

# Researching Entrepreneurial Beliefs in Career Decision-making

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## Abstract

Entrepreneurship is suggested as a key-mechanism for endogenous growth and social cohesion in modern, knowledge-driven societies and economies. Whether the youth will develop entrepreneurial competencies and initiatives has been considered crucial for economic growth and development and a key-subject of education and career counseling. Despite an increasing body of theoretical and empirical literature which mainly emphasize the formation of entrepreneurial intention and the strengthening of entrepreneurial self-efficacy -usually as a result of some intervention-, the findings show deficiencies or relative ambiguity, in terms of explaining the complex factors (e.g. entrepreneurial mindset, dysfunctional beliefs) associated with entrepreneurial intention and behavior. The present conceptual paper presents a synthetic literature review aiming at a deeper understanding of entrepreneurial intention and behavior. Based on the emergence of new, more explanatory, models to predict entrepreneurial behavior we emphasize how relevant research could approach this topic through the lens of the Socio-Cognitive Career Theory - driven by self-efficacy, outcome expectations and goal-directed activity - given that to date few studies have used this theoretical framework. We also suggest that the traditional entrepreneurial self-efficacy concept is investigated along with a new framework (ASKO) to measure beliefs regarding success of new ventures. ASKO typology traces a variety of different entrepreneurial mindsets within the person-environment dichotomy. Moreover, the potential contribution of dysfunctional career beliefs and locus of control in the formation of entrepreneurial behavior is examined. Career decision process and entrepreneurial career choices are highly complex and entail elements of various theoretical perspectives. The present literature review sheds light to our understanding of entrepreneurial career

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choices and suggests holistic in-depth research that will provide rich explanatory information on a wide range of behaviors. Finally, the present review provides opportunities to get insights regarding the nature and potential influence of support interventions in the context of entrepreneurship education and career counseling.

**Keywords:** Entrepreneurship, career beliefs, entrepreneurial self-efficacy, ASKO typology, career counseling, entrepreneurship education.

## **1. Entrepreneurship as a career option**

Entrepreneurship is suggested as a key-mechanism for endogenous growth and social cohesion in modern, knowledge-driven societies and economies. Entrepreneurship has been internationally viewed as a panacea for firm performance, technological innovation and economic development. As a result, investigating entrepreneurial behavior (EB) has been attractive for many researchers and policy makers (e.g. Belchior & Lyons, 2021). Similarly, formal or informal training and counselling is provided to strengthen the entrepreneurship behavior of young people. Whether the youth will develop entrepreneurial competencies and initiatives has been a key-subject of education and career counseling. Currently, entrepreneurship is proposed as a career option for graduates in all disciplines and is supported by educational policies both in Europe and internationally.

Entrepreneurial behavior (EB) is a key concept that relates to the personal actions taken in the pursuit of new venture creation (Gartner et al., 2010); including both pre-venture creation activities and those directly linked to new venture progression and scaling. Entrepreneurial behavior can be largely predicted by entrepreneurial intention. Entrepreneurial intentions (EI) have been conceptualized as a state of mind directing a person's attention, experience, and actions towards the specific goal of creating a new business venture (Bird & Jelinek, 1989). Investigating the motivation behind entrepreneurial intention is therefore considered as an important activity that helps in understanding and predicting entrepreneurship (Krueger et al., 2000). Although the intention is vital and seems to predict actual behavior, the formation of intention may be identified a long time before actual behavior, whereas behavior may also never take place.

Several studies show that beliefs regarding entrepreneurial success may be crucial to the formation of entrepreneurial behaviors (e.g. Belchior & Lyons, 2021; Laukkanen, 2022; Liguori et al., 2020) and may affect the formation of intention for one to be entrepreneur. For instance, in Ajzen's model of planned behavior (1991) it is assumed that various types of beliefs (normative, behavioral and control beliefs) would predict intention and in turn, intention would predict behavior. This model, although useful and widely accepted in entrepreneurial behavior research is rather linear and tends to ignore other significant contextual variables that relate with the personal or the societal impact such as personality, abilities, self-efficacy, family status, learning experiences, prior exposure to entrepreneurship, which may motivate an individual towards a new venture.

Although there is an abundance of conceptual or empirical studies to investigate the interrelation of motivational variables with entrepreneurial intention and actions, so far there is a lack of research to propose a holistic framework to explain entrepreneurship as a career choice. Krueger (2009) argues that intention is a core construct “deeply fundamental to human decision making” (p. 53) that might offer multiple fruitful opportunities to researchers to study new theories and models relating to decision making under risk and uncertainty. Entrepreneurship as a career choice begins with some degree of voluntary, conscious, planned behavior on the part of the individual (Krueger et al., 2000; Shook et al., 2003). However, there might be a large variety of other variables (person inputs, background variables, etc.) that may come into play in the process of entrepreneurial intention and behavior formation.

