



Does Entrepreneurial Self-Efficacy Lead towards Entrepreneurial Nascent Behavior? Mediating Role of Entrepreneurial Intention

Burhan Sadiq^{1}, Tayyeba Bashir¹, Amara Naseem²,*

Abstract

The objective of this study is to determine the impact of entrepreneurial self-efficacy on entrepreneurial nascent behaviour, while considering the mediating influence of entrepreneurial intention. In order to verify the hypotheses, data were gathered from 364 university students and analysed using partial least squares structural equation modelling (PLS-SEM). The results indicate that there is a significant and direct positive relationship between entrepreneurial self-efficacy and both entrepreneurial intention and entrepreneurial nascent behaviour. Furthermore, the findings suggest that entrepreneurial intention positively influences entrepreneurial nascent behaviour in a direct manner. Subsequently, research indicates that entrepreneurial intention exerts a noteworthy and favourable indirect influence on the correlation between entrepreneurial self-efficacy and entrepreneurial nascent behaviour.

Keywords: entrepreneurial self-efficacy, entrepreneurial intention, entrepreneurial nascent behavior, Pakistan university students

1. Introduction

Entrepreneurial activities are essential catalysts in advancing economic progress and sparking innovation, thereby contributing to job creation and bolstering community resilience. The focus on the psychological and behavioral aspects of entrepreneurs has increasingly become a focal point for both academic inquiry and practical application (Hu, Wang, Zhang, & Bin, 2018). Entrepreneurial self-efficacy is a crucial factor in this field, denoting an individual's confidence in their capacity to fulfil the responsibilities and obligations associated with being an entrepreneur. It is considered a vital precursor to entrepreneurial actions. The objective of the research is to delve into the intricacies of entrepreneurial self-efficacy and examine how it influences individuals to engage in nascent entrepreneurial activities, which represent the initial steps taken by aspiring entrepreneurs as they move towards establishing new ventures (Kollmann, Stöckmann, & Kensbock, 2017). Entrepreneurial intention, a multifaceted psychological concept that serves as the foundation for subsequent entrepreneurial endeavours, is commonly identified as the first step towards entrepreneurship (Mei et al., 2017; Anwar et al., 2023). Models such as ~~the Theory of Planned Behavior (TPB) have been utilized~~ to explore how personal factors, like self-efficacy, impact behaviors through the lens of intention. Although the relationship between entrepreneurial intention and entrepreneurial activities is well-documented, the specific influence of entrepreneurial self-efficacy on early entrepreneurial efforts, mediated by entrepreneurial intention, remains underexplored (Ajzen, 1991; Shane & Venkataraman, 2000; Awan et al., 2023; Jamil et al., 2023). This research gap underscores the importance of a thorough investigation into these dynamics to enhance our understanding of the psychological foundations of entrepreneurship.

¹School of Economics and Management, North China Electric Power University, Beijing, China (burhansadiq295@yahoo.com)

²College of Economics and Management, Beijing University of Technology, Beijing, China

Moreover, entrepreneurial self-efficacy is a complex attribute, incorporating the perceived capabilities to innovate, handle risks, and gather resources skills essential for overcoming the challenges of entrepreneurship. This study aims to scrutinize how these facets of self-efficacy affect entrepreneurial intention and, in turn, nascent entrepreneurial behaviors, thereby enriching our comprehension of the psychological transition from aspiring entrepreneur to active participant in the entrepreneurial realm (McGee, Peterson, Mueller, & Sequeira, 2009; Ahmad et al., 2022).

This research not only offers theoretical insights but also practical applications that can significantly impact educators, policy makers, and those involved in entrepreneurship development initiatives. By delineating the progression from self-efficacy to intention and then to entrepreneurial action, this study provides a basis for crafting targeted interventions that encourage entrepreneurial pursuits. Educational programs specifically designed to boost self-efficacy might expedite this journey from mere intention to tangible entrepreneurial activities among budding entrepreneurs (Shinnar, Hsu, Powell, & Zhou, 2018; Shirokova, Osiyevskyy, & Bogatyreva, 2016).

Employing a quantitative methodology, this investigation utilizes structural equation modeling to process data gathered from individuals on the brink of starting their entrepreneurial careers. The objective is to establish and validate a model that clearly outlines how entrepreneurial self-efficacy influences entrepreneurial intention, which in turn leads to nascent entrepreneurial behaviors. In doing so, the study aims to address a critical void in the existing entrepreneurship research and provide practical insights that can aid in the promotion of entrepreneurial activities.

