EXTENDED ABSTRACT

Entrepreneurial Alertness as cognitive bridge between Entrepreneurial Self-Efficacy and New Venture Creation Behaviour

Contextual headwinds impeding the crossing

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1. Introduction

In entrepreneurship research, a central question concerns how opportunities are discovered, created, and exploited, by whom, and with what consequences (Shane & Venkataraman, 2000). A key aspect in this regard is new venture creation, consisting of planning, organizing, and establishing new organizations. (Shook et al., 2003). New venture creation is widely recognized as a fundamental driver for economic growth by contributing to job creation, the emergence of new industries, technological innovations, and offering solutions to both social and environmental challenges (Eftekhari & Bogers, 2015; Shepherd et al., 2021). Given its importance, research has sought to uncover the drivers of new venture creation behaviour (Shepherd et al., 2021), with particular focus on entrepreneurial intentions as key predictors (Fayolle & Liñán, 2014; Neneh, 2019).

Nevertheless, entrepreneurial intentions do not always translate into action, with empirical findings suggesting that entrepreneurial intentions account for less than 30 percent of the variance in entrepreneurial action, meaning that many nascent entrepreneurs discontinue their efforts and do not create a new venture (Kautonen et al., 2015; Li et al., 2020; Shirokova et al., 2016). This highlights the need for a deeper understanding of the factors that hinder or enable new venture creation behaviour. One explanation may lie in the fact that entrepreneurial cognition can help nascent entrepreneurs cope with the challenges and obstacles involved in new venture creation (Forbes, 1999). Drawing on social cognitive career theory (SCCT) (Lent, 1994) it is emphasized that occupation-specific self-efficacy, such as entrepreneurial self-efficacy and key cognitive skills, such as entrepreneurial alertness, may act as critical factors to overcome the challenges involved in new venture creation (Baron, 2007; Cardon & Kirk, 2015).

However, cognitive-person factors alone are insufficient to explain the emergence of new venture creation behaviour. Existing research often underestimates how nascent entrepreneurs' subjective perceptions of the environment, shaped by signals from entrepreneurship-support actors (e.g., investors, universities,…), may influence decisions to create new ventures. Entrepreneurship support actors typically send deliberate, positive signals to nascent entrepreneurs that encourage new venture creation (Bafera & Kleinert, 2023; Donaldson et al., 2024). However, unintentional signals with adverse effects

may arise (Bafera & Kleinert, 2023). For example, when an investor does not follow through on a promised investment to a nascent entrepreneur, this may send an unintentional negative signal, discouraging other nascent entrepreneurs from creating new ventures (Donaldson et al., 2024).

By integrating social cognitive career theory with signaling theory, this research investigates how both cognitive-person factors and external environmental signals jointly influence new venture creation behaviour. In particular, by looking at unintentional adverse signals sent by entrepreneurship support actors that act as career barriers, preventing nascent entrepreneurs from creating new ventures.

2. Literature and hypotheses development

2.1 SCCT and signaling theory

Grounded in Bandura's (1986) social cognitive theory, social cognitive career theory (SCCT) is a widely validated and accepted framework for understanding how individuals form career interests and make career-related choices. In the context of entrepreneurship, it has been applied to explain how nascent entrepreneurs pursue an entrepreneurial career by creating a new venture (Meoli et al., 2020). SCCT operates on two complementary levels of analysis. The first emphasizes cognitive-person factors, such as a nascent entrepreneur's confidence in their entrepreneurial skills and knowledge, referred to as entrepreneurial self-efficacy. This belief plays a crucial role in enabling individuals to exercise agency *(i.e., personal control)* in new venture creation behaviour (Lent et al., 2000; Lent & Brown, 2019). The second level highlights the role of contextual influences, which moderate the relationship between cognitive-person factors and new venture creation behavior. Favorable environmental conditions strengthen the relationship, whereas less supportive environments may weaken it (Lent et al., 2000; Meoli et al., 2020). Consequently, even a highly self-efficacious nascent entrepreneur, possessing strong confidence in entrepreneurial skills and knowledge, may be discouraged from creating a new venture when faced with an unsupportive environment for entrepreneurship (Brown & Lent, 1996; Mueller, 2006).

