

# The Influence of Prior Entrepreneurial Exposure on Intentions through Entrepreneurial Alertness: The Moderating Role of Passion

Working paper by

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## 1. Introduction

Prior entrepreneurial exposure (PEX) comprises individuals' different experiences and history related to entrepreneurship (Zapkau, Schwens, Steinmetz, & Kabst, 2015). It generally involves entrepreneurial role models such as parents and other family attachment figures or direct entrepreneurial experience through founding or work experience in family or small and newly founded firms (Krueger, 1993). Although PEX is evermore regarded as one of the major antecedents of entrepreneurial intentions (EI), the literature reports ambiguous effects for all different types of PEX in both the intention development and gestation stage of the entrepreneurial process (Bosma, Hessels, Schutjens, Van Praag, & Verheul, 2012; Liñán & Fayolle, 2015; Nowiński & Haddoud, 2019). Moreover, since intentions represent a cognitive state, prior studies surprisingly overlooked to analyse how they are affected by different combinations of other core cognitive constructs such as entrepreneurial alertness together with PEX (Zapkau, Schwens, & Kabst, 2017). As a result, there is still limited knowledge concerning which specific types of prior entrepreneurial exposure facilitate one's alertness for recognizing entrepreneurial opportunities (Zapkau et al., 2017). In other words, how PEX influences EI through entrepreneurial alertness remains high on the research agenda as it continues to be highly underexplored.

We therefore present a robust entrepreneurial intention-based model (see annex) grounded on social learning theory (SLT) to examine the influence of indirect and direct PEX on EI through entrepreneurial alertness which can enhance the formation of EI (Bueckmann-Diegoli & Gutiérrez, 2020; Tang, Kacmar, & Busenitz, 2012). Furthermore, this paper will introduce the moderating role of entrepreneurial passion in the relation between PEX and entrepreneurial alertness since entrepreneurial passion can foster the ability to become more alert through learning and subsequently to recognize and exploit opportunities (Ardichvili, Cardozo, & Ray, 2003; Cardon, Gregoire, Stevens, & Patel, 2013). By doing so, we are the first to bring these trending constructs together in a moderated mediation model.

Currently, two different approaches, a personality-driven and behavioural explanation, dominate the perennial debate on why some are more inclined to develop entrepreneurial intentions and to start an entrepreneurial career (Cardella, Hernández-Sánchez, & Sánchez García, 2020). The latter, grounding on SLT, holds that through the influence of role models or direct entrepreneurial exposure individuals may learn certain critical entrepreneurial skills such as entrepreneurial alertness which is at the heart of entrepreneurship (Bandura, 1986; Chavoushi et al., 2020; Chlosta, Patzelt, Klein, & Dormann, 2012). Theoretically, we therefore apply a social learning perspective which allows us to explain how one can either vicariously learn through entrepreneurial role models such as parents and other family attachment figures or through direct learning mechanisms based on one's own entrepreneurial experiences which may deepen knowledge about entrepreneurship (Bosma et al., 2012). The rationale for this is that it has been argued that role models and direct entrepreneurial exposure can provide meaningful insights and knowledge on markets or industries, thus enhancing entrepreneurial alertness which can foster EI (Türk, Zapkau, & Schwens, 2020).

Yet, we lack profound understanding of why some are capable of identifying or spotting opportunities that most individuals cannot see and how PEX influences key outcomes such as entrepreneurial intentions (Neneh, 2019; Patel, 2019; Valliere, 2013; Van Gelderen et al., 2008). Indeed, systematic understanding concerning PEX and entrepreneurial alertness in the entrepreneurial process is presently missing (Sharma, 2019; Zapkau et al., 2017). To address the above issues, the current paper will furthermore unravel the moderating role of entrepreneurial passion as variations in entrepreneurial passion could assist to clarify why some are, whereas others are not, capable of recognizing entrepreneurial opportunities since passion may induce ardent alertness by enhancing the influence of PEX on alertness (Cardon et al., 2013).

This paper makes several contributions to extant literature by offering further understanding of the relation between PEX and entrepreneurial intentions. First, we introduce trending core constructs such as entrepreneurial alertness and passion for the first time together in a robust intention-based model. By doing so, we are one of the first to empirically answer research calls to explore how PEX facilitates an individual's alertness for recognizing entrepreneurial opportunities and we explain what exactly the impact of passion entails on the relationship between PEX and EI through alertness. Second, we account for different specific types of PEX and show how they can influence EI through entrepreneurial alertness differently (Nowiński & Haddoud, 2019; Zapkau et al., 2017). Third, our sample of 1681 cases

from the Belgian population enables us to move away from student samples to further clarify heterogeneous findings in EI research. This furthers the generalizability of our findings as there is indeed a current need for a more differentiated understanding of the influence of PEX on EI (Zapkau et al., 2015). In addition, our forthcoming results demonstrate how the distinct dimensions of alertness and passion influence the relationship between PEX and EI in our moderated mediation model. Taken together, our work induces practical implications for policy makers and scholars active in entrepreneurship (education) by offering robust insights in the perennial debate on why some are more inclined to develop entrepreneurial intentions to start a new business. Certainly in these times this is important for stimulating the venture creation process since it highly contributes to economic growth and societal dynamism.

## **2. Theory and Hypotheses Development**

### **2.1. Prior Entrepreneurial Exposure and Entrepreneurial Intentions**

Prior entrepreneurial exposure comprises individuals' different experiences related to entrepreneurship and the subsequent knowledge accumulation about potentially pursuing an entrepreneurial career (Peterman & Kennedy, 2003; Zapkau et al., 2015). Generally, PEX involves types of observational experience through entrepreneurial role models such as entrepreneurial parents and family attachment figures or direct entrepreneurial experience through previous founding or work experience in family and small or newly founded firms (Krueger, 1993). It thus stems from two contrasting mechanisms of prior exposure: indirect and direct experience (Bandura, 1977; Latham & Saari, 1979). As these different means can alter individuals' beliefs about entrepreneurship, past research shows that individuals with or without such exposure significantly differ from each other in the entrepreneurial process (Alsos & Kolvereid, 1998; Westhead, Ucbasaran, & Wright, 2005). Clearly, the decision to start a new business does not occur in a vacuum but is rather influenced by various experiences such as PEX which is a frequently studied facilitating factor in the venture creation process (Morales-Gualdrón & Roig, 2005). Thus, one's start-up intentions can be shaped by the powerful environment of PEX (Carr & Sequeira, 2007). Hence, individuals with different types of PEX may have a higher propensity towards an entrepreneurial career and consequently may develop entrepreneurial intentions.

