



VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

The impact of narcissism on entrepreneurial intentions: The roles of entrepreneurial alertness, entrepreneurial passion, and internal locus of control

This is the Published version of the following publication

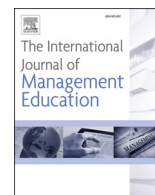
Hoang, Giang, Luu, Tuan Trong, Tran, Quan and Yang, Mingjun (2024) The impact of narcissism on entrepreneurial intentions: The roles of entrepreneurial alertness, entrepreneurial passion, and internal locus of control. *International Journal of Management Education*, 22 (3). ISSN 1472-8117

The publisher's official version can be found at
<https://www.sciencedirect.com/science/article/pii/S1472811724000922?via%3Dihub>
Note that access to this version may require subscription.

Downloaded from VU Research Repository <https://vuir.vu.edu.au/49049/>

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

The International Journal of Management Education

journal homepage: www.elsevier.com/locate/ijme

The impact of narcissism on entrepreneurial intentions: The roles of entrepreneurial alertness, entrepreneurial passion, and internal locus of control

Giang Hoang^{a,*}, Tuan Trong Luu^b, Quan Tran^c, Mingjun Yang^d

^a RMIT University, Viet Nam

^b Swinburne University of Technology, Australia

^c Victoria University, Australia

^d La Trobe University, Australia

ARTICLE INFO

Keywords:

Narcissism
Internal locus of control
Entrepreneurial passion
Entrepreneurial alertness
Entrepreneurial intentions

ABSTRACT

This study investigates the effects of narcissism on entrepreneurial intentions through entrepreneurial alertness, entrepreneurial passion, and internal locus of control. The data for our research model is collected from a sample of 422 business students from nine universities in Vietnam. The findings from structural equation modelling reveal that the relationship between narcissism and entrepreneurial intentions was fully mediated by both entrepreneurial alertness and entrepreneurial passion. Moreover, internal locus of control is found to moderate the relationships between entrepreneurial alertness and entrepreneurial passion and entrepreneurial intentions. Our study provides important theoretical and practical implications.

1. Introduction

This study investigates the relationship between narcissism and entrepreneurial intention (EI) by exploring the underlying mediating and moderating mechanisms that influence the translation of narcissism into EI. Narcissism is a high level of grandiosity, entitlement, dominance, and a strong sense of superiority, that an individual has over others (Paulhus & Williams, 2002). On the other hand, EI, which could be defined as a strong inclination towards venture creation, has been recognized as an antecedent of entrepreneurial behaviors and has attracted research interest in the past decades (Liñán & Fayolle, 2015). The focus of our research on how narcissism influences EI can be justified by the inconsistencies among findings reported in the literature. For instance, a research inquiry into EI from Hmieleski and Lerner (2016) identified a positive impact of narcissism while later research from Wu et al. (2019) reported a negative impact. On the other hand, McLarty et al. (2021) detected no evidence that higher degrees of narcissism correspond to higher levels of EI. This study aims to address the inconsistencies identified in prior research and make a substantial contribution to the field of entrepreneurship. By examining the intricate interplay between the individual personality trait of narcissism and the behavioral intention of entrepreneurship, this research seeks to illuminate the underlying mediation and moderation mechanisms involved.

Furthermore, this study addresses the gap in the literature by examining the factors that underpin the translation of narcissism into

* Corresponding author.

E-mail addresses: giang.hoang@rmit.edu.vn (G. Hoang), tllu@swin.edu.au (T.T. Luu), quan.tran1@vu.edu.au (Q. Tran), mingjunyang17@gmail.com (M. Yang).

<https://doi.org/10.1016/j.ijme.2024.101021>

Received 13 February 2023; Received in revised form 22 June 2023; Accepted 1 July 2024

Available online 4 July 2024

1472-8117/© 2024 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

EI. Prior research revealed a number of mediators that channel narcissism into EI, such as psychological capital (Choi & Hwang, 2020) and moral disengagement (Wu et al., 2020). In addition, some factors were found to moderate this relationship, such as empathic concern (Wu et al., 2020); and environmental complexity (Al-Ghazali & Afsar, 2021). While these findings enhance our understanding regarding the influences of narcissism on EI, the mediating or moderating role of other factors such as entrepreneurial alertness (EA), entrepreneurial passion (EP), and internal locus of control (ILOC) has not been examined, despite the great scholarly attention given to the importance of these variables in the entrepreneurial contexts (e.g., Cardon et al., 2013; Neneh, 2019; Ng et al., 2006). In addressing this gap in the literature, our study proposes a theoretical model in which EA and EP take the mediating roles while ILOC assumes the role of a moderator in the narcissism - EI relationship.

Our study is situated in the context of Vietnam because of its nature as an emerging market and being considered context-rich, as a dynamic economy with pro-entrepreneurship policies (Audretsch & Fiedler, 2021; Hoang et al., 2020; Nguyen, 2017). Although start-up investment was significantly reduced in 2020 due to the pandemic, it increased fourfold in 2021 and maintained a strong position at US\$636 million investment in 2022 in the face of the global tech crisis (Huy, 2023). Along with continued financial support from the government through the Initiative for Startup Ecosystem in Vietnam (ISEV) until 2025 (Ministry of Science and Technology of Vietnam, 2018), Vietnam remains a promising ecosystem to nurture the growth of entrepreneurial talents. Research into EI in the Vietnamese context has received growing attention from scholars, with studies by Hoang et al. (2022) and Lien et al. (2022) confirming a positive correlation between narcissism and EI. However, Lien et al. (2022) also noted that while narcissism may be conducive to entrepreneurship, it is often viewed negatively in Vietnam due to the collectivist ideology prioritizing adherence to social norms and standards. As a result, the full manifestation of narcissism is limited, leading to the emergence of specific social start-up motives.

Our contribution to the entrepreneurship literature can be observed in several aspects. First, our findings add to the current debate in the literature by examining the influence of narcissism on EI. Second, our study investigates the mediating roles of EA and EP, a well under-researched area in the relationship between narcissism and EI. Finally, our study provides evidence for the moderating effect of ILOC in attenuating the association between EA and EI, as well as the association between EP and EI. Furthermore, based on these findings, we then provide and discuss practical implications for university contexts. For instance, industrial training programs offered by policy makers as an extension to formal education enable students to identify industrial tendencies and business opportunities and learn from the success and failure of other entrepreneurs (Elnadi & Gheith, 2023). Teachers, on the other hand, could integrate community activities such as youth career development, mentoring programs to foster social development and passion for entrepreneurial activities. These activities and settings allow students to enhance and promote their self-image, learn how to recognize and discuss business opportunities, establish connections and partnerships with other like-minded individuals, and support their personal development by building confidence and entrepreneurial skills. The next section discusses our hypotheses development based on theoretical and empirical evidence in the literature. After that, our research methods and research findings are presented.

2. Literature review and hypothesis development

2.1. Narcissism and entrepreneurial intentions

Narcissists can be described as those who have a high level of grandiosity, entitlement, dominance, and a strong sense of superiority over others (Paulhus & Williams, 2002). The overarching goal of a narcissist is to maintain or increase a grandiose self-image to fulfil the need for self-importance (Brownell et al., 2021). This goal can be achieved through assertive self-promotion or self-enhancement, where an individual strives for being a unique person (Wink, 1991), capture grandiose fantasies (Brunell et al., 2008) and display a charming personality (Gubik & Vörös, 2023). Uniqueness, grandiosity and being charming can lead to desirable outcomes such as attainment of social status and career success; acquisition of leadership position and social attractiveness (Brownell et al., 2021). Narcissists also prefer to build an authoritative environment for their exhibitionism and career motives rather than obtaining autonomy from someone else (Brownell et al., 2023; Hanson et al., 2023).