While SCCT acknowledges the influence of environmental conditions on entrepreneurial decision-making, it primarily focuses on cognitive-person factors (Lent et al., 2000). To address this limitation,

scholars have integrated additional theoretical frameworks, such as institutional theory, which helps to capture macro-level structural barriers towards a career choice as entrepreneur (Al-Waqfi & Forstenlechner, 2012; Camelo-Ordaz et al., 2020; Meoli et al., 2020). However, such an approach does not take into account that nascent entrepreneurs often operate under conditions of high uncertainty and incomplete information (Townsend et al., 2018) and form subjective, individual interpretations of the environment (Lent et al., 2000). Signaling theory (Spence, 1973) addresses this critical gap by offering a theoretical framework to understand how nascent entrepreneurs' appraisal of the environment through the observation of cues, or signals, will alter their perceptions and, in turn, their career decisions (Chang & Busser, 2020) providing a more fine-grained understanding of how environmental conditions interact with internal cognitive processes.

Entrepreneurship support actors deliberately send positive signals to nascent entrepreneurs to communicate information about their underlying qualities, reducing uncertainty for nascent entrepreneurs (Bafera & Kleinert, 2023; Donaldson et al., 2024). For example, investors send signals about their financial power to nascent entrepreneurs to display added value and their capacity to execute follow-up investments (Mason et al., 2019). However, entrepreneurship support actors also send unintentional signals (Zhou et al., 2020). Any observable cue of an entrepreneurship support actor that a nascent entrepreneur receives can serve as an unintentional signal (Donaldson et al., 2024). While deliberate signals are primarily positive, unintentional signals can have adverse effects (Bafera & Kleinert, 2023). For example, if an investor does not follow through on their promises to an entrepreneur, this sends an unintentional signal with adverse effects to nascent entrepreneurs (Donaldson et al., 2024). In that sense, unintentional signals with adverse effects, sent by entrepreneurship support actors, can act as career barriers, preventing nascent entrepreneurs from pursuing an entrepreneurial career (Cadaret et al., 2017; Dahling & Thompson, 2010; Thiem & Dasgupta, 2022).

2.2 Entrepreneurial self-efficacy and new venture creation behavior

Two main types of self-efficacy are commonly discussed in academic literature: domain-specific self-efficacy and generalized self-efficacy. While generalized self-efficacy is regarded as a personal input variable, domain-specific self-efficacy (e.g., self-efficacy towards a career as an entrepreneur) is

considered a core motivational element of cognition (Liguori et al., 2018). According to SCCT, occupation-specific self-efficacy, rather than generalized self-efficacy, plays a crucial role in new venture creation behaviour. Individuals are more likely to pursue and succeed in an entrepreneurial occupation if they have high occupation-specific self-efficacy (Lent et al., 1994). This makes occupation-specific self-efficacy essential for understanding new venture creation behaviour (Lent & Hackett, 1987). In the context of entrepreneurship, entrepreneurial self-efficacy is a type of occupation-specific self-efficacy that reflects an individual's belief in their capability to perform entrepreneurial tasks and roles (Newman et al., 2019). Consequently, entrepreneurial self-efficacy plays a key role in the decision of a nascent entrepreneur to pursue an entrepreneurial career (Chen et al., 1998).

An extensive amount of research investigates the relationship between a nascent entrepreneur's self-efficacy and entrepreneurial intentions (Kickul et al., 2009). We acknowledge the literature using entrepreneurial intentions to predict behavior, such as new venture creation (Neneh, 2019; Shook et al., 2003; Wu et al., 2022). However, it is crucial to consider other theoretical perspectives, as entrepreneurial intentions have reigned in the entrepreneurship literature for years (Batista-Canino et al., 2024). Intentions are not sufficient to explain actual entrepreneurial behaviour (Roelandt & Andries, 2025) as creating a new venture is a complex goal that requires considerable effort to complete and involves multiple actions that need to be performed (Kautonen et al., 2015). Findings suggest that entrepreneurial intentions explain less than 30 percent of the variance in entrepreneurial behaviour (Kautonen et al., 2015; Li et al., 2020; Shirokova et al., 2016). Many nascent entrepreneurs do not follow up on their entrepreneurial intentions and drop out, not creating a new venture (Bogatyreva et al., 2019; Gieure et al., 2020; Ivanova & Tornikoski, 2024; Shirokova et al., 2016).

