review and outlook. *International Review of Entrepreneurship*, 13(3), 143-168.
- Brush, C.G., Greene, P.G., & Hart, M.M. (2001). From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. *Academy of Management Perspectives*, 15(1), 64-78. <https://doi.org/10.5465/ame.2001.4251394>
- Burgelman, R.A., & Hitt, M.A. (2007). Entrepreneurial actions, innovation, and appropriability. *Strategic Entrepreneurship Journal*, 1(3-4), 349-352. <https://doi.org/10.1002/sej.28>
- Castriotta, M., Loi, M., Marku, E., & Naitana, L. (2019). What's in a name? Exploring the conceptual structure of emerging organizations. *Scientometrics*, 118(2), 407-437. <https://doi.org/10.1007/s11192-018-2977-2>
- Cha, M.-S., & Bae, Z.-T. (2010). The entrepreneurial journey: From entrepreneurial intent to opportunity realization. *The Journal of High Technology Management Research*, 21(1), 31-42. <https://doi.org/10.1016/j.hitech.2010.02.005>

- Chandler, G.N., DeTienne, D.R., McKelvie, A., & Mumford, T.V. (2011). Causation and effectuation processes: A validation study. *Journal of Business Venturing*, 26(3), 375-390. <https://doi.org/10.1016/j.jbusvent.2009.10.006>
- Chetty, S., Karami, M., & Martín, O.M. (2018). Opportunity discovery and creation as a duality: Evidence from small firms' foreign market entries. *Journal of International Marketing*, 26(3), 70-93. <https://doi.org/10.1509/jim.17.0005>
- Chin, W.W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 29(2), 295-336.
- de la Cruz, M.E., Jover, A.J.V., & Gras, J.M.G. (2018). Influence of the entrepreneur's social identity on business performance through effectuation. *European Research on Management Business Economics*, 24(2), 90-96.
- Delmar, F., & Shane, S. (2004). Legitimizing first: Organizing activities and the survival of new ventures. *Journal of Business Venturing*, 19(3), 385-410. [https://doi.org/10.1016/S0883-9026\(03\)00037-5](https://doi.org/10.1016/S0883-9026(03)00037-5)
- Dutta, D.K., & Thornhill, S. (2008). The evolution of growth intentions: Toward a cognition-based model. *Journal of Business Venturing*, 23(3), 307-332.
- Edelman, L., & Yli-Renko, H. (2010). The impact of environment and entrepreneurial perceptions on venture-creation efforts: Bridging the discovery and creation views of entrepreneurship. *Entrepreneurship Theory and Practice*, 34(5), 833-856. <https://doi.org/10.1111/j.1540-6520.2010.00395.x>
- Farooq, M.S., Salam, M., ur Rehman, S., Fayolle, A., Jaafar, N., & Ayupp, K. (2018). Impact of support from social network on entrepreneurial intention of fresh business graduates. *Education+ Training*.
- Fisher, G. (2012). Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, 36(5), 1019-1051. <https://doi.org/10.1111/j.1540-6520.2012.00537.x>
- Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Foss, N.J., & Klein, P.G. (2017). Entrepreneurial discovery or creation? In search of the middle ground. *Academy of Management Review*, 42(4), 733-736. <https://doi.org/10.5465/amr.2016.0046>
- Frese, T., Geiger, I., & Dost, F. (2019). An empirical investigation of determinants of effectual and causal decision logics in online and high-tech start-up firms. *Small Business Economics*, 1-24.
- Fuller, B., Liu, Y., Bajaba, S., Marler, L.E., & Pratt, J. (2018). Examining how the personality, self-efficacy, and anticipatory cognitions of potential entrepreneurs shape their entrepreneurial intentions. *Personality Individual Differences*, 125, 120-125. <https://doi.org/10.1016/J.PAID.2018.01.005>
- Gaskin, J., & Lim, J. (2017). Model Fit Measures, AMOS Plugin, 2016. In.
- George, D. (2011). *SPSS for windows step by step: A simple study guide and reference, 17.0 update, 10/e*: Pearson Education India.
- Gieure, C., del Mar Benavides-Espinosa, M., & Roig-Dobón, S. (2020). The entrepreneurial process: The link between intentions and behavior. *Journal of Business Research*. 112(C), 541-548. <https://doi.org/10.1016/j.jbusres.2019.11.088>
- González, M.F., Husted, B.W., & Aigner, D.J. (2017). Opportunity discovery and creation in social entrepreneurship: An exploratory study in Mexico. *Journal of Business Research*, 81, 212-220. <https://doi.org/10.1016/j.jbusres.2016.10.032>
- Greenberg, J. (2019). Social relations and the performance of different start-up types. *The Oxford Handbook of Entrepreneurship and Collaboration*, 135.
- Harman, H.H. (1976). *Modern factor analysis*. University of Chicago press.