Our study posits that individuals with higher degrees of narcissism are more likely to develop EI. Positive attitude towards venture creation can be observed in narcissists because their self-created environment supports self-enhancement and exhibitionism (Gubik & Vörös, 2023). Within this environment, they can showcase their self-presumed greatness (Hmieleski & Lerner, 2016), and authority (Judge et al., 2006). As characterized by an excessive self-esteem and a strong sense of entitlement, narcissists expect “to be liked, admired, respected, attended to, praised, complimented, and indulged” (Hogan, 2017, p. 124). As venture creation is highly valued by society (Brownell et al., 2021), engaging in entrepreneurial activities makes narcissists feel respected and successful which reflects their yearning for social admiration and highly desirable subjective norms. Furthermore, narcissists are willing to engage in exploitation for personal benefits and are more inclined towards risk-taking (Jones & Figueredo, 2013). These traits allow them to perceive higher control over the associated risks in creating and operating a new venture. Similarly, McLarty et al. (2021) also found that individuals with a higher degree of narcissism tend to perceive the act of creating a business as a favorable opportunity to exploit others for personal gain and social recognition and to be considered as formidable, successful, and influential. Following this line of argument, we propose our first hypothesis.

Hypothesis 1. Narcissism is positively associated with EI.

2.2. Narcissism, entrepreneurial alertness and entrepreneurial intentions

2.2.1. Narcissism and entrepreneurial alertness

EA can be defined as the capability to identify market gaps based on limited cues that have been overlooked by others (Kirzner, 1979). Valliere (2013) argues that EA depends on the cognitive capacity allowing an individual to realize new opportunities through pattern recognition in response to external and internal stimuli. Furthermore, Tang et al. (2012, p. 77) break alertness into three broad, yet distinctive elements: (1) “scanning and searching” for new facts or information, (2) “associating and connecting” this information with the current possessed knowledge and (3) “evaluating and judging” the commercialization of these newly developed ideas. Alert individuals are considered to have a unique preparedness that can consistently analyze the business environment and are more inclined to engage in any given opportunity to discover its potentiality (Tang et al., 2012).

As narcissists are strongly motivated to validate their self-worth and importance to others (McLarty et al., 2021), they are constantly looking for opportunities to exploit social relationships (Brunell et al., 2008), to gain personal attention and social status (Lim et al., 2021). also allege that being able to recognize opportunities is crucial in increasing self-confidence and enhancing a positive attitude toward venture creation. Therefore, we can hypothesize as follows.

Hypothesis 2. Narcissism is positively associated with EA.

2.2.2. Entrepreneurial alertness and entrepreneurial intention

Our study posits that EA influences how EI are formed. McMullen and Shepherd (2006) argue that upon seeing an opportunity as potentially beneficial, the alert individual might assess its readiness to stand for uncertainties and exploitability, thus, formulating an intention to act upon it. As EA guides an individual to identify the right opportunities, it also helps to enhance confidence that such pursuit of these opportunities is probable. Langowitz and Minniti (2007) find that EA supports an individual in conceptualizing a clear picture of entrepreneurship by reevaluating attitudes, motives, and skills against identified opportunities. Furthermore, good opportunity-recognition skills in high-alert individuals could lead to acceptable subjective norms because they know what to do or are expected to do, thus, receiving support and approval from their social network (Hoang et al., 2022). Therefore, we can hypothesize as follows.

Hypothesis 3. EA is positively associated with EI.

From the above arguments, we further argue that EA mediates the narcissism-EI relationship because it allows individuals to identify opportunities that assist the process of transforming a narcissistic desire into a real EI. Taken together, we hypothesize as follows.

Hypothesis 4. The relationship between narcissism and EI is mediated by EA.

2.3. Narcissism, entrepreneurial passion and entrepreneurial intentions

2.3.1. Narcissism and entrepreneurial passion

EP refers to “consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur” (Cardon et al., 2009, p. 517). EP can be considered as an emotional meta-experience (Neneh, 2020). These subconscious and cognized emotional experiences consistently fuel personal desire, daily effort and creativity in an entrepreneur by influencing the three main drivers of entrepreneurial effectiveness, including problem-solving, persistence and absorption (Cardon et al., 2013; Neneh, 2020). Beyond experiencing the intense feeling towards preferred activities, EP is the key that motivates an individual to arouse and direct actions towards desired goals in a persistent manner (Murnieks et al., 2014).

The passion of engaging in entrepreneurial activities by narcissists is justified by the ambition for a successful outcome of their chosen venture, which satisfies their need for dominance and fulfils their desire for fame (Jonason & Webster, 2010); and acts as a validation of self-regard and proof of self-gratification (Raskin et al., 1991). Moreover, narcissistic individuals, in responding to various levels of provocation/social stimuli (i.e., the idea of venture creation regarded as valuable activity by society) (Brunell et al., 2008), would display various anticipated high-approach positive impacts such as enthusiasm, goal adoption and pursuit (Hart et al., 2021). It should be noted that narcissists tend to overlook the emotional connection with people and only focus on the social extraversion that serves the purpose of exhibitionism for public attention and praise (Twenge et al., 2008). It is logical to argue that individuals with a higher degree of narcissism would have passion towards venture creation or entrepreneurial activities that benefit their grandiose image. Therefore, we can hypothesize as follows.

Hypothesis 5. Narcissism is positively associated with EP.

2.3.2. Entrepreneurial passion and entrepreneurial intention

Individuals with EP are said to be passionate and devote their time and effort to exploring, exploiting, and expanding identified business opportunities (Karimi, 2020). Entrepreneurial passion creates intense, positive emotions in individuals towards entrepreneurial activities which serves as a motivational drive for their actions (Cardon et al., 2009). Furthermore, individuals with high levels of EP are likely to have a strong sense of perceived behavioral control, i.e. a higher level of self-efficacy, which manifests as a strong belief in one’s abilities and dedication of the needed energy to achieve desired outcomes of entrepreneurial activities (Cardon et al.,

2013). This enables the perception of the successful execution of new start-ups or the perceived capabilities to manage challenging entrepreneurial situations. Neneh (2022) also empirically confirmed the positive relationship between EP and EI, which is consistent with findings from prior studies from Biraglia and Kadile (2017) and Huyghe et al. (2016). Taken together, we can hypothesize as follows.

Hypothesis 6. EP is positively associated with EI.

2.3.3. The relationship between narcissism and EI is mediated by EP

From the above arguments, we further argue that EP mediates the narcissism-EI relationship because it allows individuals to construct their self-identity and formulate real EI in line with their narcissistic characteristics. The construction of self-identity refers to how EP shapes the way individuals see themselves as entrepreneurs and their selection of entrepreneurial focus, i.e. passion for inventing focusing on identifying market opportunities, developing new products or services; passion for founding associates with the need for achievement in which the new venture identity is part of their identity; and passion for developing refers to the desire to grow and expand an existing venture (Cardon et al., 2009). As the passion for entrepreneurial activities initiates the planning process for such desired activities, entrepreneurial passion supports the formation of entrepreneurial intention (Neneh, 2022). Therefore, we can hypothesize as follows.

Hypothesis 7. The relationship between narcissism and EI is mediated by EP.

2.4. The moderating roles of internal locus of control

Locus of control refers to the degree to which an individual perceives that outcomes are contingent on personal behavior or independent of it (Rotter, 1966). This study focuses on the ILoC because it has been identified as a factor that contributes to the entrepreneurial process (Hoang et al., 2022). Malik et al. (2015) posit that individuals with a high internal locus of control are likely to attribute the outcomes of their performance to personal capabilities, proactive personalities and hard-working. Recent empirical research has identified the positive impact of internal locus of control on entrepreneurial intentions and opportunity recognition (e.g., Arkorful & Hilton, 2021; Asante & Affum-Osei, 2019).