Although PEX is evermore regarded as one of the major antecedents of EI, systematic knowledge about its role in the entrepreneurial process is presently missing (Zapkau et al., 2017). We still have relatively limited knowledge concerning PEX in the intention development stage and the literature displays ambiguous findings as a whole for the influence of PEX on EI (Linan & Fayolle, 2015; Nowinski & Haddoud, 2019). The reason for these heterogeneous results are mainly twofold. First, since entrepreneurial intentions represent one's commitment to create a venture, past research insufficiently accounts for the intentional character of starting a business (Krueger & Carsrud, 1993; Bird, 1998). In this regard, exogenous variables such as PEX are considered weak direct predictors of intentions (Chlosta, Patzelt, Klein, & Dormann, 2012; Sheppard, Hartwick, & Warshaw, 1988). Hence, intention-based models examine the indirect influence of exogenous factors on EI through changes in mediating variables that are cognitive in nature as intention-based frameworks generally imply indirect relationships because they are built on the fact that starting a business is best predicted by the development of entrepreneurial intentions (Krueger & Carsrud, 1993; Krueger, Reilly, & Carsrud, 2000; Thompson, 2009). Indeed, intentions form a crucial step in the entrepreneurial process and are suggested to be the single best predictors for entrepreneurial behaviour such as starting a business (Lortie & Castogiovanni, 2015). Second, differentiated approaches other than parental prior entrepreneurial exposure are rather limited. That is, previous entrepreneurship literature largely neglects to account for the influence of different types of PEX such as direct prior exposure (Zapkau et al., 2015). This adds to disparate findings since both means of exposure may bring individuals different learning experiences about entrepreneurship (Chlosta et al., 2012). Over time, it has particularly become clear that direct prior experience can be an important driver of the development of entrepreneurial intentions.

In opposition to this intention-based rationale, most studies on PEX in the intention development stage have used models with mainly direct predictors to estimate the direct effects of various forms of PEX on EI (Zapkau et al., 2017). Overall, these studies are predominantly rooted in the theoretical foundations of Social Learning Theory (SLT) (Bandura, 1977) which emphasizes the social context of learning. SLT posits that individuals may develop entrepreneurial intentions through learning mechanisms such as

vicarious or direct learning. It thus offers a theoretical lens for explaining how individuals vicariously learn about an entrepreneurial career through entrepreneurial role models by observing their behaviour or through direct learning by one's own prior entrepreneurial experiences. Relying on SLT, a number of scholars have offered evidence of a positive influence of entrepreneurial role models such as parents or other attachment figures in the form of relatives or friends on one's entrepreneurial behaviour (BarNir, Watson, & Hutchins, 2011; Bosma et al., 2012; Mungai & Velamuri, 2011). However, notwithstanding whether research assumes a direct or indirect influence of PEX on EI, the lion's share of studies has focused on the influence of entrepreneurial parents on individuals' decision to start a business since parents are assumed to be the most influential role models for one's entrepreneurial career preferences (Liñán & Fayolle, 2015; Athayde, 2009; Crant, 1996; Urbano, Toledano, & Ribeiro-Soriano, 2011; Scherer et al., 1989; Dyer & Handler, 1994; Cooper & Dunkelberg, 1987). Stated differently, having an entrepreneur for a parent substantially increases one's likelihood to become an entrepreneur himself (Colombier & Masclat, 2008; Hoffmann, Junge, & Malchow-Møller, 2015; Lindquist, Sol, & Van Praag, 2015).

While most scholars conclude that entrepreneurial parents can stimulate individuals' development of entrepreneurial intentions, several works failed to demonstrate this positive impact and reported contrasting findings (Blau & Duncan, 1967; Cardella et al., 2020; Kim, Aldrich, & Keister, 2006; Kolvereid & Isaksen, 2006; Laspita, Breugst, Heblich, & Patzelt, 2012; Tkachev & Kolvereid, 1999; Zellweger, Sieger, & Halter, 2011). Scherer et al. (1989) demonstrated that presence of entrepreneurial parents is positively associated with individuals' entrepreneurial career preferences. Chlosta et al. (2012) found that parental role models enhance individuals' likelihood of becoming self-employed. Pablo-Lerchundi et al. (2015) employed a student sample and showed that parents who are self-employed foster their children's entrepreneurial intentions. In their well-known study, Carr & Sequeira (2007) used a sample of nascent entrepreneurs and found that prior family business exposure has a significant direct as well as indirect effect on entrepreneurial intent. Contrary, Brenner et al. (1991) analyzed the impact of parental role models and could not establish a significant connection with increased entrepreneurial intentions. Similarly, Gird and Bagraim (2008) were not able to find a significant direct relationship between exposure to entrepreneurial parents and entrepreneurial intentions. Drawing on the theory of planned behavior, Zapkau et al. (2015) hardly found a significant relation between exposure to parental founders and entrepreneurial intentions. In their study, parental role models were only found to positively impact one's subjective norm in regard to starting a business suggesting that individuals with parental role models feel social pressure to start a venture.

Studies examining the influence of other entrepreneurial role models such as family or friends have generated ambiguous findings as well in the intention development stage. A number of studies show that the presence and exposure to other role models such as relatives or friends can influence one's EIs (Karimi et al., 2014; Carr & Sequeira, 2007; Pruett et al. 2009; Davidsson & Honig, 2003; Mathews & Moser, 1995; Mueller, 2006; Lerner et al. 2013). Other works reject the view of a positive relationship between entrepreneurial relatives or friends and entrepreneurial intentions (Hamidi et al. 2008; Lu et al. 2013). It is suggested that these role model effects are weakened since the classification of relatives and friends is rather diffuse as they may also contain distant interpersonal ties. Research indicates that entrepreneurial role models generally are located in close proximity of the respondent (Bosma et al. 2012). Therefore, the influence of indirect PEX through having a role model is expected to be relatively stronger when an entrepreneurial role model is closely tied to an individual (Davidsson, 2004). Thus, opposed to friends, the effect of a role model will be stronger when concerning an entrepreneurial family member.

Opposed to indirect or observational PEX through entrepreneurial family role models, only a handful of works have examined the influence of direct PEX through prior work experience in a family or small or newly created business during the stage of developing entrepreneurial intentions. It can be expected that prior work experience in a small or newly founded firm leads to developing higher levels of EI (Zapkau et al., 2015). Yet, Kautonen et al. (2010) and Mathews and Moser (1995) established that work experience in small firms does not influence subsequent entrepreneurial intentions or the likelihood of being interested in owning a business. On the other hand, Mueller (2006) found prior work experience in small firms below twenty employees to be important for the probability of becoming a nascent entrepreneur. Moreover, Mueller's (2006) findings revealed that prior self-employment experience plays

an important role in developing entrepreneurial intentions. Indeed, there is a large consensus that prior start-up experience positively influences future entrepreneurial intentions and the new venture process (Bignotti & Le Roux, 2020; Rotefoss & Kolvereid, 2005; Zhan, Uy, & Hong, 2020). However, some issues remain unresolved. For instance, in their seminal work, Liñán and Chen (2009) show that prior founding experience only positively affects the subjective norm component in the relation between prior start-up experience and entrepreneurial intentions.

In sum, based on the above reasoning, we discern between indirect and direct prior entrepreneurial exposure to account for its differentiated influence in the intention development stage. Therefore, we propose:

**H1a:** Indirect prior entrepreneurial exposure through entrepreneurial role models such as entrepreneurial parents or family members positively influences entrepreneurial intentions.