According to SCCT, entrepreneurial self-efficacy is linked to entrepreneurial behaviour, such as new venture creation behaviour (Lent, 1994). Similarly, Cassar & Friedman (2009) found that ESE predicted greater investment of personal funds and hours worked in a venture, resulting in a greater likelihood of a venture being launched. ESE encourages higher commitment to goals and reduced chances of disengagement with a new venture after one year (Khan et al., 2014). Trevelyan (2011) found that ESE positively affects entrepreneurs' efforts towards action- and decision-type tasks. Entrepreneurial self-

efficacy thus affects how much effort individuals are willing to exert to pursue their goals, resulting in nascent entrepreneurs high in ESE being more likely to engage in entrepreneurial behaviours (Tang et al., 2023). However, measuring entrepreneurial behaviour can be complex and challenging. One would need to possess unique data to capture new venture creation behaviour (Batista-Canino et al., 2024). While several studies found a positive influence of a nascent entrepreneur's ESE on new venture creation behaviour, inconclusive results remain (Newman et al., 2019).

H1: Entrepreneurial self-efficacy positively influences new venture creation behavior

2.3 The mediating role of entrepreneurial alertness

Entrepreneurial alertness is a crucial cognitive skill driving opportunity identification (Gaglio & Katz, 2001). It was initially conceptualized as the ability to notice opportunities that others have overlooked (Kirzner, 1979). Important contributions from Gaglio & Katz (2001), Baron (2007), and Valliere (2013) illustrate the theoretical evolution that took place over the years, which has led to alertness' conceptualization as a cognitive information processing skill that drives opportunity recognition (Korsgaard et al., 2016; Sharma, 2019). Entrepreneurial alertness is not static but a complex skill to possess, and that can be developed, meaning that significant variations among nascent entrepreneurs' ability to be alert to new, innovative opportunities exist (Valliere, 2013).

ESE provides nascent entrepreneurs with the confidence that they can execute entrepreneurial tasks, like the identification of new business opportunities, the creation of new products, thinking creatively and commercializing an idea or new development (Zhao et al., 2005) this confidence increases the likelihood of the nascent entrepreneur engaging in entrepreneurial tasks, as self-efficacy beliefs will influence goal-directed behaviour (Lent, 1994). However, to successfully perform entrepreneurial tasks, a nascent entrepreneur needs to develop entrepreneurial alertness (Tang et al., 2023). In this regard, entrepreneurial alertness is crucial so that a nascent entrepreneur can scan and search for new business opportunities, associate and connect information to think creatively and create new products, and to evaluate and make judgements to assess the commercializability of an idea (Tang et al., 2012)

Prior studies have looked into the relationship between entrepreneurial alertness and entrepreneurial intentions (Campos et al., 2017; Hu et al., 2018; Obschonka et al., 2017). Although the theory of planned behaviour assumes that entrepreneurial intentions will lead to new venture creation behaviour, it was found that intentions do not always translate into entrepreneurial behaviour. A nascent entrepreneur can decide not to exploit a discovered opportunity. Yet, there is limited research exploring the connection between entrepreneurial alertness and actual entrepreneurial behaviour (Li et al., 2020). The discovery of new and innovative opportunities is associated with engagement in actual new venture creation behaviour to exploit the discovered new and innovative opportunity effectively (Dyer et al., 2008). Entrepreneurial alertness is the primary mechanism that enables entrepreneurs to identify and fill the gaps in the marketplace with new opportunities that create wealth (Araujo et al., 2023).