High ILoC can be seen as a manifestation of confidence in personal abilities and effort, leading to a greater level of perceived behavioral control (Ng et al., 2006). However, it is important to note that the concept of locus of control extends beyond behavioral control or self-efficacy and is more of a general self-concept that is influenced by a range of biological and developmental factors and applies to all circumstances. To the contrary, if ILoC is low, the individual might identify the right opportunity but be reluctant to form an EI as they are doubting themselves or believing in the perceived lack of control over the whole process. Hoang et al. (2022) reported evidence of ILoC moderating the relationship between opportunity recognition and EI, where high ILoC individuals can identify the right opportunities and utilize their perceived skills to translate these opportunities into successful ventures. Therefore, we can hypothesize as follows.

Hypothesis 8. The relationship between EA and EI is moderated by ILoC, such that this relationship is stronger when ILoC is high rather than low.

We also argue that ILoC moderates the association between EP and EI. If ILoC is low, the individual might have intense feelings towards certain entrepreneurial activities but is unlikely to pursue them because they attribute the outcomes of these activities to external factors outside of their control such as chance, fate, or social influence/support from others. Furthermore, with ILoC, individuals tend to perceive their operating environment as positive, therefore, would engage in any entrepreneurial activities, even challenging ones, if they are of interest to them (Ng et al., 2006). Therefore, we can hypothesize as follows.

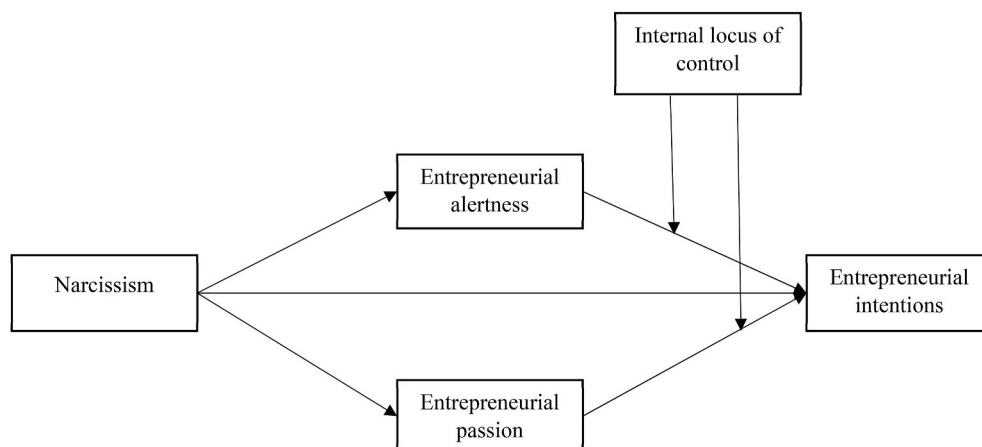


Fig. 1. Research model.

Table 1
Descriptive statistics and correlations.

	Mean	Std. Deviation	CR	AVE	Gender	Year	Family	EI	EA	EP	Narcissism	ILC
Gender	1.554	0.498										
Year	2.908	1.035			-0.100 ^b							
Family	0.208	0.406			-0.014	0.017						
EI	3.308	0.988	0.929	0.686	-0.192 ^a	-0.049	0.082 ^b	(0.927)				
EA	3.579	0.640	0.932	0.513	-0.160 ^a	0.053	0.032	0.585 ^a	(0.931)			
EP	3.669	0.896	0.869	0.632	-0.094 ^b	-0.050	0.029	0.739 ^a	0.597 ^a	(0.860)		
Narcissism	3.553	0.844	0.850	0.591	0.000	0.058	0.064	0.232 ^a	0.267 ^a	0.328 ^a	(0.844)	
IoLC	4.082	0.609	0.849	0.548	-0.055	-0.020	-0.059	0.357 ^a	0.531 ^a	0.420 ^a	0.232 ^a	(0.846)

Note.

Cronbach's alphas are shown in parentheses.

***p < 0.001.

^a p < 0.01.

^b p < 0.05.

Hypothesis 9. The relationship between EP and EI is moderated by ILoC, such that this relationship is stronger when ILoC is high rather than low.

Fig. 1 illustrates our theoretical model and summarizes the relationships between the main constructs in this study. The following sections present the research methodology and research findings.

3. Research methods

3.1. Data collection

We used a sample of undergraduate students who are studying in business-related programs at nine Vietnamese universities for several reasons. First, undergraduate students have some notions of entrepreneurial activities or venture creation when choosing business as their major as well as when exposed to business subjects (Nowiński et al., 2019). Second, they have potential to undertake entrepreneurial activities in their future employer or create a venture due to their exposure to business subjects, industry guest speakers, or internship particularly in relation to innovation and entrepreneurship (Hoang et al., 2022). Third, Vietnam can provide a rich research context for this research as it is a dynamic economy, which has recently shifted from de-entrepreneurship to pro-entrepreneurship policy viewpoint (Nguyen et al., 2015).

Following the approach suggested by Jena (2020), purposive sampling technique was employed in the selection of the universities and random sampling technique was adopted in the selection of the respondents. We first approached the managers of the undergraduate courses at nine Vietnamese universities to seek their permission to administer the survey and their support in contacting students. With their agreement, we sent an email, which included a link to the online survey and a cover letter, to the students. Survey data were collected at two timepoints to reduce common method bias, following the suggestion of (Podsakoff et al., 2003). This technique has been used in several studies on entrepreneurial intentions, such as Tolentino et al. (2014) and Nwosu et al. (2022). At Time 1, we invited 635 students to answer items about their narcissism, EA, EP, and ILoC. All the participants in Time 1 were provided with a four-digit code for matching purposes. A total of 482 responses were collected, yielding a response rate of 75.9%. At Time 2, which was about six weeks later, we asked those 482 participating students to answer questions about their EI and demographic information. A total of 422 responses were collected, yielding a response rate of 66.4%.

Among the participants, 234 students (55.5%) were female and 188 students (44.5%) were male. Regarding their year of study, 55 students were first year (13%), 90 students were second year (21.3%), 142 students were third year (33.6%), and 135 students were last year (32%). Students' demographic data also showed that 333 students (78.9%) did not have an entrepreneurial family background and 89 students (21.1%) reported that they had an entrepreneurial family background.

3.2. Measures

A five-point Likert scale was used to evaluate all the main constructs (1 = Strongly Disagree and 5 = Strongly Agree). The questionnaire was back translated from English into Vietnamese and vice versa (Brislin, 1970).

To measure students' EI, we used the six-item scale developed by Liñán and Chen (2009) (e.g., "My professional goal is to become an entrepreneur").

Narcissism personality trait was assessed by a four-item scale adopted from the scale developed by Jonason and Webster (2010). An exemplary item is "I tend to want others to admire me."

We used a four-item scale developed by Tang et al. (2012) to assess EA (e.g., "I always keep an eye out for new business ideas when looking for information").

We measured EP using a four-item scale that measures passion toward founding developed by Cardon et al. (2013). An exemplary item is "It is exciting to figure out new ways to solve unmet market needs that can be commercialized."

A four-item instrument developed by Mueller and Thomas (2001) was used to measure ILoC (e.g., "My life is determined by my own actions").

Following the approach in prior research (e.g., Hoang et al., 2022; Nowiński et al., 2019), several demographic variables, such as students' gender, year of study, and family entrepreneurial background, were controlled because these variables are potential predictors of EI.