This study intends to comprehend the complex relationship across entrepreneurial self-efficacy, intention, and nascent behaviour. This study makes a valuable contribution to the body of knowledge regarding the psychological mechanisms that support entrepreneurial action by examining the way in which self-efficacy influences the initial entrepreneurial steps via the mediating position of intention. These findings are essential for creating strategies to foster and bolster the upcoming generation of entrepreneurs, thus driving innovation and economic expansion.

2. Literature Review ESE and EI

Entrepreneurial self-efficacy (ESE) refers to the trust and confidence that an individual has in their own capability to effectively initiate and grow a business enterprise. The idea discussed here is crucial in influencing entrepreneurial intention, which refers to an individual's deliberate mental state that guides their focus and actions towards entrepreneurial activity (Naktiyok, Karabey, & Gulluce, 2010). The relationship between these two constructs is deeply intertwined, as a higher level of self-efficacy enhances the likelihood that an individual will not only harbor entrepreneurial intentions but also act upon them (Bandura, 1982). At the foundation of this correlation resides the self-evaluation of one's own abilities, whereby those who possess a strong sense of self-efficacy are more likely to perceive entrepreneurial challenges as prospects to be exploited rather than hindrances to be evaded (Ng & Lucianetti, 2016; Yousaf et al., 2020; Sadiq et al., 2023; Dunnan et al., 2020). Consequently, they are more likely to develop a strong intention to engage in entrepreneurship, driven by the belief in their ability to successfully navigate the complexities of starting and running a business. This dynamic underscores the significance of fostering entrepreneurial self-efficacy as a means of encouraging more individuals to pursue entrepreneurial endeavors, highlighting a pivotal area of focus for educators, policymakers, and researchers within the domain of entrepreneurship (Ajzen, 2011).

EI and ENB

Entrepreneurial intention, the cognitive representation of one's readiness to perform entrepreneurial activities, serves as a pivotal precursor to entrepreneurial nascent behavior, which encompasses the concrete actions taken towards the creation of a new venture (Arenius & Minniti, 2005; Li et al., 2020; Gul et al 2023). This relationship is grounded in the theory of planned behavior, suggesting that the intention to engage in entrepreneurship is a strong predictor

of actually undertaking steps necessary for venture creation. Individuals that possess a greater level of entrepreneurial intention are more inclined to become nascent entrepreneurs, actively participating in activities such as identifying opportunities, gathering resources, and initiating business planning (Wagner, 2007; Mohsin et al., 2024). The progression from intention to action is influenced by various factors including personal attitude, perceived behavioral control, and social norms (Shinnar et al., 2018; Shirokova et al., 2016; Li et al., 2020). However, the strength and direction of this relationship can be moderated by individual capabilities, environmental conditions, and access to resources. Therefore, understanding the dynamics between entrepreneurial intention and nascent behavior is crucial for developing targeted interventions aimed at fostering entrepreneurship, emphasizing the critical role of nurturing intention as a means to stimulate entrepreneurial activity (Mwiya et al., 2018; Souitaris, Zerbinati, & Al-Laham, 2007; Idrees et al 2018; Amjad et al., 2018).

ESE and ENB

The correlation between entrepreneurial self-efficacy (ESE) and entrepreneurial nascent behaviour is a critical component of the entrepreneurial process, serving as an intermediary between confidence regarding one's own entrepreneurial aptitude and the concrete measures undertaken to initiate a new enterprise (Boyd & Vozikis, 1994; Kickul, Gundry, Barbosa, & Whitcanack, 2009). Entrepreneurial self-efficacy refers to an individual's belief in their own capability to effectively carry out entrepreneurial tasks. This belief directly affects the probability and intensity of participating in early-stage entrepreneurial activities, such as recognising opportunities, obtaining resources, and establishing new ventures.

This is because individuals with high ESE are more likely to perceive entrepreneurial challenges as manageable and are thus more inclined to initiate and persist in the face of the adversities encountered during the early stages of venture development (Bandura, 1982; Rana et al., 2021). The strength of this belief system not only propels individuals towards taking the first steps in entrepreneurship but also sustains their effort through the uncertainties and setbacks that characterize the nascent phase of venture creation. Therefore, ESE is a critical psychological resource that fosters the transition from the intention to engage in entrepreneurship to the actual initiation of entrepreneurial actions, highlighting its importance in entrepreneurship education and support programs (Zhao, Seibert, & Hills, 2005; Baig et al 2019).