H2: Entrepreneurial alertness mediates the relationship between entrepreneurial self-efficacy and new venture creation behavior

2.4. Negatively moderating role of perceived barriers to university collaboration on the relationship between ESE and EA

The development of entrepreneurial alertness depends on nascent entrepreneurs being able to access new and innovative external information (Minniti, 2004). Nascent entrepreneurs will draw new and innovative information from their environments and connect it to formulate new venture ideas (Lanivich et al., 2022). Universities play a key role in providing new and innovative knowledge by conducting academic research. The new and innovative knowledge produced by academic research will spill over to the external environment in geographic proximity to the university. It was found that universities with a greater knowledge output also generated a higher number of technology startups (Audretsch & Lehmann, 2005). When nascent entrepreneurs observe a pool of new and innovative information, it leads them to develop entrepreneurial alertness (Roundy & Im, 2024).

However, the pool of new and innovative information can appear inaccessible to nascent entrepreneurs due to perceived barriers to fruitful collaboration with universities. Differences in organizational culture, misalignment of incentives, and problems related to project management have been recognized as major

negative signals preventing firms from collaborating with the university (Perkmann et al., 2011). Additionally, the long-term orientation of universities and extensive regulations were shown to deter firms from collaborating with universities. It was shown that these signals are even more pronounced in contexts where a firm has not collaborated before with a university, such as in nascent entrepreneurship (Bruneel et al., 2010). Additionally, gaining access to university-generated knowledge often requires pre-existing relationships, informal networks, or specialized knowledge intelligence systems (Nasirov & Joshi, 2023). These negative signals generate a perception within nascent entrepreneurs that it is difficult to collaborate with universities (Siegel et al., 2003).

The nascent entrepreneurs' interpretation of signals and consequent perception will influence their decision to turn their entrepreneurial self-efficacy into the skill of entrepreneurial alertness necessary to pursue an entrepreneurial career (Connelly et al., 2011).

H3: The positive effect of entrepreneurial self-efficacy on entrepreneurial alertness is negatively moderated by perceived barriers to university collaboration, such that the effect becomes less positive.

2.5. The negatively moderating role of perceived barriers to venture capital on the relationship between EA and NVCB

To pursue new and innovative discovered opportunities, nascent entrepreneurs need to create a new venture, which is costly and typically requires external venture capital (Eckhardt et al., 2006). However, without an established reputation, nascent entrepreneurs often receive negative signals about the possibilities to collaborate with a venture capitalist. Nascent entrepreneurs often face difficulties in obtaining the necessary external capital to pursue a new and innovative opportunity (Hsu & Kaplan, 2004). Nascent innovative entrepreneurs often do not yet generate revenue and tend to possess assets that are knowledge-based and intangible, making it difficult for investors to observe the quality and value of the new venture (Audretsch et al., n.d.). External funding sources are often unavailable to nascent entrepreneurs due to their small size, unknown track record, and future uncertainty (Liao et al., 2008). According to signaling theory, these signals will influence the perception of the nascent

entrepreneur on the existence of a career barrier. A nascent entrepreneur will not turn their alertly discovered opportunities into new ventures as they expect no positive outcomes to be gained.

H4: The positive effect of entrepreneurial alertness on new venture creation behavior is negatively moderated by perceived barriers to venture capital, such that the effect becomes less positive. (H4)