- Hmieleski, K.M., Carr, J.C., & Baron, R.A. (2015). Integrating discovery and creation perspectives of entrepreneurial action: The relative roles of founding CEO human capital, social capital, and psychological capital in contexts of risk versus uncertainty. *Strategic Entrepreneurship Journal*, 9(4), 289-312. <https://doi.org/10.1002/sej.1208>
- Ilozor, B., Sarki, A., Hodd, M., Craig, J.B., & Johnson, D. (2006). Establishing individual differences related to opportunity alertness and innovation dependent on academic-career training. *Journal of Management Development*.
- Katsikea, E., Theodosiou, M., & Morgan, R.E. (2015). Why people quit: Explaining employee turnover intentions among export sales managers. *International Business Review*, 24(3), 367-379. <https://doi.org/10.1016/j.ibusrev.2014.08.009>
- Kirzner, I.M. (1997). Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of Economic Literature*, 35(1), 60-85.
- Krasniqi, B.A. (2014). Characteristics of self-employment: A refuge from unemployment or road to entrepreneurship. *Small Enterprise Research*, 21(1), 33-53. <https://doi.org/10.1080/13215906.2014.11082075>
- Krasniqi, B.A., Berisha, G., & Pula, J.S. (2019). Does decision-making style predict managers' entrepreneurial intentions?. *Journal of Global Entrepreneurship Research*, 9(1), 1-15. <https://doi.org/10.1186/s40497-019-0200-4>
- Laskovaia, A., Marino, L., Shirokova, G., & Wales, W. (2019). Expect the unexpected: examining the shaping role of entrepreneurial orientation on causal and effectual decision-making logic during economic crisis. *Entrepreneurship and Regional Development*, 31(5-6), 456-475. <https://doi.org/10.1080/08985626.2018.1541593>
- Leyden, D.P. (2016). Public-sector entrepreneurship and the creation of a sustainable innovative economy. *Small Business Economics*, 46(4), 553-564. <https://doi.org/10.1007/s11187-016-9706-0>
- Li, Murad, Shahzad, Khan, & Ashraf (2020). Dark tetrad personality traits and counterproductive work behavior among doctors in Pakistan. *The International Journal of Health Planning and Management*. <https://doi.org/10.1002/hpm.3025>
- Li, Murad, Shahzad, Khan, Ashraf, & Dogbe (2020). Entrepreneurial Passion to Entrepreneurial Behavior: Role of Entrepreneurial Alertness, Entrepreneurial Self-Efficacy and Proactive Personality. *Frontiers in Psychology*, 11, 1611.
- Li, C., Naz, S., Khan, M.A.S., Kusi, B., & Murad, M. (2019). An empirical investigation on the relationship between a high-performance work system and employee performance: measuring a mediation model through partial least squares–structural equation modeling. *Psychology Research and Behavior Management*, 12, 397. <https://doi.org/10.2147/PRBM.S195533>
- Li, W., Wang, X., Haque, M.J., Shafique, M.N., & Nawaz, M.Z. (2020). Impact of workforce diversity management on employees' outcomes: Testing the mediating role of a person's job match. *SAGE Open*, 10(1). <https://doi.org/10.1177/2158244020903402>
- Mansoori, Y., & Lackeus, M. (2019). Comparing effectuation to discovery-driven planning, prescriptive entrepreneurship, business planning, lean startup, and design thinking. *Small Business Economics*, 1-28. <https://doi.org/10.1007/s11187-019-00153-w>
- Mergemeier, L., Moser, J., & Flatten, T.C. (2018). The influence of multiple constraints along the venture creation process and on start-up intention in nascent entrepreneurship. *Entrepreneurship and Regional Development*, 30(7-8), 848-876. <https://doi.org/10.1080/08985626.2018.1471163>
- Miles, M.P., de Vries, H., Harrison, G., Bliemel, M., De Klerk, S., & Kasouf, C.J. (2017). Accelerators as authentic training experiences for nascent entrepreneurs. *Education+ Training*. <https://doi.org/10.1108/ET-01-2017-0007>