Mediating role of EI

Entrepreneurial intention serves as a mediator between entrepreneurial self-efficacy (ESE) and entrepreneurial emergent behaviour, highlighting a complex mechanism by which attitudes regarding one's own capabilities manifest in entrepreneurial conduct. Cai et al. (2021); Rana et al. (2021); Wilson, Kickul, & Marlino (2007). ESE, the conviction in one's ability to successfully undertake entrepreneurial tasks, fosters the formation of entrepreneurial intention, the determined mindset to start a new venture. This intention acts as a critical mediator, channeling the positive influence of self-efficacy into the execution of nascent entrepreneurial behaviors, such as conducting market research, securing funding, or developing a business plan. An individual's entrepreneurial intention is directly proportional to the magnitude of their self-efficacy. which in turn predicts the likelihood and extent of their engagement in behaviors that are directly linked to venture creation. This mediating relationship highlights a psychological process whereby self-efficacy influences not just the desire to become an entrepreneur but significantly impacts the transition into actual entrepreneurial activities (Hu et al., 2018; Muneer et al 2017; Amjad et al., 2017). Understanding this mediation is essential for designing interventions that enhance self-efficacy, thereby indirectly stimulating entrepreneurial action through the cultivation of strong entrepreneurial intentions. From the preceding discussion, we formulated the subsequent

hypothesis:

H1: *Entrepreneurial self-efficacy is positively and significantly associated with entrepreneurial intention.*

H2: *Entrepreneurial intention is significantly associated with entrepreneurial nascent behavior.*

H3: *Entrepreneurial self-efficacy is significantly associated with entrepreneurial nascent behavior.*

H4: *The relationship between entrepreneurial self-efficacy and entrepreneurial nascent behaviour will be moderated positively by entrepreneurial intention.*

3. Research Methodology

University business students from Punjab, Pakistan, provided the data used in this study. Two paper-and-pencil questionnaires have been used to gather data. One survey was given out to students with a four-week gap in between administrations. The official administration of institutions was notified via email of the impending data collection process and promised of the utmost secrecy of their replies. The method utilised was convenience sampling, which is not based on probability. Since the population was considered to be infinite, the method of Cochran's formula was employed to determine the sample size (Cochran, 2007). There was a total of 384 respondents, as determined by the formula. Also, to make sure the study's sample was representative, we used two surveys to gauge students' levels of entrepreneurial nascent behaviours and entrepreneurial self-efficacy. The first survey surveyed 384 students about these topics. We were able to collect 364 correctly marked questionnaires out of 384 that were delivered. Twenty questionnaires were discarded because they were either incomplete or not marked.

Table 1 Demographic Representation

Variables	Frequency and Percentage	Mean	Standard Deviation
Gender			
Male	218 (59.9%)	1.40	.491
Female	146 (40.1%)		
Age			
18-25 years	72 (19.8%)	2.22	.753
26-35 years	141 (38.7%)		
36- above years	151 (41.5%)		
Education			
Bachelors	213 (58.5%)	1.52	.678
Masters	113 (31.0%)		
M.Phil./MS./Ph.D.	38 (10.4%)		