3. Methodology

3.1 Sample

In recent studies, it is increasingly recommended to study the new venture creation behavior of actual nascent entrepreneurs from the general working age population, as this provides a robust alternative to overcome the aforementioned current shortcomings in the literature that scholars face today (Roelandt et al., 2023; Shepherd et al., 2021). Therefore, we collected data from Belgian nascent entrepreneurs, defined in line with the dominant literature as individuals who have been actively trying to start a new business in the past months and whose endeavors cannot have already led to the creation of the envisioned firm (Reynolds, 2009). This approach enables a large sampling variety to study the concepts central to this study. Because nascent entrepreneurs are one of the most difficult samples to reach and study in entrepreneurship, as they are not readily detectable in the general population, we cooperated with a reputable Belgian news media outlet (Mediahuis). Through the shared contact lists of subscribers to newspapers Het Nieuwsblad and HBvL, we invited the Belgian working-age population to participate voluntarily in a general study about entrepreneurship, which was deliberately framed to avoid disclosing the main objective of this study. We did so to prevent biases and to avoid the possibility that otherwise highly motivated (passionate) nascent entrepreneurs would particularly feel attracted to participate. We also stressed the conciseness of the survey for the same reason (average completion time of fourteen minutes).

First, to identify nascent entrepreneurs, in line with recent works like Roelandt et al. (2023), (1) we asked respondents whether they currently are trying to start a new business, followed by (2) whether they have undertaken any active efforts in the past 6 months to start this new business. If respondents answered yes to these questions, they could participate in this study. In so doing, we immediately filter

out respondents who are not eligible to participate (e.g., already existing young founders). After eliminating incomplete data, drop-outs, and participants who did not meet basic attention checks, a final unique sample of 493 Belgian nascent entrepreneurs was obtained. Table 1 provides the sample characteristics of the respondents in this study. Finally, we compared early and late respondents who participated after a reminder call to take the survey. No statistically t-test differences were found for this study's main variables, alleviating potential nonresponse bias concerns.

References

Al-Waqfi, M. A., & Forstenlechner, I. (2012). Of private sector fear and prejudice: The case of young citizens in an oil-rich Arabian Gulf economy. *Personnel Review*, *41*(5), 609–629. https://doi.org/10.1108/00483481211249139/FULL/PDF

Araujo, C. F., Karami, M., Tang, J., Roldan, L. B., & dos Santos, J. A. (2023). Entrepreneurial alertness: A meta-analysis and empirical review. *Journal of Business Venturing Insights*, *19*. https://doi.org/10.1016/j.jbvi.2023.e00394

Audretsch, D. B., Bönte, W., Mahagaonkar, P., Schiller, F., & Jena, U. (n.d.). *Financial Signaling by Innovative Nascent Entrepreneurs*. Retrieved April 24, 2025, from www.uni-jena.dewww.econ.mpg.de

Audretsch, D. B., & Lehmann, E. E. (2005). Does the knowledge spillover theory of entrepreneurship hold for regions? *Research Policy*, *34*(8), 1191–1202. https://doi.org/10.1016/j.respol.2005.03.012

Bafera, J., & Kleinert, S. (2023). Signaling Theory in Entrepreneurship Research: A Systematic Review and Research Agenda. *Entrepreneurship: Theory and Practice*, *47*(6), 2419–2464. https://doi.org/10.1177/10422587221138489

Baron, R. A. (2007). Behavioral and cognitive factors in entrepreneurship: entrepreneurs as the active element in new venture creation. *Strategic Entrepreneurship Journal*, *1*(1–2), 167–182. https://doi.org/10.1002/sej.12

Batista-Canino, R. M., Santana-Hernández, L., & Medina-Brito, P. (2024). A holistic literature review on entrepreneurial Intention: A scientometric approach. *Journal of Business Research*, *174*, 114480. https://doi.org/10.1016/J.JBUSRES.2023.114480

Bogatyreva, K., Edelman, L. F., Manolova, T. S., Osiyevskyy, O., & Shirokova, G. (2019). When do entrepreneurial intentions lead to actions? The role of national culture. *Journal of Business Research*, *96*, 309–321. https://doi.org/10.1016/J.JBUSRES.2018.11.034

Brown, S. D., & Lent, R. W. (1996). A Social Cognitive Framework for Career Choice Counseling. *The Career Development Quarterly*, *44*(4), 354–366. https://doi.org/10.1002/J.2161-0045.1996.TB00451.X

Bruneel, J., D'Este, P., & Salter, A. (2010). Investigating the factors that diminish the barriers to university-industry collaboration. *Research Policy*, *39*(7), 858–868. https://doi.org/10.1016/j.respol.2010.03.006