**H1b:** Direct prior entrepreneurial exposure through prior founding or work experience in family or small or newly founded firms positively influences entrepreneurial intentions.

## 2.2. The Mediating Role of Entrepreneurial Alertness

Next, we argue that both indirect and direct forms of prior entrepreneurial exposure positively affect entrepreneurial intentions through entrepreneurial alertness. The concept of alertness stands central in entrepreneurship and has furthered our understanding of the economic development process and opportunity identification dynamics (Shane, 2003; Shane & Venkataraman, 2000; Yu, 2001). In entrepreneurship research, there are two main streams which claim that opportunities either are discovered and arise exogenously or are created and emerge endogenously (Short, Ketchen, Shook, & Ireland, 2010; Valliere, 2013). Yet, regardless of which perspective one supports, entrepreneurial alertness is considered to be the most essential cognitive factor in the recognition of entrepreneurial opportunities and, as such, it constitutes a crucial first step in the entrepreneurial process (Gaglio & Katz, 2001).

It was Kirzner (1973) who initially developed research on entrepreneurial alertness and famously conceptualized it as “the ability to notice without search opportunities that have hitherto been overlooked”. He characterized alert individuals as possessing an “antenna” that allows recognizing gaps with a minimum of clues. According to Kirzner (1979), as a process, alertness enables some individuals to have a greater awareness of changing conditions, opportunities and neglected possibilities. Later, in Kirznerian tradition, Kaish and Gilad (1991) viewed individuals who are alert as holding a unique readiness to discover opportunities by systematically scanning the environment. A later generation of scholars have advanced alertness arguing that it entails a proactive attitude grounded in a variety of cognitive capabilities and processes such as information processing abilities, pattern identification and prior knowledge and experience (Ardichvili et al., 2003; Baron, 2004, 2006). Moreover, McMullen and Shepherd (2006) added that alertness only is entrepreneurial if it includes judgement and taking action.

Whereas these early as well as later views of alertness are instinctively illustrative, explicit theoretical underpinnings are lacking (Valliere, 2013). And while in his earlier work Kirzner did not aim to unravel the determinants of alertness, years later he and others signal that the antecedents of the construct remain underexplored. Given the perennial interest in alertness and its core significance in entrepreneurship, it is surprising that alertness has not received as much scholarly attention as may be expected (Kirzner, 2009; Patel, 2019; Sharma, 2019). This may be due to the complex nature of the construct, the theoretical ambiguity and major measurement issues with earlier empirical work (Busenitz, 1996). Building on these elements, in their seminal work, Tang et al. (2012) developed a robust empirical instrument for exploring entrepreneurial alertness including its antecedents and outcomes. Building from Kirzner, Tang et al. (2012) operationalized alertness as consisting of three complementary dimensions: scanning and searching for new information, association and connection of previously disparate information and evaluation and judgment of whether this new information represents an opportunity worth pursuing. As entrepreneurial alertness enables individuals to acquire (scanning and searching), organize (association and connection) and assess or interpret (evaluation and judgement) disparate information to recognize opportunities, it rests on individuals’ cognitive capacities and information

processing skills (Baron, 2006; Hajizadeh & Zali, 2016). Hence, alert individuals are more sensitive and attentive to changes in their environment and have a greater likelihood of recognizing opportunities.

Previous studies have suggested several factors that may play a role in one's alertness for recognizing opportunities. Among these, particularly the influence of prior knowledge has received increased attention in recent years (George, Parida, Lahti, & Wincent, 2016). An individual's prior knowledge is based on one's distinctive information gathered from various mixes of personal and work experiences and may be accumulated through vicarious or direct learning (Baron, 2006; Shepherd & DeTienne, 2005). Although prior knowledge has a highly heterogeneous research base with regard to theories and focus areas, many scholars assert that it can be a major advantage for the recognition of potentially profitable opportunities and recognize it as a key element of entrepreneurial alertness (Ardichvili et al., 2003; Arentz, Sautet, & Storr, 2013; Fuentes, Arroyo, Bojica, & Pérez, 2010). In short, prior knowledge which can come from different types of PEX fuels alertness which leads to opportunity recognition (Marvel & Lumpkin, 2007; Minniti & Bygrave, 2001).

Shane and Venkataraman (2000) for instance already stated that some individuals are capable of discovering opportunities because they have prior knowledge and possess the cognitive ability to evaluate it. In the same vein, Shane (2000) classified prior knowledge into three dimensions: prior knowledge of markets, the ways of how to serve markets, and needs or customer problems. These elements of prior knowledge enable individuals to recognize and discover opportunities that fulfill unmet market needs. In fact, one's prior knowledge operates as a guide and leads to increased entrepreneurial alertness for information and opportunities in the environment (Hajizadeh & Zali, 2016). In other words, alertness represents one's cognitive ability to process prior knowledge and experiences related to entrepreneurship (Adomako, Danso, Boso, & Narteh, 2018)

Empirically, for instance, Tang et al. (2012) found evidence that prior knowledge is significantly related to entrepreneurial alertness and each of the construct's dimensions. Several other scholars also identified forms of prior knowledge as a determining element of alertness (Ardichvili et al., 2003; Chavoushi et al., 2020; Hajizadeh & Zali, 2016; Jiao, Cui, Zhu, & Chen, 2014; Sharma, 2019; Valliere, 2013). In terms of types of previous experience, the literature argues that prior startup and work experience can crucially contribute to enhancing entrepreneurial alertness as it may provide necessary knowledge that is learned by doing about identifying opportunities (Shane, 2003; Tang et al., 2012). Thus, in general, by employing gathered prior knowledge, individuals can be more alert for recognizing opportunities (George et al., 2016). In essence, prior knowledge is fundamental to provide individuals the insights to be more alert for identifying opportunities (Shane, 2000). Accordingly, prior knowledge influences one's ability to scan and search, associate and connect, and evaluate new information in a completely unique way (Fiet, 2007; Roberts, 1991).

This implies that each individual's idiosyncratic set of prior knowledge generates a "cognitive corridor" that enables him or her, and not others, to be alert for recognizing certain opportunities (Tang et al., 2012; Venkataraman, 1997). Particularly, we argue that prior knowledge which can be accumulated through PEX can be vital in increasing the likelihood of entrepreneurial alertness. Especially role models such as entrepreneurial parents or family members as well as direct prior entrepreneurial exposure can provide seminal insights and opportunity-related knowledge on markets or industries and can therefore enhance entrepreneurial alertness through vicarious or direct learning mechanisms (Ozgen & Baron, 2007; Türk et al., 2020; Zozimo, Jack, & Hamilton, 2017). Hence, we posit that both indirect and direct PEX are positively related to entrepreneurial alertness.