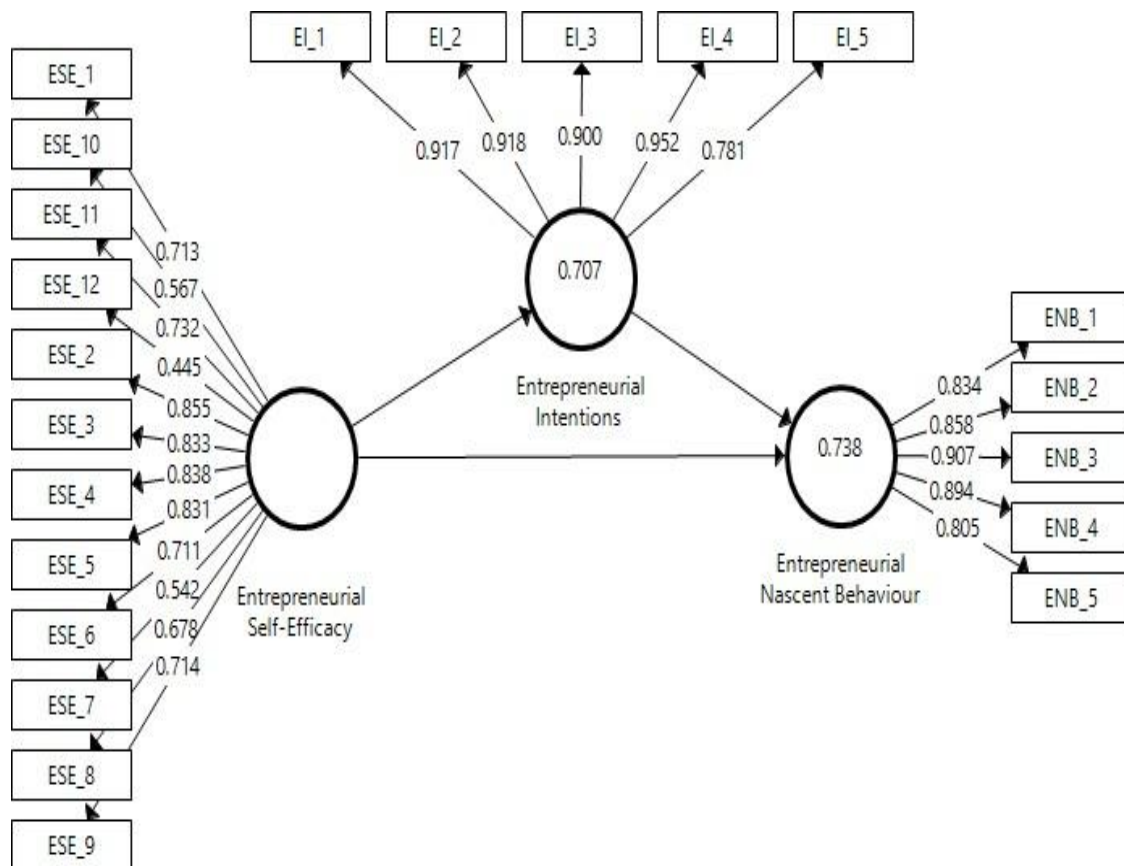
4. Measures & Results

The measurement of entrepreneurial self-efficacy was conducted using a scale consisting of 12 items, which was established by Gartner in 1989. The measurement of all the components of entrepreneurial self-efficacy was conducted using a 5-point scale. The Likert scale ranges from 1 (indicating strong disagreement) to 5 (indicating strong agreement). An example query is "Calculate the required amount of initial investment and operational funds needed to launch my business". The scale created by Liñán and Chen (2009) was utilised to measure entrepreneurial

intention. The measurement scale has five items that were extensively employed to assess entrepreneurial intention. A sample item: “My professional goal is becoming an entrepreneur”. The assessment of entrepreneurial nascent behaviour was conducted using a scale created by (McGee et al., 2009). This study utilised the scale developed by McGee et al. (2009) to determine whether an individual could be classified as a fledgling entrepreneur. The criterion for categorization was based on whether the individual has engaged in at least two out of the five specified activities, indicated by a yes or no response. A sample item “Writing a business plan/participating in seminars that focus on writing a business plan”. **Measurement Model**

It is crucial to evaluate the validity and reliability of the measurement constructs prior to implementing the final analysis. This research examines the composite reliability and reliability using Cronbach's alpha. Entrepreneurial self-efficacy exhibited a reliability of 0.912, while the composite reliability value was 0.924. Furthermore, the entrepreneurial intention exhibited a reliability of 0.937, while the composite reliability measured 0.953. Entrepreneurial nascent behaviour exhibited a composite reliability of 0.934 and a reliability of 0.912. Therefore, the values of all the measurement constructs met the alpha threshold value of 0.6 proposed by Nunally and Bernstein in 1978, which is considered acceptable. Furthermore, the average variance extracted (AVE) was utilised to evaluate convergent validity.

Figure 1 Factor Loadings



Notes: Values mark with * under loading of 0.6 which are not included in final analysis.