Cadaret, M. C., Hartung, P. J., Subich, L. M., & Weigold, I. K. (2017). Stereotype threat as a barrier to women entering engineering careers. *Journal of Vocational Behavior*, *99*, 40–51. https://doi.org/10.1016/J.JVB.2016.12.002

Camelo-Ordaz, C., Diánez-González, J. P., Franco-Leal, N., & Ruiz-Navarro, J. (2020). Recognition of entrepreneurial opportunity using a socio-cognitive approach. *International Small Business Journal: Researching Entrepreneurship*, *38*(8), 718–745. https://doi.org/10.1177/0266242620939843/ASSET/D6647433-6717-472D-A38D-6E1BB3BF2069/ASSETS/IMAGES/LARGE/10.1177_0266242620939843-FIG3.JPG

Cardon, M. S., & Kirk, C. P. (2015). Entrepreneurial Passion as Mediator of the Self-Efficacy to Persistence Relationship. *Entrepreneurship: Theory and Practice*, *39*(5), 1027–1050. https://doi.org/10.1111/etap.12089

Cassar, G., & Friedman, H. (2009). Does self-efficacy affect entrepreneurial investment? *Strategic Entrepreneurship Journal*, *3*(3), 241–260. https://doi.org/10.1002/SEJ.73

Chang, W., & Busser, J. A. (2020). Hospitality career retention: the role of contextual factors and thriving at work. *International Journal of Contemporary Hospitality Management*, *32*(1), 193–211. https://doi.org/10.1108/IJCHM-10-2018-0831/FULL/PDF

Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? In *Journal of Business Venturing* (Vol. 13).

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, *37*(1), 39–67. https://doi.org/10.1177/0149206310388419

Dahling, J. J., & Thompson, M. N. (2010). Contextual supports and barriers to academic choices: A policy-capturing analysis. *Journal of Vocational Behavior*, *77*(3), 374–382. https://doi.org/10.1016/J.JVB.2010.07.007

Donaldson, C., Villagrasa, J., & Theodoraki, C. (2024). Inside-out and outside-in: How entrepreneurial ecosystems can build legitimacy through signaling. *Journal of Small Business Management*. https://doi.org/10.1080/00472778.2024.2394499

Dyer, J. H., Gregersen, H. B., & Christensen, C. (2008). Entrepreneur behaviors, opportunity recognition, and the origins of innovative ventures. *Strategic Entrepreneurship Journal*, *2*(4), 317–338. https://doi.org/10.1002/SEJ.59

Eckhardt, J. T., Shane, S., & Delmar, F. (2006). Multistage Selection and the Financing of New Ventures. *Https://Doi.Org/10.1287/Mnsc.1050.0478*, *52*(2), 220–232. https://doi.org/10.1287/MNSC.1050.0478

Eftekhari, N., & Bogers, M. (2015). Open for Entrepreneurship: How Open Innovation Can Foster New Venture Creation. *Creativity and Innovation Management*, *24*(4), 574–584. https://doi.org/10.1111/caim.12136

Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, *67*(5), 663–666. https://doi.org/10.1016/j.jbusres.2013.11.024

Forbes, D. P. (1999). *Cognitive approaches to new venture creation*.

Gaglio, C. M., & Katz, J. A. (2001). The Psychological Basis of Opportunity Identification: Entrepreneurial Alertness. *Small Business Economics*, *16*(2), 95–111. https://doi.org/10.1023/A:1011132102464/METRICS

Gieure, C., Benavides-Espinosa, M. del M., & Roig-Dobón, S. (2020). The entrepreneurial process: The link between intentions and behavior. *Journal of Business Research*, *112*, 541–548. https://doi.org/10.1016/j.jbusres.2019.11.088

Hsu, D. H., & Kaplan, S. (2004). What Do Entrepreneurs Pay for Venture Capital Affiliation? *The Journal of Finance*, *59*(4), 1805–1844. https://doi.org/10.1111/J.1540-6261.2004.00680.X