In this paper we view entrepreneurship through the lens of a career decision-making approach, attempting to integrate career counseling theoretical underpinnings with the relevant entrepreneurship literature.

In particular, the purpose of the present synthetic literature review (Kraus et al., 2022) is: (i) to provide a brief overview of the theoretical and empirical literature attempting to address the complex factors that interplay and contribute to an individual’s entrepreneurial intent and behavior, (ii) examine the role of beliefs such as those related to entrepreneurial self-efficacy and outcome expectations, (iii) to identify gaps and inconsistencies in the relevant literature, (iv) suggest more informative avenues to better understand entrepreneurial decision-making through the lens of the Socio Cognitive Career Theory (v) suggest investigating entrepreneurial success beliefs through the new ASKO framework, (vi) exploring the potential role of dysfunctional beliefs in the career decision-making process. We finally provide suggestions for further research in the form of emerging research hypotheses.

## **2. The concept of entrepreneurial beliefs**

Intention to form an entrepreneurial behavior begins from the individual’s attitude toward initiating a new venture (Kakouris, 2018). In turn, attitude is defined as the disposition, positive or negative, towards a particular idea, thing or situation and influences decision making and behavior. Attitudes are tightly connected with entrepreneurial beliefs (Tampouri & Kakouris, 2019).

Three interrelated main processes underlie beliefs. First, beliefs result from cumulative experiences (Cheng & Buehner, 2012). In particular, intensive ones like growing in a successful entrepreneur’s family or witnessing entrepreneurial failure can produce deep constructive or negative beliefs (Bandura, 1994). Second, in terms of content, modern adults’ knowledge and beliefs are largely socially transferred through cultural indoctrination, education, organisational arenas, and exposure to media and different information sources (Chi & Ohlsson, 2005).

Numerous studies investigating entrepreneurial beliefs have been largely based on the theory of planned behavior (Ajzen, 1991). According to this theory, beliefs of

various kinds shape the intention to behave in a particular way:

- a. behavioral beliefs, which relate to personal views on the specific behavior (whether it is good, bad, preferable, etc.),
- b. normative beliefs, which involve the opinion of significant others about that behavior,
- c. control beliefs, which involve the individual's self-perception regarding whether he or she can achieve the particular behavior.

Especially, control beliefs are considered an important cognitive factor and appear to play a mediating role in the intention-behavior relationship (Ajzen, 1991). Although different, in some studies, control beliefs are represented through self-efficacy beliefs.

Self-efficacy beliefs represent another important sort of beliefs, which is a core construct drawn from the Social Cognitive Theory (Bandura, 1997). They denote a dynamic set of beliefs about one's capacity to execute a course of action within a given performance domain (e.g. 'Can I do this?'). Such kind of beliefs strongly predict career goals or intentions (Lent et al., 1994). It is assumed that the higher the individuals' level of self-efficacy about fulfilling their occupational roles, the broader the options they will consider pursuing, the more interest they will show in those options, and the greater their persistence in pursuing occupational goals (Bandura et al., 2001). Conversely, individuals with low self-efficacy exhibit a lack of determination and tend to avoid vocational choices that they feel are beyond their abilities. More specifically, entrepreneurial self-efficacy refers to the individual's belief that he or she can successfully undertake business activities and behaviors (McGee et al., 2009). Entrepreneurial self-efficacy appears to influence both the identification of entrepreneurial opportunities (Ozgen & Baron, 2007) as well as the resilience and persistence of the entrepreneur (Mitchell & Shepherd, 2010). In the entrepreneurship research domain, self-efficacy has been mostly conceptualized as entrepreneurial self-efficacy beliefs, but generalized self-efficacy measures have also been used (Belchior & Lyons, 2021).

As another core construct of Social Cognitive Theory (Bandura, 1997) outcome expectations (OE) denote individuals' beliefs about the consequences of performing particular behaviors (Lent et al., 1994) in the form of the following phrase *'If I do this –what will happen?'*. Outcome expectations may be considered a self-regulatory mechanism that contributes to exercising human agency and acts to motivate a person towards achieving a goal and affects his/her career choices and behaviors. Specifically, in the career development domain this construct is of vital importance for individuals as it denotes "the extent to which they will be able to satisfy their primary values if they were to pursue particular career paths" (Lent, 2005, p. 104).