The AVE values for entrepreneurial self-efficacy, entrepreneurial intention, and entrepreneurial nascent behaviour are 0.513, 0.802, and 0.704, respectively. The acceptable levels of convergent validity, as proposed by Henseler, Hubona, and Ray (2016), require that all values of AVE fall between 0 and 0.5. The assessment of discriminant validity was conducted based on the criteria

established by Fornell and Larcker (1981). This criterion was extensively employed to evaluate the discriminant validity. The value is the square root of the average variance extracted (AVE). Figure 1 displays the discriminant validity values for entrepreneurial self-efficacy (0.716), entrepreneurial intention (0.895), and entrepreneurial nascent behaviour (0.860). Therefore, all of the values satisfy the specified requirements.

The structural model was evaluated using a bootstrapping technique with 5000 subsamples in the Smart-PLS software. The model's output is assessed using the standardised root mean square residual (SRMR) value. Henseler et al. (2016) state that a model fit is considered satisfactory when it has a value below 0.08. The model's SRMR value was 0.041, indicating the level of fitness of the measurement model. In addition, the structural model elucidated that 70.7% of the variance in entrepreneurial intention and 73.8% of the variance in entrepreneurial nascent behaviour can be accounted for. In order to test the hypotheses, it was hypothesised that there would be a substantial relationship between entrepreneurial self-efficacy and entrepreneurial intention (H1). Table 2 displays the findings indicating that entrepreneurial self-efficacy had a positive and substantial impact on entrepreneurial intention ($\beta=0.791$, $t=34.50$, $p<0.00$). Therefore, the first hypothesis (H1) was validated by the model.

In addition, H2 suggested that there is a considerable relationship between entrepreneurial ambition and entrepreneurial nascent behaviour. The findings suggest that there is a strong and positive relationship between entrepreneurial intention and entrepreneurial nascent behaviour ($\beta=0.490$, $t=9.22$, $p<0.00$). Therefore, we can conclude that hypothesis H2 has been confirmed. Furthermore, the study proposed that there is a substantial relationship between entrepreneurial self-efficacy (H3) and entrepreneurial nascent behaviour. The findings indicate that entrepreneurial self-efficacy had a positive and significant impact on entrepreneurial nascent behaviour ($\beta=0.385$, $t=6.87$, $p<0.00$), therefore supporting hypothesis H3. Finally, the study made a prediction about the H4 hypothesis concerning the mediating role. The findings demonstrate that there is a positive and substantial association between entrepreneurial self-efficacy and entrepreneurial nascent behaviour, and this relationship is mediated by entrepreneurial intention ($\beta=0.387$, $t=9.17$, $p<0.00$). Therefore, H4 was likewise deemed acceptable.

Table 2 Path Coefficient (Direct Effects)

Hypothesis	Relationship	β	t	p
H1	ESE \rightarrow EI	0.791**	34.501	0.000
H2	EI \rightarrow ENB	0.490**	9.228	0.000
H3	ESE \rightarrow ENB	0.385**	6.876	0.000
H4 (Mediation)	ESE \rightarrow EI \rightarrow ENB	0.387**	9.176	0.000

Notes: ESE= Entrepreneurial self-efficacy, EI= Entrepreneurial intention, ENB=Entrepreneurial nascent behavior

Note: * $p<0.001$; ** $p<0.000$

5. Conclusion and Implications

This study has some practical implications for researchers, policy-makers, and educationalists that make policy for entrepreneurship. Firstly, this study found that entrepreneurial self-efficacy has a strong effect on entrepreneurial intention and entrepreneurial nascent behavior. Therefore, educators should facilitate individuals who have a high level of entrepreneurial self-efficacy to start a new business. Moreover, this study results suggest that entrepreneurial self-efficacy would be helpful for individuals to transform their intentions into entrepreneurial actions. There have been increasing calls to find ways of motivating individuals to move from simply having entrepreneurial intentions to taking active steps towards starting a new business to become