4. Results

4.1. Descriptive statistics and common method bias

Table 1 presents the descriptive statistics results, including the mean values, standard deviation, CR, AVE, and correlations between the variables. Furthermore, the alpha coefficients are presented in the diagonal.

We adapted several approaches to address common method bias. First, the data were obtained at different points of time to avoid common method variances as suggested by (Gurel et al., 2021). Second, the result of Harman's one-factor analysis demonstrated that the largest unrotated factor only accounts for 37.47%, which did not exceed the threshold of 50%, implicating the non-existence of a single factor (Podsakoff & Organ, 1986). Third, multicollinearity test was conducted to find the correlations between the strength of the correlations and independent variables (Kock, 2017). The multicollinearity test revealed that the VIF values ranged between 1.426

and 1.825, which were well below the cutoff value of 3.3 (Kock, 2017). In sum, it can be conclusive that our study findings were not affected by common method bias.

4.2. Confirmatory factor analysis

A confirmatory factor analysis (CFA) was carried out to investigate the model fit using the fit indices. We adapted the suggested values by (Hair et al., 2010), such that Tucker Lewis index (TLI), an incremental fit index (IFI), and a comparative fit index (CFI) exceeding 0.9 and a root mean square error of approximation (RMSEA) surpassing 0.06 would reveal an acceptable model fit. The results of our CFA show that our model fits the data well ($\chi^2/df = 2.925$, $p < 0.001$, CFI = 0.930, TLI = 0.921, IFI = 0.930, RMSEA = 0.057). Moreover, the CR values surpassed 0.70 (Bagozzi & Youjae, 1988), and all the AVE values exceeded 0.5 (Fornell & Larcker, 1981). Thus, convergent and discriminant validities are confirmed for our hypothesized model.

4.3. Hypothesis testing

4.3.1. Direct relationships

To test the hypotheses, we conducted structural equation modelling (SEM) using AMOS version 28 software. The SEM results are presented in Table 2. As can be seen in Table 2, the direct association between narcissism and EI is non-significant ($\beta = -0.031$, $p > 0.05$). Hence, Hypothesis 1, which posits that narcissism is positively associated with EI, is not supported.

The impact of narcissism on EA was significant ($\beta = 0.203$, $p < 0.001$), supporting Hypothesis 2. The impact of narcissism on EP was also significant ($\beta = 0.349$, $p < 0.001$), supporting Hypothesis 5.

Furthermore, we found a significant relationship between EA and EI ($\beta = 0.186$, $p < 0.001$), which supports Hypothesis 3. Table 2 also revealed a positive and significant association between EP and EI ($\beta = 0.443$, $p < 0.001$), which supports Hypothesis 6.

4.3.2. Mediation effects

The mediating effects of EA (Hypothesis 4) and EP (Hypothesis 7) were tested following the approach of (Foo et al., 2009) by conducting bootstrapping test (see results in Table 3).

Regarding Hypothesis 4, the result of bootstrapping test exhibited that confidence intervals (5000 samples) for the indirect relationship between narcissism and EI through EA did not contain zero [CI 95%, (0.038; 0.102)]. Therefore, Hypothesis 4 is supported.

In terms of Hypothesis 7, the bootstrapping test showed that confidence intervals (5000 samples) also did not contain zero [CI 95%, (0.159; 0.317)]. Thus, Hypothesis 7 is supported, which means the full mediating role of EP is confirmed.

4.3.3. Moderation effects

According to the results in Table 2, the interaction term of EA \times ILoC in predicting EI was significant ($\beta = 0.034$; $p < 0.001$). This moderation effect was plotted in a graph (Fig. 2). As can be seen in Fig. 2, the relationship between EA and EI is stronger when ILoC is high, rather than when it is low, which showed that the effect of EA on EI is moderated by ILoC. Therefore, Hypothesis 8 is supported.

The interaction term of EP \times ILoC in affecting EI is significant ($\beta = 0.055$, $p < 0.001$) (Table 2). This moderating role was illustrated in the plotting graph (Fig. 3). As Fig. 3 presented, the association between EP and EI becomes stronger when ILoC is high, rather than when it is low, which exhibits that the effect of EP on EI is moderated by ILoC. Therefore, Hypothesis 9 is supported.

Table 2
Path results.

Hypotheses	Description of path	Estimate (β)	Standard error
Control variables			
	Family entrepreneurial background	0.141 ^b	0.064
	Year of study	-0.038	0.025
	Gender	-0.221 ^a	0.058
Direct effects			
Hypothesis 1	Narcissism \rightarrow EI	-0.031	0.036
Hypothesis 2	Narcissism \rightarrow EA	0.203 ^a	0.03
Hypothesis 3	EA \rightarrow EI	0.186 ^a	0.042
Hypothesis 5	Narcissism \rightarrow EP	0.349 ^a	0.041
Hypothesis 6	EP \rightarrow EI	0.443 ^a	0.031
Hypothesis 8	ILoC \times EA \rightarrow EI	0.034 ^a	0.013
Hypothesis 9	ILoC \times EP \rightarrow EI	0.055 ^a	0.009

Note.

^a $p < 0.001$.

^b $p < 0.05$.

Table 3
Mediating effects.

Mediation paths	Bootstrapping 5000 (Percentile 95% confidence interval)		
	Standardized estimates	Lower	Upper
Hypothesis 4: Narcissism → EA → EI	0.066 ^a	0.038	0.102
Hypothesis 7: Narcissism → EP → EI	0.230 ^a	0.159	0.317

Note.

^a $p < 0.001$.

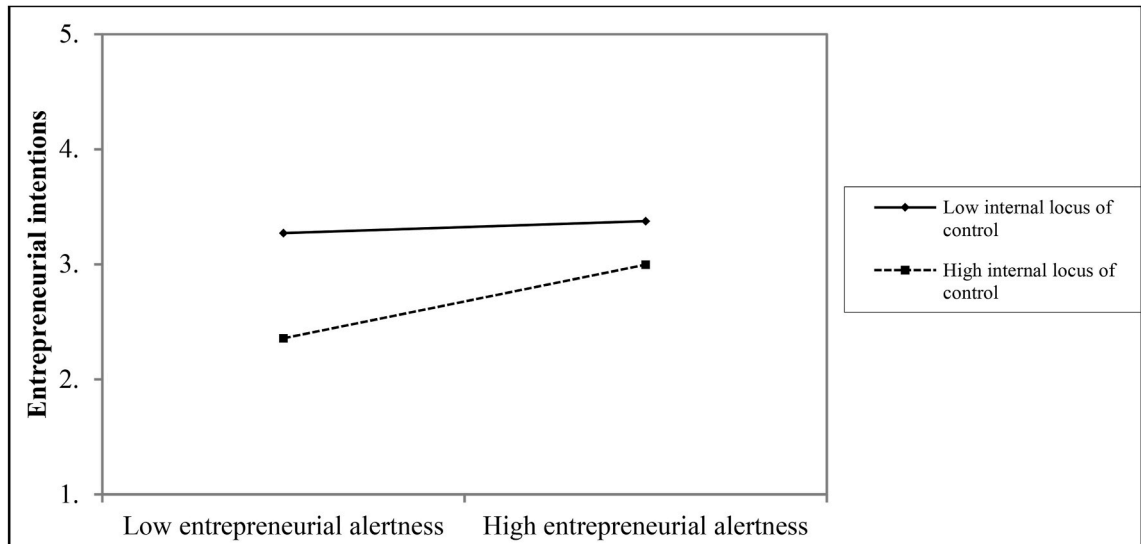


Fig. 2. The moderating role of ILoC in EA- EI relationship.