- Neneh, B.N. (2019). From entrepreneurial alertness to entrepreneurial behavior: The role of trait competitiveness and proactive personality. *Personality Individual Differences, 138*, 273-279. <https://doi.org/10.3389/fpsyg.2020.01611>
- Park, J.Y., Sung, C.S., & Im, I. (2017). Does social media use influence entrepreneurial opportunity? A review of its moderating role. *Sustainability, 9*(9), 1593.
- Pearce II, J.A., Kramer, T.R., & Robbins, D.K. (1997). Effects of managers' entrepreneurial behavior on subordinates. *Journal of Business Venturing, 12*(2), 147-160.
- Pfeffer, L., & Khan, M.S. (2018). Causation and Effectuation: An Exploratory Study of New Zealand Entrepreneurs. *Journal of Technology Management Innovation, 13*(1), 27-37. <https://doi.org/10.3758/BRM.40.3.879>
- Podsakoff, P.M., MacKenzie, S.B., & Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879-891.
- Ren, S., Shu, R., Bao, Y., & Chen, X. (2016). Linking network ties to entrepreneurial opportunity discovery and exploitation: the role of affective and cognitive trust. *International Entrepreneurship and Management Journal, 12*(2), 465-485.
- Rosin, H.M., & Korabik, K. (1991). Workplace variables, affective responses, and intention to leave among women managers. *Journal of Occupational Psychology, 64*(4), 317-330.
- Sarasvathy, S.D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review, 26*(2), 243-263.
- Sarasvathy, S.D., Dew, N., Velamuri, S.R., & Venkataraman, S. (2003). Three views of entrepreneurial opportunity. In *Handbook of entrepreneurship research* (pp. 141-160). New York: Springer.
- Sarasvathy, S.D., Dew, N., Velamuri, S.R., & Venkataraman, S. (2010). Three views of entrepreneurial opportunity. In *Handbook of entrepreneurship research* (pp. 77-96). New York: Springer.
- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice, 38*(2), 291-332. <https://doi.org/10.1111/etap.12087>
- Shane. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing.
- Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the intention-behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal, 34*(4), 386-399. <https://doi.org/10.1016/j.emj.2015.12.007>
- Short, J.C., Ketchen Jr, D.J., Shook, C.L., & Ireland, R.D. (2010). The concept of 'opportunity' in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management, 36*(1), 40-65. <https://doi.org/10.1177/0149206309342746>
- Shu, R., Ren, S., & Zheng, Y. (2018). Building networks into discovery: The link between entrepreneur network capability and entrepreneurial opportunity discovery. *Journal of Business Research, 85*, 197-208.
- Sine, W.D., & David, R.J. (2003). Environmental jolts, institutional change, and the creation of entrepreneurial opportunity in the US electric power industry. *Research Policy, 32*(2), 185-207.
- Smith, K.G., & Gregorio, D.D. (2017). Bisociation, discovery, and the role of entrepreneurial action. *Strategic Entrepreneurship: Creating a New Mindset, 127-150*.

- Songling, Y., Ishtiaq, M., Anwar, M., & Ahmed, H. (2018). The role of government support in sustainable competitive position and firm performance. *Sustainability*, 10(10), 3495. <https://doi.org/10.3390/su10103495>
- Tabares, A., Chandra, Y., Alvarez, C., & Escobar-Sierra, M. (2020). Opportunity-related behaviors in international entrepreneurship research: a multilevel analysis of antecedents, processes, and outcomes. *International Entrepreneurship and Management Journal*, 1-48. <https://doi.org/10.1007/s11365-020-00636-3>
- Tian, L., Yang, J.Y., & Wei, L. (2019). Speed to legal registration and nascent venture performance: A temporal dilemma for nascent entrepreneurs in an emerging economy. *Journal of Small Business Management*, 57(2), 476-495.
- Tryba, A., & Fletcher, D. (2019). How shared pre-start-up moments of transition and cognitions contextualize effectual and causal decisions in entrepreneurial teams. *Small Business Economics*, 1-24.
- Upton, J.W., Damaraju, N.L., Anderson, J.R., & Barney, J.B. (2017). Strategic networks of discovery and creation entrepreneurs. *European Management Journal*, 35(2), 198-210. <https://doi.org/10.1016/j.emj.2017.01.001>
- Welter, C., Mauer, R., & Wuebker, R.J. (2016). Bridging behavioral models and theoretical concepts: effectuation and bricolage in the opportunity creation framework. *Strategic Entrepreneurship Journal*, 10(1), 5-20. <https://doi.org/10.1002/sej.1215>


Authors

The first two authors share is 50% (ca. 25% each of them) and remaining author's contribution is equal (ca. 16.7% each of them).