### **3. Theoretical framework and gaps to be examined**

Researchers have conceptualized entrepreneurial ventures as a planned behavior in relation with a new venture creation. Intentions toward entrepreneurship are deemed to be the most robust predictor of entrepreneurial behavior, over and above personality, attitudes or demographics (Kautonen et al., 2015). Entrepreneurial intentions are important as they enhance understanding of the reasons individuals pursue a new venture (Liguori et al., 2020). Krueger (2007) also notes that, ‘behind entrepreneurial action are entrepreneurial intentions’ (p. 124).

Considerable research has been conducted in the entrepreneurial intentions’ domain, but with mixed findings (Krueger et al., 2000). Belchior and Lyons (2021) posit that despite its popularity, the relationship between EI and EB is still debated. Researchers have found varying strengths of this EI-to-EB relationship, with the EI explained variance having great variations ranging between 10% and 37% (e.g., Armitage & Conner, 2001; Delanoe-Gueguen and Liñán 2019; Liñán & Fayolle, 2015; Neneh, 2019; Shirokova et al. 2016; Van Gelderen et al. 2015; cf. Belchior & Lyons, 2021). Moreover, numerous EI-focused studies suffer from methodological idiosyncrasies such as varying study timeframes, different measurement instruments, etc., which may justify some of their results’ differences. Additionally, the specific measurement of EI is still not consensual and has been criticized for being inconsistent and ambiguous at times (Bird, 2015). Despite the strong underpinnings of the EI-EB relationship in the relevant literature, researchers such as Lent and Brown (2006) raise some concerns about this predictability in contexts where goals are not clearly stated, are not set proximally to the intended behavior, and refer to actions that are not subject to personal control.

An increasing number of researchers have considered insufficient to test only hypothesized linear relations between entrepreneurial beliefs, intention and consequent behaviors and thus, attempt to integrate plenty additional variables in their models that are likely to interfere in the above traditionally examined framework. These studies include several personal, cognitive, social, contextual, and other factors in researching entrepreneurial beliefs in career decision-making. Moreover, emerging models used to investigate the phenomenon of entrepreneurial intentions are becoming more integrative of past models, such as combining those generated by Ajzen (1991) and Shapero (1984), and extending them to include demographic characteristics, perceived university support, entrepreneurial conviction, tolerance for risk and perceived benefits and so forth (Liguori et al., 2020). Following this line, a variety of new theoretical frameworks, techniques and methods have been recently implemented by several researchers. Below we present a few examples of research findings in which new sets of variables were involved in examining entrepreneurial beliefs and relevant behavior.

Townsend et al. (2010) demonstrated that confidence in one's ability to perform tasks relevant to entrepreneurship is a robust predictor of start-up while outcome expectancies appear to play a marginal role. Arenius and Minniti (2005) explored perceptual variables including opportunity perception and confidence in

one's skills and found that they are significantly correlated with new business creation. Bae et al. (2014) found a significant but small correlation between entrepreneurship education and entrepreneurial intentions. Additionally, Austin and Nauta (2016) examined the role of the entrepreneurial role-model exposure (operationalized in terms of both the number of role models known and the intensity of interactions with one's most influential role model) and self-efficacy as predictors of women's entrepreneurial intentions. Self-efficacy and number of entrepreneurial role models were both associated with stronger entrepreneurial intentions. In this line, BarNir et al. (2011) study's results indicated that role models have a significant and positive impact on intention, that gender moderated the effects, and that self-efficacy mediated it.

In another study, McCann (2017) focused on how individuals' general attitudes toward entrepreneurship based on exposure to others' prior entrepreneurial activities are related to beliefs surrounding current entrepreneurial opportunities. It was found that nascent entrepreneurs with more positive general attitudes toward entrepreneurship form more optimistic estimates of the financial performance and survival likelihood of their future ventures. Furthermore, they also estimated lower levels of environmental uncertainty.

An interesting field of study concerns the identification of entrepreneurial conceptions and beliefs of students as compared in various fields of study. For example, Kakouris (2016) administered a 34-item questionnaire of entrepreneurial conceptualizations (conceptualizing entrepreneurship, entrepreneurial success factors, motivation, risk management and business financing) to science and economics graduates and nascent entrepreneurs and compared these data to those of general population samples. The previous variables were also correlated with entrepreneurial intention as measured with a six-item scale. Findings demonstrated that Greek science and economics graduates typically exhibit differences in beliefs that downsize through entrepreneurship education. Entrepreneurial nascence was supported by personal competencies, self-confidence, planning capacities and adoption of an entrepreneurial style. Beyond expected dependencies on personal entrepreneurial competencies, motives, organizational skills and other subjective beliefs, possible misapprehension of entrepreneurial notions were found to reduce the entrepreneurial intention. The latter result differentiated nascent entrepreneurs from latent ones.