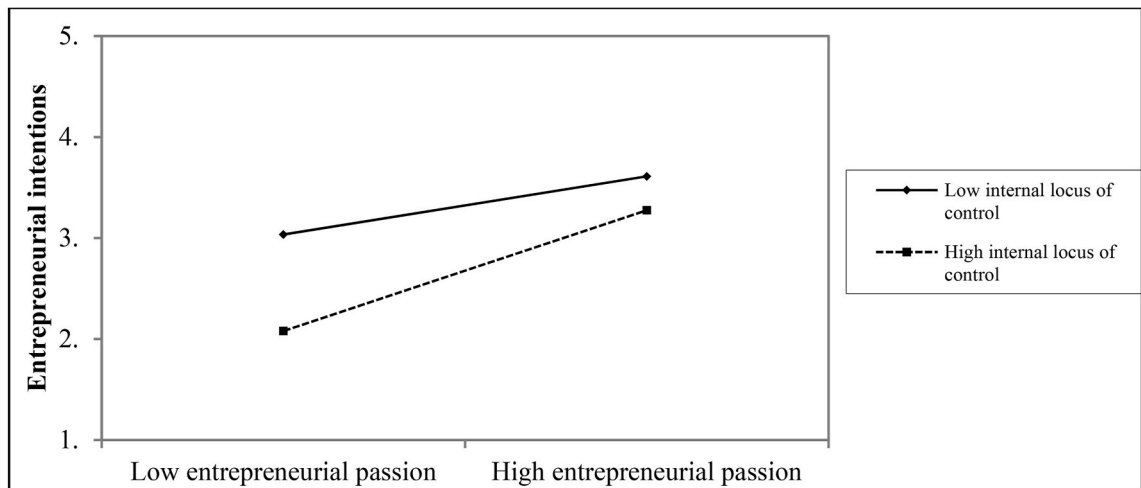


Fig. 3. The moderating role of ILoC in EP- EI relationship.

5. Discussion

5.1. Discussion of the results

First, no empirical evidence is observed for hypothesis H1 on the positive link between narcissism and EI. This result differs from the finding on the positive and significant association between narcissism and EI in some previous studies such as [Al-Ghazali and Afsar](#)

(2021), Gao and Huang (2022), Leung et al. (2021). However, our finding can be explained through dual full mediation mechanism of EA and EP between narcissism and EI (see further explanation in the theoretical implications section). Moreover, another potential explanation for the non-significant, positive association between narcissism and EI relates to our consideration of narcissism in general rather than looking at specific types of narcissism as suggested by some scholars (e.g., Baldegger et al., 2017; Wurst et al., 2017). Baldegger et al. (2017) found that narcissistic rivalry serves as a negative antecedent of EI while narcissistic admiration positively activates EI.

Second, our results lend support for hypotheses on the positive nexus between narcissism and EA (H2), the positive association between EA and EI (H3), and the full mediation of EA between narcissism and EI (H4). While the positive association between narcissism and EA has not been established in the literature, the positive impact of EA on EI is consonant with the result of prior studies such as Awwad and Al-Aseer (2021), Hu et al. (2018), and Obschonka and Hahn (2018). Nonetheless, with our finding on the role of EA as a mediator for narcissism and EI, the current study deviates from previous works that examined the mediating role of EA that links personality traits such as proactive personality (Hu et al., 2018) or openness and extraversion (Awwad & Al-Aseer, 2021) with EI.

Third, our findings provide support for hypotheses on the positive association between narcissism and EP (H5), the positive linkage between EP and EI (H6), and the full mediation of EP between narcissism and EI (H7). Though our result on H5 is partly consistent with the link between personal traits and EP (Dheer & Castrogiovanni, 2023; Kumar & Shukla, 2023), our study concentrates on narcissism, while prior studies consider personal traits such as cognitive adaptability (Dheer & Castrogiovanni, 2023) or entrepreneurial self-efficacy (Kumar & Shukla, 2023). Furthermore, our result on H6 is in harmony with the finding of prior works such as Dheer and Castrogiovanni (2023), Kumar and Shukla (2023), and Murad et al. (2021). Nevertheless, with the finding for H7 on the role of EP as a mediator between narcissism and EI, our study distinguishes itself from previous studies that investigated the mediating role of EP in linking personal traits such as cognitive adaptability (Dheer & Castrogiovanni, 2023) or entrepreneurial self-efficacy (Kumar & Shukla, 2023) with EI.

Finally, the results of our study lend evidence for the hypotheses H8 and H9 regarding the role of internal locus of control in intensifying the effects of EA and EP on EI respectively. Our finding partly echoes the moderating role of internal locus of control in prior studies such as Bernardus et al. (2020) and Hoang et al. (2022). Yet, in such studies, internal locus of control was found to positively moderate the relationship between entrepreneurial intention and entrepreneurial action (Bernardus et al., 2020) or the relationship between opportunity recognition on entrepreneurial intention (Hoang et al., 2022), while the current inquiry unfolds the role of internal locus of control as an intensifier for the associations of EA and EP with EI.

5.2. Theoretical implications

Our research results contribute to the stream of EI research on multiple fronts. First, the findings of the current research provide support for hypotheses concerning the role of EA and EP as dual full mediation mechanism for the effect of narcissism on EI. The present study advances the studies in the EI research stream that have concentrated on single mediation mechanism of entrepreneurial self-efficacy (Al-Ghazali & Afsar, 2021; Gao & Huang, 2022) or opportunity recognition (Hoang et al., 2022; Tucker et al., 2016) through which narcissism fosters EI. Furthermore, this study extends the stream of personality trait-EI research by identifying the role of narcissism in shaping EI through the dual mediation mechanism of EA and EP, which has scarcely been explored in this research strand (Liu et al., 2021).

Second, our study advances the EI literature by unfolding the moderating role of internal locus of control for the links of EA and EP with EI. Our study addresses Liu et al.'s (2021) call for investigating more boundary conditions underlying EI since Liu et al.'s (2021) systematic review of narcissism and entrepreneurship found that prior studies had mainly focused on entrepreneurial self-efficacy and resilience as boundary conditions in this research strand. Moreover, with the moderating effect of internal locus of control, our study extends some previous studies (e.g., Asante & Affum-Osei, 2019; Biswas & Verma, 2021), which have tended to examine the predictive role, rather than the moderating role, of locus of control for EI.

Last, our study provides contextual insights through unpacking the mechanisms underlying the positive link between narcissism and entrepreneurial intention in the Vietnamese context. Though studies in the stream of narcissism and EI research have been based on various contexts including both Western (e.g., Baldegger et al., 2017) and non-Western contexts (e.g., Al-Ghazali & Afsar, 2021; Gao & Huang, 2022; Wu et al., 2019), empirical evidence for the mechanisms underlying this relationship has not been obtained from the Vietnamese context except for the work of Lien et al. (2022) that reported the direct link between narcissism and start-up motives. Our study not only advances this research stream by considering the Vietnamese context but also indicates that narcissism, a Western-based concept, can be applicable to a non-Western context such as Vietnam.

Furthermore, cultural values of the Vietnamese context such as collectivism can provide a further explanation for the relationship between narcissism and EI in this context. Since those in individualistic cultures self-enhance with regard to their uniqueness and independence (Grijalva & Harms, 2014), narcissists in individualistic cultures incline to engage in entrepreneurial action because they can fulfill the need for self-importance and their uniqueness through a venture creation. However, since individuals in collectivistic cultures are expected to self-enhance with regard to their connectedness and social harmony (Grijalva & Harms, 2014), narcissists in collectivistic cultures are expected to self-enhance via developing pro-social start-up motives (Lien et al., 2022) rather than through a venture creation to achieve self-importance and their uniqueness. Hence, in collectivistic cultures, narcissism is more likely to relate to pro-social start-up motives (Lien et al., 2022) rather than entrepreneurial intention in general, which potentially explains the non-significant direct relationship between narcissism and generic EI in our study context. This indicates further investigations into social entrepreneurial intention, rather than EI in general, as an outcome of narcissism in collectivistic versus individualistic cultures (Porfirio et al., 2023). However, if narcissist individuals develop EA and EP, which drive them to self-enhance through passion,

enhanced capacity to identify market opportunities, and opportunities to grow professionally, then they may be more likely to undertake entrepreneurial action. This casts further light on the role of the dual mediation mechanism of EA and EP in channeling narcissism into EI.