Consequently, the positive impact of both forms of PEX on entrepreneurial alertness has important consequences for developing entrepreneurial intentions. As a core construct in entrepreneurship, alertness implies taking entrepreneurial action which is preceded by the development of entrepreneurial intentions (Fayolle, Liñán, & Moriano, 2014; McMullen & Shepherd, 2006). Clearly, entrepreneurship is a process that unfolds over time (Gartner, Shaver, Gatewood, & Katz, 1994). In this regard, entrepreneurial intentions constitute a primordial step in the complex process of venture creation (Lee & Wong, 2004). Traditionally, the development of entrepreneurial intentions is known as a strong predictor of entrepreneurship and actual entrepreneurial behavior since it entails an individual's more or less concrete plans to prepare and ultimately start a new business in the future (Liñán & Chen, 2009; Thompson, 2009). As such, numerous works have employed intention-based models to unravel the

entrepreneurial phenomenon of developing entrepreneurial intentions (Liñán & Fayolle, 2015). This means that the stronger one's entrepreneurial intention to engage in entrepreneurial action, the more likely it is that entrepreneurial behavior such as starting a new business will occur (Ajzen, 1991; Lortie & Castogiovanni, 2015)

Indeed, previous studies found entrepreneurial alertness to be closely related with entrepreneurial intentions. Although this relation needs further exploration, alertness has been deemed as essential for entrepreneurship and the new venture creation process (Bueckmann-Diegoli & Gutiérrez, 2020; Obschonka, Hakkarainen, Lonka, & Salmela-Aro, 2017; Van Gelderen et al., 2008). In addition, a growing number of studies have focus on the relationship between entrepreneurial alertness and intention in recent years. Several scholars e.g. (Hu, Wang, Zhang, & Bin, 2018; Neneh, 2019) have empirically analyzed the role of alertness together with intentions and established that it represents an essential cognitive predictor for studying entrepreneurial intentions. Thus, individuals that are alert for entrepreneurial opportunities will display a greater likelihood to engage in venture creation since it provides individuals the cognitive ability to pursue the identified opportunities. Hence, these individuals will likely develop high levels of entrepreneurial intentions.

In sum, based on the above rationale, we propose:

**H2a:** The relationship between indirect prior entrepreneurial exposure and entrepreneurial intentions is mediated by entrepreneurial alertness.

**H2b:** The relationship between direct prior entrepreneurial exposure and entrepreneurial intentions is mediated by entrepreneurial alertness.

### **2.3. The Moderating Role of Entrepreneurial Passion**

We have already argued that indirect as well as direct PEX are positively related to alertness. Next to alertness' core position, passion stands at the heart of entrepreneurship and is suggested play a key factor in the entrepreneurial intention development stage (Cardon, Zietsma, Saporito, Matherne, & Davis, 2005; Neneh, 2020; Smilor, 1997). As a particular entrepreneurial affective state, passion has been attracting increasing scholarly attention (Cardon, Wincent, Singh, & Drnovsek, 2009). It has been defined as a conscious, accessible, and intense positive state that manifests when individuals undertake entrepreneurial activities central to their identity (Cardon et al., 2009). Contrary to personality traits, entrepreneurial passion is an internal affective state that is experienced when individuals think about or engage in activities related to entrepreneurship (Cardon et al., 2009).

These activities encompass scanning the environment for new opportunities and developing new products, starting a business, and further developing and growing ventures after founding (Cardon et al., 2013; Murnieks, Mosakowski, & Cardon, 2014). In short, entrepreneurial passion comprises intense positive feelings related to such entrepreneurial activities that are salient and central to individuals' self-identity (Drnovsek, Cardon, & Patel, 2016). Compared to emotions, the combination of intense positive feelings and one's identity centrality leads to persistent affective experiences that remain stable over time and that can even last for long times or even years. Entrepreneurial passion is thus more endurable than emotions (Costa, Santos, Wach, & Caetano, 2018). The construct is therefore conceptualized and empirically measured by Cardon et al. (2013) in accordance with these two dimensions (intense positive feelings and identity centrality) which are operationalized in three role identities or domains related to established or potential entrepreneurs: inventing, founding and developing.

Within the SLT framework, it is proposed that passion represents an important personal factor that can stimulate overcoming certain impediments associated with the recognition and exploitation of opportunities which constitute a crucial step in the development of entrepreneurial intentions (Bandura, 1986; Biraglia & Kadile, 2017; Murnieks, Klotz, & Shepherd, 2020). In that regard, according to Costa et al. (2018), entrepreneurial passion plays an essential role in the opportunity identification learning process, which among others demands pattern recognition based on prior knowledge. As such, entrepreneurial passion can foster the ability to become more alert through learning and subsequently

to recognize and exploit opportunities (Cardon et al., 2013). Indeed, passion is an internal state that has an influence on learning as the features of passion may positively enhance learning processes.

It is argued that, contrary to cognitive skills such as entrepreneurial alertness, passion is an internal state in which one cannot be trained (Cardon et al., 2013; Newman, Obschonka, Moeller, & Chandan, 2019). Yet, entrepreneurial passion as an individual's affective disposition may enhance the influence of PEX on entrepreneurial alertness as passion can strongly foster cognitive processes and vicarious or direct learning abilities to become more alert through indirect and direct PEX (Baron, 2008). As an internal factor, we argue that passion can enhance or impede learning processes related to prior knowledge coming from different types of PEX and thus the ability to identify and spot opportunities which in turn enhances the development of entrepreneurial intentions (Costa et al., 2018; Huyghe, Knockaert, & Obschonka, 2016).

Consequently, it is pertinent to study the moderating role of entrepreneurial passion in this context. Hence, we argue that when one experiences passion for inventing and founding, entrepreneurial passion exerts a positive moderating effect on the relationship between PEX and alertness since individuals then might learn more actively from indirect as well as direct entrepreneurial experiences in order to identify new opportunities (Cardon, Glauser, & Murnieks, 2017). Surely, variations in entrepreneurial passion could assist to clarify why some are, whereas others are not, capable of spotting or recognizing opportunities as passion may induce ardent alertness by enhancing the influence of indirect and direct PEX on entrepreneurial alertness (Cardon et al., 2013).

Therefore, we propose the following:

**H3a:** Entrepreneurial passion moderates the indirect relationship between indirect prior entrepreneurial exposure and entrepreneurial intentions through entrepreneurial alertness, such that the relationship is stronger when entrepreneurial passion is higher.

**H3b:** Entrepreneurial passion moderates the indirect relationship between direct prior entrepreneurial exposure and entrepreneurial intentions through entrepreneurial alertness, such that the relationship is stronger when entrepreneurial passion is higher.

### **3. Methods**

#### **3.1. Sample**

Entrepreneurial intentions refer to one's readiness to engage in actual entrepreneurial behavior. Since entrepreneurship is viewed as intentional behavior, prominent scholars have used intention-based models over the years to understand highly desirable outcomes such as venture creation. Following Krueger and Carsrud (1993), entrepreneurial intentions are best analyzed prospectively instead of retrospectively. Stated differently, they need to be examined before they occur (Krueger et al., 2000). One of the important methodological criticisms in the field however is the preference for post hoc research methods. Such prior studies often ground on samples of existing founders. As a result, they may suffer from selection bias due to examining only existent founders and therefore overlooking individuals who did not continue with their startup intentions (Zapkau et al., 2015). Additionally, hindsight bias or memory decay is a common concern about studying startup endeavors ex post as it challenges the internal validity of prior works (Krueger & Carsrud, 1993).