Ivanova, S., & Tornikoski, E. T. (2024). Termination of nascent entrepreneurship: The central effects of action crisis in new venture creation. *Journal of Small Business Management*, *62*(3), 1385–1429. https://doi.org/10.1080/00472778.2022.2140160;WGROUP:STRING:PUBLICATION

Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship: Theory and Practice*, *39*(3), 655–674. https://doi.org/10.1111/etap.12056

Khan, S. A., Tang, J., & Joshi, K. (2014). Disengagement of Nascent Entrepreneurs from the Start-Up Process. *Journal of Small Business Management*, *52*(1), 39–58. https://doi.org/10.1111/JSBM.12032

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. https://doi.org/10.1111/J.1540-6520.2009.00298.X

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. https://doi.org/10.1016/j.jbusres.2021.10.023

Lent. (1994). *Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance*.

Lent, R. W., & Brown, S. D. (2019). Social cognitive career theory at 25: Empirical status of the interest, choice, and performance models. *Journal of Vocational Behavior*, *115*. https://doi.org/10.1016/j.jvb.2019.06.004

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance. *Journal of Vocational Behavior*, *45*(1), 79–122. https://doi.org/10.1006/JVBE.1994.1027

Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology*, *47*(1), 36–49. https://doi.org/10.1037/0022-0167.47.1.36

Lent, R. W., & Hackett, G. (1987). Career self-efficacy: Empirical status and future directions. *Journal of Vocational Behavior*, *30*(3), 347–382. https://doi.org/10.1016/0001-8791(87)90010-8

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*. https://doi.org/10.3389/fpsyg.2020.01611

Liao, J. (Jon), Welsch, H., & Moutray, C. (2008). Start-Up REsources and Entrepreneurial Discontinuance: The Case of Nascent Entrepreneurs. *Journal of Small Business Strategy (Archive Only)*, *19*(2), 1–16. https://libjournals.mtsu.edu/index.php/jsbs/article/view/112

Liguori, E. W., Bendickson, J. S., & McDowell, W. C. (2018). Revisiting entrepreneurial intentions: a social cognitive career theory approach. *International Entrepreneurship and Management Journal*, *14*(1), 67–78. https://doi.org/10.1007/s11365-017-0462-7

Mason, C., Botelho, T., & Harrison, R. (2019). The changing nature of angel investing: some research implications. *Venture Capital*, *21*(2–3), 177–194. https://doi.org/10.1080/13691066.2019.1612921

Meoli, A., Fini, R., Sobrero, M., & Wiklund, J. (2020). How entrepreneurial intentions influence entrepreneurial career choices: The moderating influence of social context. *Journal of Business Venturing*, *35*(3), 105982. https://doi.org/10.1016/J.JBUSVENT.2019.105982

Minniti, M. (2004). Entrepreneurial alertness and asymmetric information in a spin-glass model. *Journal of Business Venturing*, *19*(5), 637–658. https://doi.org/10.1016/J.JBUSVENT.2003.09.003

Mueller, P. (2006). Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? *Small Business Economics*, *27*(1), 41–58. https://doi.org/10.1007/S11187-006-6951-7/METRICS

Nasirov, S., & Joshi, A. M. (2023). Minding the communications gap: How can universities signal the availability and value of their scientific knowledge to commercial organizations? *Research Policy*, *52*(9), 104870. https://doi.org/10.1016/J.RESPOL.2023.104870

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. https://doi.org/10.1016/j.paid.2018.10.020

Newman, A., Obschonka, M., Schwarz, S., Cohen, M., & Nielsen, I. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. In *Journal of Vocational Behavior* (Vol. 110, pp. 403–419). Academic Press Inc. https://doi.org/10.1016/j.jvb.2018.05.012

Perkmann, M., King, Z., & Pavelin, S. (2011). Engaging excellence? Effects of faculty quality on university engagement with industry. *Research Policy*, *40*(4), 539–552. https://doi.org/10.1016/J.RESPOL.2011.01.007