5.3. Practical implications

The present study has a threefold practical contribution. First, the results indicate that narcissism promotes EA, which in turn enhances EI. Therefore, it is recommended that university students utilize the positive side of narcissism personality. University students should consistently self-motivate to seek for admiration and respect from others (Wu et al., 2022). For instance, they may actively innovate working ways and improve their capabilities through discussing their ideas with and learning from others, thereby gaining admiration, respect, compliment and indulgence from others (Hogan, 2017). Moreover, as EA is one of the mechanisms translating narcissism into EI, university students should pay more attention to recognizing entrepreneurial opportunities (Lanivich et al., 2022). For example, they can attend industrial training programs and conferences to learn new techniques and understand recent industrial tendencies to identify new business opportunities (Neneh, 2019; Obschonka et al., 2017). This study also advises university students to learn from success and failure experiences of other entrepreneurs to understand causes of these successes and failures. They thus can better identify entrepreneurial opportunities as well as avoid potential failures to the outmost extent, contributing to their EA and better channeling their narcissism into EI from a practical perspective.

Second, our empirical findings also support the idea that narcissism personality fosters EP, which in turn positively predicts EI. Thus, in addition to fostering EA, it is crucial for university students to nurture their EP. As EP is associated with passion for people and social mission (Cardon et al., 2017; Chandra et al., 2021), the present study advises university students to form partnership with peers and colleagues who also have passion for entrepreneurial activities. By so doing, they can further promote their EP. Moreover, to build social mission, university students could engage more in community service activities, such as youth career development, to realize their contribution to social development (García-Jurado et al., 2021), which might enhance their EP.

Last, the research findings show that internal locus of control strengthens the effects of both EA and EP on EI. As Thompson et al. (2020) suggest that internal locus of control can be developed over time, it is essential for university students to cultivate their confidence in their capabilities and endeavors, which is a key for entrepreneurship. Universities could introduce entrepreneurial mentor programs to help university students develop their entrepreneurial ideas and provide them with trainings to improve their entrepreneurial abilities (Chen et al., 2015). These programs can also provide students with positive feedback and recognition for their entrepreneurial abilities and endeavors (Wang et al., 2010).

6. Limitations and future studies

We acknowledge several limitations of this study and call for future research investigations. First, this research only uses the data from students, which might affect the generalizability of our findings. Since our study engaged with undergraduate students as participants, it could examine entrepreneurial intention but not their start-up behavior (Collins et al., 2016) or actions taken with the aim of starting a business as conducted in some previous studies (Rauch & Hulsink, 2015; Van Gelderen et al., 2015). As suggested by Rauch and Hulsink (2015), future research is encouraged to use entrepreneurship students from master's programs or entrepreneurs to investigate venture creation behavior or actions taken with the purpose to start a venture. Second, we only consider the mediating roles of EA and EP. While existing studies have reported some boundary conditions, such as self-control (Van Gelderen et al., 2015) or proactive personality (Li et al., 2020), that strengthen the translation of entrepreneurial intention into entrepreneurial action, more boundary conditions should be explored in future research of venture creation actions. Therefore, we recommend that future studies investigate the role of other mediators in translating narcissism into EI. Last, the causality findings of this research might not fully reflect the long-term effect of narcissism on EI. Thus, using a longitudinal or experimental design could enhance our understanding of the contribution of narcissism to EI.

Credit author statement

Giang Hoang: Conceptualization, Investigation, Data Curation, Methodology, Software, Formal analysis, Writing - Original Draft, Writing - review & editing.

Tuan Luu: Conceptualization, Investigation, Data Curation, Methodology, Software, Formal analysis, Writing - Original Draft, Writing - review & editing.

Quan Tran: Investigation, Writing - Original Draft, Writing - review & editing.

Mingjun Yang: Investigation, Writing - Original Draft, Writing - review & editing.

Declaration of competing interest

None.

Data availability

The data that has been used is confidential.