Therefore, according to Krueger et al. (2000), studying entrepreneurial intentions demands samples that contain individuals who may or may not have the intention to start a business. For data collection purposes this holds vast challenges to incorporate non-entrepreneurial intending individuals correctly. For this reason, student samples are commonly employed in intentions research due to easy scholarly access, students' lack of occupational biases and because they are at a stage where they face career decisions such as deciding between paid-employment or to become self-employed in the near future (Engle et al., 2010; Meoli, Fini, Sobrero, & Wiklund, 2020). Although student samples have had their merits for unraveling important dynamics, problems with the generalizability of results are common. Consequently, there are strong calls to move away from student as well as existing founder samples in entrepreneurial intentions research because of the well-known sample limitations (Kautonen, Van Gelderen, & Fink, 2015; Lortie & Castogiovanni, 2015).



Based on the above rationale, we collected unique large-scale data from the general Belgian population through one of Belgium's biggest and most reputable media outlets. Especially concerning direct PEX, this approach enables sampling individuals who have a wider variety of prior entrepreneurial exposure (Autio, Keeley, Klofsten, Parker, & Michael, 2001). Initially, this large scale data collection process was planned at the beginning of 2020 during the outbreak of the unprecedented COVID-19 pandemic. Since entrepreneurship in general has been severely impacted by this global exogenous shock, we deliberately postponed collecting data until after the Belgian and European general lockdown when societal stability cautiously returned after implementing comprehensive economic policy responses to the COVID-19 pandemic (Kuckertz et al., 2020; Manolova, Brush, Edelman, & Elam, 2020). Consequently, data collection took place in the summer of 2020. Data were collected by inviting respondents to participate in an online survey powered by Qualtrics. Such digital tools have gained popularity in social sciences as they have made large-scale data collections more cost-efficient and manageable. While advocates claim that these web-based instruments can strengthen data quality because of augmenting the overall heterogeneity in the sample, opponents state that these tools may produce convenience samples and thus cause sampling biases (Hsu, Simmons, & Wieland, 2017).

To avoid this, we used several carefully designed procedures to collect data. First, we launched our survey as a general entrepreneurship study to avoid framing it as a specific study into entrepreneurial intentions. Second, we stressed that the study was for all Belgian citizens. Participation was completely voluntary. Third, we were transparent about the actual average completion time of twenty minutes which we elaborately tested in a pilot study. Fourth, we emphasized that the study was relevant and doable for all Belgian citizens since the subject of entrepreneurship could scare off respondents and create self-selection concerns. Fifth, next to a media campaign (newspaper, internet, television, radio) by one of Belgium's well-respected media outlets, we did a single dedicated mailing to approximately one hundred and fifty thousand email addresses in accordance with GDPR legislation to specifically stimulate participation of population groups that are hard to reach.

As a result, our final sample consists of 1681 Belgian cases after maintaining rigorous data selection criteria. Precise filters inspired by the GEM methodology allowed us to differentiate between the intention or gestation stage and to generate large control groups. However, due to incomplete cases, drop-outs or missing data, we had to eliminate 4585 cases from our study sample. Additionally, we removed 536 entrepreneurs (startups, scale-ups, family businesses, etc.) for the purpose of our study. These stringent criteria resulted in a final well-balanced data set with rich variation. Sample characteristics confirm this and show this for our determining construct in our model. In our sample, 9% of respondents has a parent that currently owns a business and 22% of respondents' parents has owned a business in the past. Whereas 40% has a family member other than a parent that currently owns a business, 21% of individuals in the sample has a family member that has previously owned a business. 21% has ever worked in a family member's business and 37% of individuals in our sample has prior work experience in a small or newly founded firm. Finally, 19% of our sample has prior founding experience.

## **3.2. Measures**

### **3.2.1. Entrepreneurial intentions**

We operationalize our measure for entrepreneurial intentions based on Liñán & Chen's (2009) well-established entrepreneurial intention questionnaire and measured it on a 7-point Likert scale ranging from 1 "strongly disagree" to 7 "strongly agree". We used all six items from their multi-item scale. Sample items include: "I am ready to do anything to be an entrepreneur"; "my professional goal is to become an entrepreneur"; "I will make every effort to start and run my own firm", etc. Cronbach's alpha (CA 0.97) demonstrates very high reliability.

### **3.2.2. Prior entrepreneurial exposure**

In line with our theorizing, we analyze two types of prior entrepreneurial exposure. To establish the influence of indirect and direct PEX, we follow the literature and utilize binary measures as is common to gauge PEX (Krueger, 1993). We employed Carr and Sequeira's (2007) construct of prior family business exposure to assess indirect PEX and asked respondents to indicate whether their parents currently own or have ever owned a business and whether a family member other than a parent currently owns or has ever owned a business. To determine direct PEX in our measurement model, respondents were asked whether they have ever worked in a family member's business, whether they have ever worked in a small or newly founded firm and whether they have ever started a business in the past. All items were coded "0" if no and "1" if yes

### **3.2.3. Entrepreneurial alertness**

To capture entrepreneurial alertness, we used all thirteen items from Tang et al's., (2012) multidimensional scale which is divided into three dimensions: scanning and searching, association and connection, and evaluation and judgment. This scale was developed to answer fundamental entrepreneurship questions such as whether greater alertness increases the likelihood that a new business will be created (Roundy, Harrison, Khavul, Pérez-Nordtvedt, & McGee, 2018). This multi-item instrument is not only highly suitable for probing entrepreneurial intentions, it also has been successfully used in general entrepreneurship and career research (Obschonka et al., 2017; Uy, Chan, Sam, Ho, & Chernyshenko, 2015). All items were anchored on a 7-Point Likert scale. Cronbach's alpha (CA 0.94) shows very high reliability.

### **3.2.4. Entrepreneurial passion**

Entrepreneurial passion was measured using Cardon et al.'s (2013) multidimensional scale items. All items were measured on a 7-point Likert. Sample items comprise: "It is exciting to figure out new ways to solve unmet market needs that can be commercialized"; "Searching for new ideas for products/services to offer is enjoyable to me"; "I am motivated to figure out how to make existing products/services better"; "scanning the environment for new opportunities really excites me"; "inventing new solutions to problems is an important part of who I am"; "establishing a new company excites me"; "owning my own company energizes me", etc. Cronbach's alpha indicates (CA 0.97) excellent reliability of our measure.