Cai Li

Doctoral Supervisor and Professor of management sciences in the School of Management, Jiangsu University, Zhenjiang, China. She is engaged and chairs several national and provincial projects. She has published a lot of research papers in renowned international and SSCI journals. Her research interest mainly focuses on SMEs in China, entrepreneurship in developing countries, self-organised entrepreneurship behaviour, self-organised mass entrepreneurship, self-organised innovation, and intellectual capital development.


Correspondence to: Prof. Dr. Cai Li, School of Management, Jiangsu University, China. 301 Xuefu Rd, Jingkou, Zhenjiang, Jiangsu, China, e-mail: gscaili@ujs.edu.cn

ORCID  <http://orcid.org/0000-0001-6010-159X>

Majid Murad

PhD in management science and engineering from the School of Management at Jiangsu University, China. He published many research articles in renowned journals. His research interest mainly focuses entrepreneurship (entrepreneurial intention, behaviours, personality, SMEs and self-organised entrepreneurship behaviour).


Correspondence to: Mr Majid Murad, Jiangsu University (China), 301 Xuefu Rd, Jingkou, Zhenjiang, Jiangsu, China, e-mail: majidmurad1@gmail.com

ORCID  <http://orcid.org/0000-0003-1465-6724>

Sheikh Farhan Ashraf

PhD in management science and engineering from school of management Jiangsu University, China. He published many research articles in renowned journals. His research interest mainly focuses entrepreneurship (family business, entrepreneurial performance, organizational performance, SMEs and self-organised entrepreneurship behaviour).


Correspondence to: Mr Sheikh Farhan Ashraf, Jiangsu University, 301 Xuefu Rd, Jingkou, Zhenjiang, Jiangsu, China, e-mail: fhsheikh08@yahoo.com

ORCID  <http://orcid.org/0000-0003-0439-6682>

Nausheen Syed

Assistant Professor in the Department of Business Administration, Government College Women University, Faisalabad, Pakistan. Her research interest mainly focuses on organizational behaviour entrepreneurship and family business and SME development.


Correspondence to: Ms. Nausheen Syed, Government College Women University, Arfa Kareem Road Faisalabad, Pakistan, e-mail: nausheen.dr@gmail.com

ORCID  <http://orcid.org/0000-0002-7246-1012>

Madiha Riaz

Assistant Professor at Department of Economics, Ghazi University, Dera Ghazi Khan, Pakistan. Her research interest mainly focuses on economics, entrepreneurship and family business and SME development.

Correspondence to: Ms. Madiha Riaz, Ghazi University, College Chowk, Dera Ghazi Khan, Pakistan, e-mail: mriaz@gudgk.edu.pk

ORCID  <http://orcid.org/0000-0001-5531-1242>

Acknowledgements and Financial Disclosure

Project Funds: [1] Self-organized cluster entrepreneurship behaviour reform, evolution and promotion strategies study (No. 16BGL028), China National Social Science Foundation; [2] Study on Bottleneck and Innovation of Post-industrial Intellectual capital development in Jiangsu Province (No. 14JD009), Jiangsu Province Social Science Foundation Project. [3] Interactive effect between Self-Organised Innovation and Industrial cluster, Jiangsu Province Graduate Scientific Research Innovation Project. [4] Perception of fairness in self-organised mass Entrepreneurship (No. 4061160023).

Copyright and License

This article is published under the terms of the Creative Commons Attribution – NoDerivs (CC BY-ND 4.0) License
<http://creativecommons.org/licenses/by-nd/4.0/>

Published by Cracow University of Economics – Krakow, Poland



Ministry of Science
and Higher Education
Republic of Poland

The copyediting and proofreading of articles in English is financed in the framework of contract No. 913/P-DUN/2019 by the Ministry of Science and Higher Education of the Republic of Poland committed to activities aimed at science promotion.