References

- Al-Ghazali, B. M., & Afsar, B. (2021). Narcissism and entrepreneurial intentions: The roles of entrepreneurial self-efficacy and environmental complexity. *The Journal of High Technology Management Research*, 32(1), Article 100395.
- Arkorful, H., & Hilton, S. K. (2021). Locus of control and entrepreneurial intention: A study in a developing economy. *Journal of Economic and Administrative Sciences* (In printing).
- Asante, E. A., & Affum-Osei, E. (2019). Entrepreneurship as a career choice: The impact of locus of control on aspiring entrepreneurs' opportunity recognition. *Journal of Business Research*, 98, 227–235.
- Audretsch, D. B., & Fiedler, A. (2021). The Vietnamese entrepreneurship paradox: How can entrepreneurs thrive without political and economic freedom? *The Journal of Technology Transfer*, 1–19 (In Printing).
- Awad, M. S., & Al-Aseer, R. M. N. J. (2021). Big five personality traits impact on entrepreneurial intention: The mediating role of entrepreneurial alertness. *Asia Pacific Journal of Innovation and Entrepreneurship*, 15(1), 87–100.
- Bagozzi, R. P., & Youjae, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74.
- Baldegger, U., Schroeder, S. H., & Furtner, M. R. (2017). The self-loving entrepreneur: Dual narcissism and entrepreneurial intention. *International Journal of Entrepreneurial Venturing*, 9(4), 373–391.
- Bernardus, D., Murwani, F. D., Ardyan, E., Padmawidjaja, L., Aji, I. D. K., Jatiperwira, S. Y., Kusumojanto, D. D., Wardoyo, C., & Hermanto, Y. B. (2020). Which psychological characteristics strengthen "The entrepreneurial intention-action relationship"? An extension of the theory of planned behavior. *Cogent Business & Management*, 7(1), Article 1823579.
- Biraglia, A., & Kadile, V. (2017). The role of entrepreneurial passion and creativity in developing entrepreneurial intentions: Insights from American homebrewers. *Journal of Small Business Management*, 55(1), 170–188.
- Biswas, A., & Verma, R. K. (2021). Attitude and alertness in personality traits: A pathway to building entrepreneurial intentions among university students. *Journal of Entrepreneurship*, 30(2), 367–396.
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.
- Brownell, K. M., McMullen, J. S., & O'Boyle Jr, E. H. (2021). Fatal attraction: A systematic review and research agenda of the dark triad in entrepreneurship. *Journal of Business Venturing*, 36(3), Article 106106.
- Brownell, K. M., Quinn, A., & Bolinger, M. T. (2023). The triad divided: A curvilinear mediation model linking founder machiavellianism, narcissism, and psychopathy to new venture performance. *Entrepreneurship Theory and Practice*, Article 10422587231173684.
- Brunell, A. B., Gentry, W. A., Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., & DeMarree, K. G. J. (2008). Leader emergence: The case of the narcissistic leader. *Personality and Social Psychology Bulletin*, 34(12), 1663–1676.
- Cardon, M. S., Glauser, M., & Murnieks, C. Y. (2017). Passion for what? Expanding the domains of entrepreneurial passion. *Journal of Business Venturing Insights*, 8, 24–32.
- Cardon, M. S., Gregoire, D. A., Stevens, C. E., & Patel, P. C. (2013). Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of Business Venturing*, 28(3), 373–396.
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3), 511–532.
- Chandra, Y., Tjipto, F., & Setyawan, A. (2021). The promise of entrepreneurial passion to advance social entrepreneurship research. *Journal of Business Venturing Insights*, 16, Article e00270.
- Chen, S.-C., Hsiao, H.-C., Chang, J.-C., Chou, C.-M., Chen, C.-P., & Shen, C.-H. (2015). Can the entrepreneurship course improve the entrepreneurial intentions of students? *The International Entrepreneurship and Management Journal*, 11(3), 557–569.
- Choi, J., & Hwang, K. (2020). The effects of nascent entrepreneurs' positive psychological capital and public self-consciousness on entrepreneurial intentions. *Journal of Information Technology Applications and Management*, 27(1), 15–47.
- Collins, J. D., McMullen, J. S., & Reutzell, C. R. (2016). Distributive justice, corruption, and entrepreneurial behavior. *Small Business Economics*, 47, 981–1006.
- Dheer, R. J., & Castrogiovanni, G. J. (2023). Cognitive adaptability's impact on entrepreneurial intent: The mediating roles of entrepreneurial passion and efficacy. *Journal of Business Research*, 160, Article 113798.
- Elnadi, M., & Gheith, M. H. (2023). The role of individual characteristics in shaping digital entrepreneurial intention among university students: Evidence from Saudi Arabia. *Thinking Skills and Creativity*, 47, Article 101236.
- Foo, M.-D., Uy, M. A., & Baron, R. A. (2009). How do feelings influence effort? An empirical study of entrepreneurs' affect and venture effort. *Journal of Applied Psychology*, 94(4), 1086.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Gao, S.-Y., & Huang, J. (2022). Effect of narcissistic personality on entrepreneurial intention among college students: Mediation role of entrepreneurial self-efficacy. *Frontiers in Psychology*, 12, 6702.
- García-Jurado, A., Pérez-Barea, J. J., & Nova, R. J. (2021). A new approach to social entrepreneurship: A systematic review and meta-analysis. *Sustainability*, 13(5), 2754.
- Grijalva, E., & Harms, P. D. (2014). Narcissism: An integrative synthesis and dominance complementarity model. *Academy of Management Perspectives*, 28(2), 108–127.
- Gubik, A. S., & Vörös, Z. (2023). Why narcissists may be successful entrepreneurs: The role of entrepreneurial social identity and overwork. *Journal of Business Venturing Insights*, 19, Article e00364.
- Gurel, E., Madanoğlu, M., & Altınay, L. (2021). Gender, risk-taking and entrepreneurial intentions: Assessing the impact of higher education longitudinally. *Education + Training*, 63(5), 777–792.
- Hair, J., Anderson, R., Babin, B., & Black, W. (2010). *Multivariate data analysis: A global perspective*, 7. Upper Saddle River, NJ: Pearson.
- Hanson, S. K., Valentine, S. R., & Shultz, P. L. (2023). Bright or dark, vain or villainous? How entrepreneurial fitness, machiavellianism and narcissism relate to entrepreneurial intention. *Journal of Management and Organization*, 1–24.
- Hart, W., Kinrade, C., Xia, M., & Lambert, J. T. (2021). The positive-passion hypothesis: Grandiose but not vulnerable narcissism relates to high-approach positive affect following provocation. *Personality and Individual Differences*, 180, Article 110983.
- Hmieleski, K. M., & Lerner, D. A. (2016). The dark triad and nascent entrepreneurship: An examination of unproductive versus productive entrepreneurial motives. *Journal of Small Business Management*, 54, 7–32.
- Hoang, G., Le, T. T. T., Tran, A. K. T., & Du, T. (2020). Entrepreneurship education and entrepreneurial intentions of university students in Vietnam: The mediating roles of self-efficacy and learning orientation. *Education + Training*, 63(1), 115, 113.
- Hoang, G., Luu, T. T., Le, T. T. T., & Tran, A. K. T. (2022). Dark Triad traits affecting entrepreneurial intentions: The roles of opportunity recognition and locus of control. *Journal of Business Venturing Insights*, 17, Article e00310.
- Hogan, R. (2017). *Personality and the fate of organizations*. Psychology Press.
- 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.
- Huy, V. Q. (2023). Vietnam innovation and tech investment report 2023. https://nic.gov.vn/wp-content/uploads/2023/03/ENG_Vietnam-Innovation-Tech-Investment-Report-2023-1.pdf.
- Huyghe, A., Knockaert, M., & Obschonka, M. (2016). Unraveling the "passion orchestra" in academia. *Journal of Business Venturing*, 31(3), 344–364.
- Jena, R. (2020). Measuring the impact of business management student's attitude towards entrepreneurship education on entrepreneurial intention: A case study. *Computers in Human Behavior*, 107, Article 106275.
- Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment*, 22(2), 420.