### **3.2.5. Control variables**

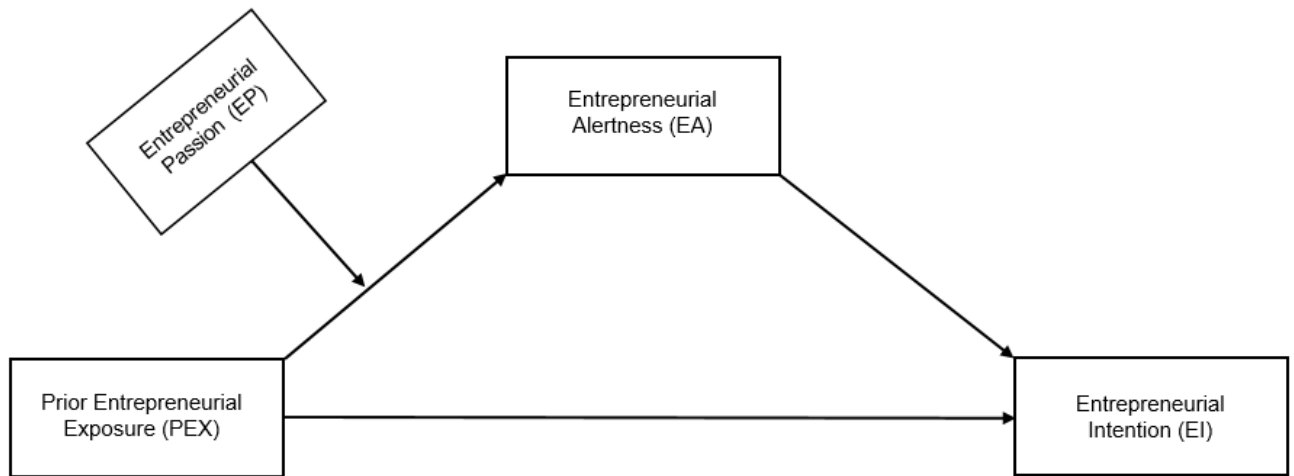
We statically control for an array of alternative explanations that are known to influence the development of EI. In our empirical model, the first control variable we include is a gender dummy. Previous works have showed that men display a higher entrepreneurial propensity and develop higher levels of entrepreneurial intentions compared to women (Schlaegel & Koenig, 2014). Second, we control for age to account for the U-shaped effect of age on new business formation (Minniti, 2008). Empirical evidence suggests that age is a major determinant of entrepreneurship and that younger individuals are more likely to create a new venture than older individuals. Third, we control for industry effects by assessing in which industry one intends to start a new business. Fourth, we add to our model whether an individual intends to start a limited liability company or not. Lastly, we control for a multitude of individual-level attributes that are known to influence the entrepreneurial process and entrepreneurial intentions. These include one's level of education, current professional status, years of professional experience, income level and ethnicity.

## **4. Results**

First preliminary results will be available for the RENT conference

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## 5. Annex:



## References:

- Adomako, S., Danso, A., Boso, N., & Narteh, B. (2018). Entrepreneurial alertness and new venture performance: Facilitating roles of networking capability. *International Small Business Journal*, 36(5), 453-472.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Alsos, G., & Kolvareid, L. (1998). The business gestation process of novice, serial, and parallel business founders. *Entrepreneurship Theory and Practice*, 22(4), 101-114.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105-123.
- Arentz, J., Sautet, F., & Storr, V. (2013). Prior-knowledge and Opportunity Identification. *Small Business Economics*, 41(2), 461-478.
- Athayde, R. (2009). Measuring enterprise potential in young people. *Entrepreneurship Theory and Practice*, 33(2), 481-500.
- Autio, E., Keeley, R., Klofsten, M., Parker, G., & Michael, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145-160.
- Bandura, A. (1977). *Social learning theory*: Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory. *Englewood Cliffs, NJ: Prentice-Hall, 1986*.
- BarNir, A., Watson, W., & Hutchins, H. (2011). Mediation and moderated mediation in the relationship among role models, self-efficacy, entrepreneurial career intention, and gender. *Journal of Applied Social Psychology*, 41(2), 270-297.
- Baron, R. (2004). The cognitive perspective: a valuable tool for answering entrepreneurship's basic "why" questions. *Journal of Business Venturing*, 19(2), 221-239.
- Baron, R. (2006). Opportunity recognition as pattern recognition: How entrepreneurs "connect the dots" to identify new business opportunities. *Academy of Management Perspectives*, 20(1), 104-119.
- Baron, R. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, 33(2), 328-340.
- Bignotti, A., & Le Roux, I. (2020). Which types of experience matter? The role of prior start-up experiences and work experience in fostering youth entrepreneurial intentions. *International Journal of Entrepreneurial Behavior & Research*.

- 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.
- Blau, P., & Duncan, O. (1967). The American occupational structure.
- Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I. (2012). Entrepreneurship and role models. *Journal of Economic Psychology*, 33(2), 410-424.
- Brenner, O., Pringle, C., & Greenhaus, J. (1991). Perceived fulfillment of organizational employment versus. *Journal of small business management*, 29(3), 62.
- Bueckmann-Diegoli, R., & Gutiérrez, H. (2020). The development of entrepreneurial alertness in undergraduate students. *Education+ Training*.
- Busenitz, L. (1996). Research on entrepreneurial alertness. *Journal of small business management*, 34(4), 35.
- Cardella, G., Hernández-Sánchez, B., & Sánchez García, J. (2020). Entrepreneurship and Family Role: A Systematic Review of a Growing Research. *Frontiers in Psychology*, 10, 2939.
- Cardon, M., Glauser, M., & Murnieks, C. (2017). Passion for what? Expanding the domains of entrepreneurial passion. *Journal of Business Venturing Insights*, 8, 24-32.
- Cardon, M., Gregoire, D., Stevens, C., & Patel, P. (2013). Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of Business Venturing*, 28(3), 373-396.
- Cardon, M., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3), 511-532.
- Cardon, M., Zietsma, C., Saporito, P., Matherne, B., & Davis, C. (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, 20(1), 23-45.
- Carr, J., & Sequeira, J. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of business research*, 60(10), 1090-1098.
- Chavoushi, Z., Zali, M., Valliere, D., Faghieh, N., Hejazi, R., & Dehkordi, A. (2020). Entrepreneurial alertness: a systematic literature review. *Journal of Small Business & Entrepreneurship*, 1-30.
- Chlosta, S., Patzelt, H., Klein, S., & Dormann, C. (2012). Parental role models and the decision to become self-employed: The moderating effect of personality. *Small Business Economics*, 38(1), 121-138.
- Colombier, N., & Masclat, D. (2008). Intergenerational correlation in self employment: some further evidence from French ECHP data. *Small Business Economics*, 30(4), 423-437.
- Cooper, A., & Dunkelberg, W. (1987). Entrepreneurial research: Old questions, new answers and methodological issues. *American Journal of Small Business*, 11(3), 11-24.
- Costa, S., Santos, S., Wach, D., & Caetano, A. (2018). Recognizing opportunities across campus: The effects of cognitive training and entrepreneurial passion on the business opportunity prototype. *Journal of small business management*, 56(1), 51-75.
- Crant, J. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of small business management*, 34, 42-49.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301-331.
- Drnovsek, M., Cardon, M., & Patel, P. (2016). Direct and indirect effects of passion on growing technology ventures. *Strategic Entrepreneurship Journal*, 10(2), 194-213.
- Dyer, W., & Handler, W. (1994). Entrepreneurship and family business: Exploring the connections. *Entrepreneurship Theory and Practice*, 19(1), 71-83.
- Engle, R., Dimitriadi, N., Gavidia, J., Schlaegel, C., Delanoe, S., Alvarado, I., . . . Wolff, B. (2010). Entrepreneurial Intent: A twelve-country evaluation of Ajzen's model of planned behavior. *International Journal of Entrepreneurial Behavior & Research*, 16(1), 35-57.
- Fayolle, A., Liñán, F., & Moriano, J. (2014). Beyond Entrepreneurial Intentions: Values and Motivations in Entrepreneurship. *International Entrepreneurship and Management Journal*, 10(4), 679-689.