Roelandt, J., & Andries, P. (2025). From intrapreneurship to entrepreneurship: the role of displacing events. *International Entrepreneurship and Management Journal*, *21*(1), 1–25. https://doi.org/10.1007/S11365-025-01090-9/FIGURES/5

Roundy, P. T., & Im, S. (2024). Combining cognition and context: entrepreneurial alertness and the microfoundations of entrepreneurial ecosystems. *Asia Pacific Journal of Management*, 1–19. https://doi.org/10.1007/S10490-024-09951-7/FIGURES/1

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*(1), 217–226. https://doi.org/10.5465/AMR.2000.2791611;REQUESTEDJOURNAL:JOURNAL:AMR;PAGEGROUP:STRING:PUBLICATION

Shepherd, D. A., Souitaris, V., & Gruber, M. (2021). Creating New Ventures: A Review and Research Agenda. In *Journal of Management* (Vol. 47, Issue 1, pp. 11–42). SAGE Publications Inc. https://doi.org/10.1177/0149206319900537

Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the intention–behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal*, *34*(4), 386–399. https://doi.org/10.1016/j.emj.2015.12.007

Shook, C. L., Priem, R. L., & McGee, J. E. (2003). Venture creation and the enterprising individual: A review and synthesis. *Journal of Management*, *29*(3), 379–399. https://doi.org/10.1016/S0149-2063(03)00016-3

Siegel, D. S., Waldman, D., & Link, A. (2003). Assessing the impact of organizational practices on the relative productivity of university technology transfer offices: an exploratory study. *Research Policy*, *32*(1), 27–48. https://doi.org/10.1016/S0048-7333(01)00196-2

Tang, J., Baron, R. A., & Yu, A. (2023). Entrepreneurial alertness: Exploring its psychological antecedents and effects on firm outcomes. *Journal of Small Business Management*, *61*(6), 2879–2908. https://doi.org/10.1080/00472778.2021.1945071

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. https://doi.org/10.1016/j.jbusvent.2010.07.001

Thiem, K. C., & Dasgupta, N. (2022). From Precollege to Career: Barriers Facing Historically Marginalized Students and Evidence-Based Solutions. *Social Issues and Policy Review*, *16*(1), 212–251. https://doi.org/10.1111/SIPR.12085;WEBSITE:WEBSITE:SPSSI;REQUESTEDJOURNAL:JOURNAL:17512409;WGROUP:STRING:PUBLICATION

Townsend, D. M., Hunt, R. A., McMullen, J. S., & Sarasvathy, S. D. (2018). Uncertainty, knowledge problems, and entrepreneurial action. *Academy of Management Annals*, *12*(2), 659–687. https://doi.org/10.5465/ANNALS.2016.0109;ISSUE:ISSUE:10.5465/ANNALS.2018.12.ISSUE-2;PAGEGROUP:STRING:PUBLICATION

Trevelyan, R. (2011). Self-efficacy and effort in new venture development. *Journal of Management & Organization*, *17*(1), 2–16. https://doi.org/10.5172/JMO.2011.17.1.2

Valliere, D. (2013). Towards a schematic theory of entrepreneurial alertness. *Journal of Business Venturing*, *28*(3), 430–442. https://doi.org/10.1016/j.jbusvent.2011.08.004

Wu, L., Jiang, S., Wang, X., Yu, L., Wang, Y., & Pan, H. (2022). Entrepreneurship Education and Entrepreneurial Intentions of College Students: The Mediating Role of Entrepreneurial Self-

Efficacy and the Moderating Role of Entrepreneurial Competition Experience. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.727826

Zhao, H., Hills, G. E., & Seibert, S. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*(6), 1265–1272. https://doi.org/10.1037/0021-9010.90.6.1265

Zhou, J. ;, Ge, L. G., Li, J. ;, & Chandrashekar, S. P. (2020). Entrepreneurs' socioeconomic status and government expropriation in an emerging economy. *Strategic Entrepreneurship Journal*, *14*(3), 396–418. https://doi.org/10.1002/sej.1361