- Jones, D. N., & Figueredo, A. J. (2013). The core of darkness: Uncovering the heart of the Dark Triad. *European Journal of Personality*, 27(6), 521–531.
- Judge, T. A., LePine, J. A., & Rich, B. L. (2006). Loving yourself abundantly: Relationship of the narcissistic personality to self-and other perceptions of workplace deviance, leadership, and task and contextual performance. *Journal of Applied Psychology*, 91(4), 762.
- Karimi, S. (2020). The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics*, 52(3), 331–344.
- Kirzner, I. (1979). *Perception, opportunity, and profit*. Chicago: University of Chicago Press.
- Kock, N. (2017). Common method bias: A full collinearity assessment method for PLS-SEM. In *Partial least squares path modeling* (pp. 245–257). Springer.
- Kumar, R., & Shukla, S. (2023). A theory-based approach to model entrepreneurial intentions: Exploring the role of creativity, proactive personality and passion. *Higher Education, Skills and Work-based Learning*, 13(2), 355–370.
- Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship Theory and Practice*, 31(3), 341–364.
- Lanivich, S. E., Smith, A., Levasseur, L., Pidduck, R. J., Busenitz, L., & Tang, J. (2022). Advancing entrepreneurial alertness: Review, synthesis, and future research directions. *Journal of Business Research*, 139, 1165–1176.
- Leung, Y. K., Franken, I., Thurik, R., Driessen, M., Kamei, K., Torrès, O., & Verheul, I. (2021). Narcissism and entrepreneurship: Evidence from six datasets. *Journal of Business Venturing Insights*, 15, Article e00216.
- Lí, 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.
- Lien, T. T. H., Anh, T. T., Anh, T. N., Anh, L. H. T., & Thao, N. T. T. (2022). Selfish personalities influencing start-up intention and motivation: A study of Vietnam. *Journal of Innovation and Entrepreneurship*, 11(1), 15.
- Lim, W., Lee, Y., & Al Mamun, A. (2021). Delineating competency and opportunity recognition in the entrepreneurial intention analysis framework. *Journal of Entrepreneurship in Emerging Economies*. In printing.
- 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.
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *The International Entrepreneurship and Management Journal*, 11(4), 907–933.
- Liu, D., Zhu, T., Huang, X., Wang, M., & Huang, M. (2021). Narcissism and entrepreneurship: A systematic review and an agenda for future research. *Frontiers in Psychology*, 12, Article 657681.
- Malik, M. A. R., Butt, A. N., & Choi, J. N. (2015). Rewards and employee creative performance: Moderating effects of creative self-efficacy, reward importance, and locus of control. *Journal of Organizational Behavior*, 36(1), 59–74.
- McLarty, B. D., Skorodzievskiy, V., & Muldoon, J. (2021). The Dark Triad's incremental influence on entrepreneurial intentions. *Journal of Small Business Management*, 1–29. In Printing.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152.
- Ministry of Science and Technology of Vietnam. (2018). Introduction to the “support innovative Startup ecosystem in Vietnam until 2025” national program (ISEV). <http://en.dean844.most.gov.vn/gioi-thieu.htm>.
- Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51–75.
- Murad, M., Lí, C., Ashraf, S. F., & Arora, S. (2021). The influence of entrepreneurial passion in the relationship between creativity and entrepreneurial intention. *International Journal of Global Business and Competitiveness*, 16(1), 51–60.
- Murnieks, C. Y., Mosakowski, E., & Cardon, M. S. (2014). Pathways of passion: Identity centrality, passion, and behavior among entrepreneurs. *Journal of Management*, 40(6), 1583–1606.
- Neneh, B. N. (2019). From entrepreneurial alertness to entrepreneurial behavior: The role of trait competitiveness and proactive personality. *Personality and Individual Differences*, 138, 273–279.
- Neneh, B. N. (2020). Entrepreneurial passion and entrepreneurial intention: The role of social support and entrepreneurial self-efficacy. *Studies in Higher Education*, 1–17 (In printing).
- Neneh, B. N. (2022). Entrepreneurial passion and entrepreneurial intention: The role of social support and entrepreneurial self-efficacy. *Studies in Higher Education*, 47(3), 587–603.
- Ng, T. W., Sorensen, K. L., & Eby, L. T. (2006). Locus of control at work: A meta-analysis. *Journal of Organizational Behavior*, 27(8), 1057–1087.
- Nguyen, C. (2017). Entrepreneurial intention of international business students in Viet Nam: A survey of the country joining the trans-pacific partnership. *Journal of Innovation and Entrepreneurship*, 6(1), 1–13.
- Nguyen, Q. A., Sullivan Mort, G., & D'Souza, C. (2015). Vietnam in transition: SMEs and the necessitating environment for entrepreneurship development. *Entrepreneurship & Regional Development*, 27(3–4), 154–180.
- Nowiński, W., Haddoud, M. Y., Lančarić, D., Egerová, D., & Czeglédi, C. (2019). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 44(2), 361–379.
- Nwosu, H. E., Obidike, P. C., Ugwu, J. N., Udeze, C. C., & Okolie, U. C. (2022). Applying social cognitive theory to placement learning in business firms and students' entrepreneurial intentions. *International Journal of Management in Education*, 20(1), Article 100602.
- Obschonka, M., & Hahn, E. (2018). Personal agency in newly arrived refugees: The role of personality, entrepreneurial cognitions and intentions, and career adaptability. *Journal of Vocational Behavior*, 105, 173–184.
- Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: Entrepreneurial alertness and intention in the transition to adulthood. *Small Business Economics*, 48(3), 487–501.
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556–563.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management Studies*, 12(4), 531–544.
- Porfirio, J. A., Felício, J. A., Carrilho, T., & Jardim, J. (2023). Promoting entrepreneurial intentions from adolescence: The influence of entrepreneurial culture and education. *Journal of Business Research*, 156, Article 113521.
- Raskin, R., Novacek, J., & Hogan, R. (1991). Narcissism, self-esteem, and defensive self-enhancement. *Journal of Personality*, 59(1), 19–38.
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *The Academy of Management Learning and Education*, 14(2), 187–204.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80.
- Tang, J., Kacmar, K. M. M., & Busenitz, L. (2012). Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, 27(1), 77–94.
- Thompson, C. L., Kua, A. T., Foong, R., & Ng, E. S. (2020). The development of emotional intelligence, self-efficacy, and locus of control in Master of Business Administration students. *Human Resource Development Quarterly*, 31(1), 113–131.
- Tolentino, L. R., Sedoglavich, V., Lu, V. N., Garcia, P. R. J. M., & Restubog, S. L. D. (2014). The role of career adaptability in predicting entrepreneurial intentions: A moderated mediation model. *Journal of Vocational Behavior*, 85(3), 403–412.
- Tucker, R. L., Lowman, G. H., & Marino, L. D. (2016). Dark triad traits and the entrepreneurial process: A person-entrepreneurship perspective. In *Research in personnel and human resources management*. Emerald Group Publishing Limited.
- Twenge, J. M., Konrath, S., Foster, J. D., Keith Campbell, W., & Bushman, B. J. (2008). Egos inflating over time: A cross-temporal meta-analysis of the narcissistic personality inventory. *Journal of Personality*, 76(4), 875–902.
- Valliere, D. (2013). Towards a schematic theory of entrepreneurial alertness. *Journal of Business Venturing*, 28(3), 430–442.

- Van Gelderen, M., Kautonen, T., & Fink, M. (2015). From entrepreneurial intentions to actions: Self-control and action-related doubt, fear, and aversion. *Journal of Business Venturing*, 30(5), 655–673.
- Wang, S., Tomlinson, E. C., & Noe, R. A. (2010). The role of mentor trust and protégé internal locus of control in formal mentoring relationships. *Journal of Applied Psychology*, 95(2), 358.
- Wu, W., Su, Y., Huang, X., Liu, W., & Jiang, X. (2020). The dark triad, moral disengagement, and social entrepreneurial intention: Moderating roles of empathic concern and perspective taking. *Frontiers in Psychology*, 11, 1520.
- Wu, W., Wang, H., & Wang, X. (2022). Entrepreneur narcissism and new venture performance: A learning perspective. *Journal of Business Research*, 149, 901–915.
- Wu, W., Wang, H., Zheng, C., & Wu, Y. J. (2019). Effect of narcissism, psychopathy, and machiavellianism on entrepreneurial intention—the mediating of entrepreneurial self-efficacy. *Frontiers in Psychology*, 10, 360.
- Wurst, S. N., Gerlach, T. M., Dufner, M., Rauthmann, J. F., Grosz, M. P., Küfner, A. C., Denissen, J. J., & Back, M. D. (2017). Narcissism and romantic relationships: The differential impact of narcissistic admiration and rivalry. *Journal of Personality and Social Psychology*, 112(2), 280.

Giang Hoang (PhD, Victoria University) is a Lecturer at RMIT University, Vietnam. His teaching and research interests are in the areas of leadership, innovation, entrepreneurship and entrepreneurship education. He has published research papers in journals such as *Journal of Business Venturing Insights*, *Higher Education*, *Leadership & Organization Development Journal*, *Journal of Services Marketing*, *International Journal of Hospitality Management*, *Employee Relations*, among others.

Tuan Trong Luu (PhD, Asian Institute of Technology) is an Associate Professor at Swinburne Business School, Swinburne University of Technology, Australia. His research interests include organizational behavior and human resource management. Widely published his research has appeared in refereed academic journals such as *Tourism Management*, *International Journal of Hospitality Management*, *Journal of Business Ethics*, *Group & Organization Management*, *Journal of Business Research*, *Industrial Marketing Management*, among others.

Quan Tran (MBA, RMIT University) is a PhD student in Education at Victoria University. His research interests are in the areas of education and organizational training. His current research relates to virtual internship, post-digital learning spaces and their impact on students learning.

Mingjun Yang currently is a lecturer at La Trobe Business School, La Trobe University. She received her PhD degree from Swinburne Business School, Swinburne University of Technology, Hawthorn, Australia. She received her master's degree from the University of Melbourne, Parkville, Australia. Her research interests include human resource management, leadership, organizational behavior, organizational culture, group diversity and multilevel modelling. She widely published her research in refereed academic journals such as *International Journal of Hospitality Management*, *International Journal of Contemporary Hospitality Management*, *Journal of Hospitality and Tourism Management*, among others.