- Fiet, J. (2007). A prescriptive analysis of search and discovery. *Journal of Management Studies*, 44(4), 592-611.
- Fuentes, M., Arroyo, M., Bojica, A., & Pérez, V. (2010). Prior knowledge and social networks in the exploitation of entrepreneurial opportunities. *International Entrepreneurship and Management Journal*, 6(4), 481-501.
- Gaglio, C., & Katz, J. (2001). The psychological basis of opportunity identification: Entrepreneurial alertness. *Small Business Economics*, 16(2), 95-111.
- Gartner, W., Shaver, K., Gatewood, E., & Katz, J. (1994). Finding the entrepreneur in entrepreneurship. *Entrepreneurship Theory and Practice*, 18(3), 5-10.
- George, N., Parida, V., Lahti, T., & Wincent, J. (2016). A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors. *International Entrepreneurship and Management Journal*, 12(2), 309-350.
- Gird, A., & Bagraim, J. (2008). The theory of planned behaviour as predictor of entrepreneurial intent amongst final-year university students. *South African Journal of Psychology*, 38(4), 711-724.
- Hajizadeh, A., & Zali, M. (2016). Prior knowledge, cognitive characteristics and opportunity recognition. *International Journal of Entrepreneurial Behavior & Research*.
- Hoffmann, A., Junge, M., & Malchow-Møller, N. (2015). Running in the family: parental role models in entrepreneurship. *Small Business Economics*, 44(1), 79-104.
- Hsu, D. K., Simmons, S. A., & Wieland, A. M. (2017). Designing Entrepreneurship Experiments: A Review, Typology, and Research Agenda. *Organizational Research Methods*, 20(3), 379-412.
- 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.
- Huyghe, A., Knockaert, M., & Obschonka, M. (2016). Unraveling the "passion orchestra" in academia. *Journal of Business Venturing*, 31(3), 344-364.
- Jiao, H., Cui, Y., Zhu, Y., & Chen, J. (2014). Building entrepreneurs' innovativeness through knowledge management: the mediating effect of entrepreneurial alertness. *Technology analysis & strategic management*, 26(5), 501-516.
- Kaish, S., & Gilad, B. (1991). Characteristics of opportunities search of entrepreneurs versus executives: Sources, interests, general alertness. *Journal of Business Venturing*, 6(1), 45-61.
- Karimi, S., Biemans, H., Lans, T., Chizari, M., & Mulder, M. (2014). Effects of role models and gender on students' entrepreneurial intentions. *European Journal of Training and Development*.
- Kautonen, T., Luoto, S., & Tornikoski, E. (2010). Influence of work history on entrepreneurial intentions in 'prime age' and 'third age': A preliminary study. *International Small Business Journal*, 28(6), 583-601.
- 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.
- Kim, P., Aldrich, H., & Keister, L. (2006). Access (not) denied: The impact of financial, human, and cultural capital on entrepreneurial entry in the United States. *Small Business Economics*, 27(1), 5-22.
- Kirzner, I. (1973). *Competition and entrepreneurship*. Chicago: University of Chicago press.
- Kirzner, I. (1979). *Perception, opportunity, and profit*. Chicago: University of Chicago press
- Kirzner, I. (2009). The alert and creative entrepreneur: A clarification. *Small Business Economics*, 32(2), 145-152.
- Kolvereid, L., & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of Business Venturing*, 21(6), 866-885.
- Krueger, N. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice*, 18(1), 5-21.
- Krueger, N., & Carsrud, A. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5(4), 315-330.
- Krueger, N., Reilly, M., & Carsrud, A. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411-432.

- Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C., Prochotta, A., . . . Berger, E. (2020). Startups in times of crisis—A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, e00169.
- Laspita, S., Breugst, N., Heblich, S., & Patzelt, H. (2012). Intergenerational transmission of entrepreneurial intentions. *Journal of Business Venturing*, 27(4), 414-435.
- Latham, G., & Saari, L. (1979). Application of social-learning theory to training supervisors through behavioral modeling. *Journal of Applied Psychology*, 64(3), 239.
- Lee, S., & Wong, P. (2004). An exploratory study of technopreneurial intentions: A career anchor perspective. *Journal of Business Venturing*, 19(1), 7-28.
- Lerner, J., & Malmendier, U. (2013). With a little help from my (random) friends: Success and failure in post-business school entrepreneurship. *The Review of Financial Studies*, 26(10), 2411-2452.
- Liñán, F., & Chen, Y. (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. *International Entrepreneurship and Management Journal*, 11(4), 907-933.
- Lindquist, M., Sol, J., & Van Praag, M. (2015). Why do entrepreneurial parents have entrepreneurial children? *Journal of Labor Economics*, 33(2), 269-296.
- Lortie, J., & Castogiovanni, G. (2015). The theory of planned behavior in entrepreneurship research: what we know and future directions. *International Entrepreneurship and Management Journal*, 11(4), 935-957.
- Manolova, T., Brush, C., Edelman, L., & Elam, A. (2020). Pivoting to stay the course: How women entrepreneurs take advantage of opportunities created by the COVID-19 pandemic. *International Small Business Journal*, 38(6), 481-491.
- Marvel, M., & Lumpkin, G. (2007). Technology entrepreneurs' human capital and its effects on innovation radicalness. *Entrepreneurship Theory and Practice*, 31(6), 807-828.
- Mathews, C., & Moser, S. (1995). Family background and gender: Implications for interest in small firm ownership. *Entrepreneurship & Regional Development*, 7(4), 365-378.
- McMullen, J., & Shepherd, D. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132-152.
- 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.
- Minniti, M. (2008). The Role of Government Policy on Entrepreneurial Activity: Productive, Unproductive, or Destructive? *Entrepreneurship Theory and Practice*, 32(5), 779-790.
- Minniti, M., & Bygrave, W. (2001). A dynamic model of entrepreneurial learning. *Entrepreneurship Theory and Practice*, 25(3), 5-16.
- Mueller, P. (2006). Entrepreneurship in the region: breeding ground for nascent entrepreneurs? *Small Business Economics*, 27(1), 41-58.
- Mungai, E., & Velamuri, S. (2011). Parental entrepreneurial role model influence on male offspring: Is it always positive and when does it occur? *Entrepreneurship Theory and Practice*, 35(2), 337-357.
- Murnieks, C., Klotz, A., & Shepherd, D. (2020). Entrepreneurial motivation: A review of the literature and an agenda for future research. *Journal of Organizational Behavior*, 41(2), 115-143.
- Murnieks, C., Mosakowski, E., & Cardon, M. (2014). Pathways of passion: Identity centrality, passion, and behavior among entrepreneurs. *Journal of Management*, 40(6), 1583-1606.
- Neneh, B. (2019). From entrepreneurial alertness to entrepreneurial behavior: The role of trait competitiveness and proactive personality. *Personality and Individual Differences*, 138, 273-279.
- Neneh, B. (2020). Entrepreneurial passion and entrepreneurial intention: the role of social support and entrepreneurial self-efficacy. *Studies in Higher Education*, 1-17.