entrepreneurs. Secondly, it is observed in previous literature some individuals with a high level of entrepreneurial intentions are known purposely postpone taking entrepreneurial action. Therefore, this study recommends that encouraging them to enrich their level of entrepreneurial self-efficacy could hasten their need to take entrepreneurial action. Thirdly entrepreneurial intentions are an essential step towards starting a new business creation process. Accordingly, developing entrepreneurial intention is also needed in shaping successive entrepreneurial behavior. This study has certain limitations that serve as the basis for guidance for future researchers. Expanding the sample size to encompass the entire country will enhance the universality of conclusions, as this research was limited to the province of Punjab, Pakistan. Furthermore, it is important to note that this study is cross-sectional in nature, meaning that the results can only provide a momentary glimpse of the phenomenon under investigation. Future research might conduct a longitudinal study to investigate the specific effects of each facet of entrepreneurial self-efficacy on the progression from intention to embryonic behaviour and ultimately to the establishment of a real business. The study provides fresh perspectives on a growing situation on how entrepreneurial self-efficacy and fledgling behaviour are influenced by entrepreneurial intention.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2011). The theory of planned behaviour: reactions and reflections. In: Taylor & Francis.
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233-247.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122.
- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18(4), 63-77.
- Cai, L., Murad, M., Ashraf, S. F., & Naz, S. (2021). Impact of dark tetrad personality traits on nascent entrepreneurial behavior: the mediating role of entrepreneurial intention. *Frontiers of Business Research in China*, 15(1), 1-19.
- Cochran, W. G. (2007). *Sampling techniques*: John Wiley & Sons.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Gartner, W. B. (1989). Some suggestions for research on entrepreneurial traits and characteristics. *Entrepreneurship Theory and Practice*, 14(1), 27-38.
- Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Industrial Management and Data Systems*, 116(1), 2-20.
- Hu, R., Wang, L., Zhang, W., & Bin, P. (2018). Creativity, proactive personality, and entrepreneurial intention: the role of entrepreneurial alertness. *Frontiers in Psychology*, 9, 951.
- Kickul, J., Gundry, L. K., Barbosa, S. D., & Whitcanack, L. (2009). Intuition versus analysis? Testing differential models of cognitive style on entrepreneurial self-efficacy and the new venture creation process. *Entrepreneurship Theory and Practice*, 33(2), 439-453.
- Kollmann, T., Stöckmann, C., & Kensbock, J. M. (2017). Fear of failure as a mediator of the relationship between obstacles and nascent entrepreneurial activity—An experimental approach. *Journal of Business Venturing*, 32(3), 280-301.
- Kumar, R., & Shukla, S. (2019). Creativity, Proactive Personality and Entrepreneurial Intentions: Examining the Mediating Role of Entrepreneurial Self-efficacy. *Global Business Review*, 0972150919844395.

- Li, C., Murad, M., Shahzad, F., Khan, M. A. S., Ashraf, S. F., & Dogbe, C. S. K. (2020). Entrepreneurial passion to entrepreneurial behavior: Role of entrepreneurial alertness, entrepreneurial self-efficacy and proactive personality. *Frontiers in Psychology, 11*, 1611.
- 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.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33*(3), 593-617.
- McGee, J. E., Peterson, M., Mueller, S. L., & Sequeira, J. M. (2009). Entrepreneurial self-efficacy: refining the measure. *Entrepreneurship Theory and Practice, 33*(4), 965-988.
- Mei, H., Ma, Z., Jiao, S., Chen, X., Lv, X., & Zhan, Z. (2017). The Sustainable Personality in Entrepreneurship: The Relationship between Big Six Personality, Entrepreneurial Self-Efficacy, and Entrepreneurial Intention in the Chinese Context. *Sustainability, 9*(9), 1649.
- Mwiya, B. M., Wang, Y., Kaulungombe, B., & Kayekesi, M. (2018). Exploring entrepreneurial intention's mediating role in the relationship between self-efficacy and nascent behaviour. *Journal of Small Business and Enterprise Development.*
- Naktiyok, A., Karabey, C. N., & Gulluce, A. C. (2010). Entrepreneurial self-efficacy and entrepreneurial intention: the Turkish case. *International Entrepreneurship and Management Journal, 6*(4), 419-435.
- Ng, T. W., & Lucianetti, L. (2016). Within-individual increases in innovative behavior and creative, persuasion, and change self-efficacy over time: A social-cognitive theory perspective. *Journal of Applied Psychology, 101*(1), 14.
- Nunally, J. C., & Bernstein, I. (1978). *Psychometric theory*. Ed. NY: McGraw-Hill.
- Shinnar, R. S., Hsu, D. K., Powell, B. C., & Zhou, H. (2018). Entrepreneurial intentions and start-ups: Are women or men more likely to enact their intentions? *International Small Business Journal, 36*(1), 60-80.
- 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.
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing, 22*(4), 566-591.
- Wagner, J. (2007). What a difference a Y makes-female and male nascent entrepreneurs in Germany. *Small Business Economics, 28*(1), 1-21.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice, 31*(3), 387-406.
- Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology, 90*(6), 1265.