- Newman, A., Obschonka, M., Moeller, J., & Chandan, G. (2019). Entrepreneurial Passion: A Review, Synthesis, and Agenda for Future Research. *Applied Psychology*.
- Nowiński, W., & Haddoud, M. (2019). The role of inspiring role models in enhancing entrepreneurial intention. *Journal of business research*, *96*, 183-193.
- 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.
- Ozgen, E., & Baron, R. (2007). Social sources of information in opportunity recognition: Effects of mentors, industry networks, and professional forums. *Journal of Business Venturing*, *22*(2), 174-192.
- Pablo-Lerchundi, I., Morales-Alonso, G., & González-Tirados, R. (2015). Influences of parental occupation on occupational choices and professional values. *Journal of business research*, *68*(7), 1645-1649.
- Patel, P. (2019). Opportunity related absorptive capacity and entrepreneurial alertness. *International Entrepreneurship and Management Journal*, *15*(1), 63-73.
- Peterman, N., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship Theory and Practice*, *28*(2), 129-144.
- Pruett, M., Shinnar, R., Toney, B., Llopis, F., & Fox, J. (2009). Explaining entrepreneurial intentions of university students: a cross-cultural study. *International Journal of Entrepreneurial Behavior & Research*.
- Roberts, E. (1991). *Entrepreneurs in high technology: Lessons from MIT and beyond*. New York: Oxford University Press.
- Rotefoss, B., & Kolvereid, L. (2005). Aspiring, nascent and fledgling entrepreneurs: An investigation of the business start-up process. *Entrepreneurship & Regional Development*, *17*(2), 109-127.
- Roundy, P., Harrison, D., Khavul, S., Pérez-Nordtvedt, L., & McGee, J. (2018). Entrepreneurial alertness as a pathway to strategic decisions and organizational performance. *Strategic Organization*, *16*(2), 192-226.
- Scherer, R., Adams, J., Carley, S., & Wiebe, F. (1989). Role model performance effects on development of entrepreneurial career preference. *Entrepreneurship Theory and Practice*, *13*(3), 53-72.
- Scherer, R., Adams, J., & Wiebe, F. (1989). Developing entrepreneurial behaviours: A social learning theory perspective. *Journal of Organizational Change Management*.
- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: a meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, *38*(2), 291-332.
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, *11*(4), 448-469.
- Shane, S. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. London: Edward Elgar Publishing.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*(1), 217-226.
- Sharma, L. (2019). A systematic review of the concept of entrepreneurial alertness. *Journal of Entrepreneurship in Emerging Economies*.
- Shepherd, D., & DeTienne, D. (2005). Prior knowledge, potential financial reward, and opportunity identification. *Entrepreneurship Theory and Practice*, *29*(1), 91-112.
- Sheppard, B., Hartwick, J., & Warshaw, P. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of consumer research*, *15*(3), 325-343.
- Short, J., Ketchen, D., Shook, C., & Ireland, R. (2010). The concept of "opportunity" in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management*, *36*(1), 40-65.
- Smilor, R. (1997). Entrepreneurship: Reflections on a subversive activity. *Journal of Business Venturing*, *12*(5), 341-346.

- Tang, J., Kacmar, K., & Busenitz, L. (2012). Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, 27(1), 77-94.
- Thompson, E. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669-694.
- Tkachev, A., & Kolvereid, L. (1999). Self-employment intentions among Russian students. *Entrepreneurship & Regional Development*, 11(3), 269-280.
- Türk, S., Zapkau, F., & Schwens, C. (2020). Prior entrepreneurial exposure and the emergence of entrepreneurial passion: The moderating role of learning orientation. *Journal of small business management*, 58(2), 225-258.
- Urbano, D., Toledano, N., & Ribeiro-Soriano, D. (2011). Socio-cultural factors and transnational entrepreneurship: A multiple case study in Spain. *International Small Business Journal*, 29(2), 119-134.
- Uy, M., Chan, K., Sam, Y., Ho, M., & Chernyshenko, O. (2015). Proactivity, adaptability and boundaryless career attitudes: The mediating role of entrepreneurial alertness. *Journal of Vocational Behavior*, 86, 115-123.
- Valliere, D. (2013). Towards a schematic theory of entrepreneurial alertness. *Journal of Business Venturing*, 28(3), 430-442.
- Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., & Van Gils, A. (2008). Explaining entrepreneurial intentions by means of the theory of planned behaviour. *Career development international*.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. J. Katz, R. Brockhaus, eds. *Advances in Entrepreneurship, Firm Emergence and Growth*, Vol. 3. Greenwich, CT: JAI Press Vickers, New York: Basic Books, 3, 119-138.
- Westhead, P., Ucbasaran, D., & Wright, M. (2005). Decisions, actions, and performance: do novice, serial, and portfolio entrepreneurs differ? *Journal of small business management*, 43(4), 393-417.
- Yu, T. (2001). Entrepreneurial alertness and discovery. *The review of Austrian economics*, 14(1), 47-63.
- Zapkau, F., Schwens, C., & Kabst, R. (2017). The role of prior entrepreneurial exposure in the entrepreneurial process: A review and future research implications. *Journal of small business management*, 55(1), 56-86.
- Zapkau, F., Schwens, C., Steinmetz, H., & Kabst, R. (2015). Disentangling the effect of prior entrepreneurial exposure on entrepreneurial intention. *Journal of business research*, 68(3), 639-653.
- Zellweger, T., Sieger, P., & Halter, F. (2011). Should I stay or should I go? Career choice intentions of students with family business background. *Journal of Business Venturing*, 26(5), 521-536.
- Zhan, S., Uy, M., & Hong, Y. (2020). Missing the Forest for the Trees: Prior Entrepreneurial Experience, Role Identity, and Entrepreneurial Creativity. *Entrepreneurship Theory and Practice*, 1042258720952291.
- Zozimo, R., Jack, S., & Hamilton, E. (2017). Entrepreneurial learning from observing role models. *Entrepreneurship & Regional Development*, 29(9-10), 889-911.