In their recent research, Gieure et al. (2020), based on Ajzen's theory of planned behavior, examined the link between entrepreneurial intentions and behavior in a sample of university students and revealed the important additional role that entrepreneurial skills play in the previous link.

In an attempt to develop a new structural model approach, Esfandiar et al. (2019) involved the notion of implementation intention in their research. Their findings revealed that entrepreneurial goal intention affects entrepreneurial implementation intention. Further, they found that desirability matters more than feasibility for students' entrepreneurial intention while social norms do not affect desirability and entrepreneurial goal intention while self-efficacy and collective efficacy have a

relative similar impact on feasibility.

Using a moderated mediation model, Odoardi et al. (2018) investigated the relationship between the entrepreneurial self-efficacy, belief, motivation, family support and entrepreneurial intentions in a sample of 446 students from four different high schools. Findings suggested that entrepreneurial self-efficacy partially mediated the effect of beliefs and motivations on entrepreneurial intention. This mediation is moderated by family support, which is also directly related to the intentions.

Neneh (2019) examined the role of action-oriented personality traits (i.e. trait competitiveness and proactive personality) and entrepreneurial alertness in the transition from opportunity recognition to entrepreneurial action. It was shown that entrepreneurial alertness significantly influenced entrepreneurial intentions, which subsequently resulted in entrepreneurial action. Also, the entrepreneurial alertness to entrepreneurial intentions ( $R^2 = 32.6\%$ ) association was positively moderated by trait competitiveness while the entrepreneurial intention to behavior association ( $R^2 = 32.2\%$ ) was positively moderated by proactive personality.

Led by a values-based perspective, Dougherty et al. (2019) explored religious beliefs and related values as correlates of entrepreneurial behavior. Results of a multigroup path model revealed that value orientations of self-enhancement, openness to change, and conservation are associated with entrepreneurial attitudes of opportunity recognition and risk willingness. These attitudes likewise correlate with new business creation whereas prosperity beliefs moderate the impact of values and entrepreneurial attitudes on the likelihood of starting a new business.

Another interesting research study (Tiwari et al., 2017) focused on social entrepreneurial intentions among undergraduate students ( $N=230$ ) in an Indian context also including measures of emotional intelligence, self-efficacy, and attitudes toward becoming a social entrepreneur. The proposed model explained 42% of the variance, explaining the social entrepreneurship intention while the emotional intelligence and self-efficacy were found to positively correlate with social entrepreneurial intentions.

#### **4. Bringing Social Cognitive Career Theory into play**

Individuals choosing to enter entrepreneurship typically do so after having made previous career decisions to work in paid-employment careers. Despite the usefulness of the accumulated knowledge of individual and contextual antecedents to entrepreneurial intentions, few studies offer a careers theory-based explanation of the reasons some people who have previously decided to pursue paid-employment careers view moves to entrepreneurial careers as feasible and desirable as proposed by entrepreneurial intentions-based models (Marshall & Gigliotti, 2020). In addition, many researchers argue that more complex configurations of motivational antecedents deserve further attention to better understand the cognitive process leading up to the start-up decision. These more complex models should also consider interaction, moderation, and mediation (BarNir et al., 2011; Fitzsimmons

& Douglas, 2011; Pollack et al., 2012).

Emerging intention models incorporate theories from different domains such as psychology, sociology, and economics (Barbosa et al., 2007; Fayolle & Liñán, 2014; Matthews & Moser, 1996; Scherer et al., 1989; Van Auken et al., 2006). This suggests the potential for well-established theories and measures from other domains to inform the development of the entrepreneurial intentions field. As Krueger (2009, p. 53) argues, ‘the construct of intentions appears to be deeply fundamental to human decision making and, as such, it should afford us multiple fruitful opportunities to explore the connection between intent and a vast array of other theories and models that relate to decision making under risk and uncertainty.’ Emanating from the career literature, Social Cognitive Career Theory - SCCT (Lent et al. 1994, 2000, 2002) is regarded as a promising theoretical basis for EI models given its robustness across domains and contexts (Liguori et al., 2018). As a result, it is growing in popularity in the study of EI and has already been used by several scholars to date (e.g. Lanero et al., 2016; Lent et al. 2010; Liguori 2012; Liguori et al., 2020; Zhao et al., 2005). Social Cognitive Career Theory offers a powerful opportunity to incorporate the dynamic interplay of previously studied individual, contextual and motivational variables in the formation of entrepreneurial intentions as a career choice. Integrating SCCT tenets into the current entrepreneurial intentions landscape provides the demanded clarity in a domain presently plagued by ambiguous results and underspecified models.

#### **4.1 Social Cognitive Career Theory (SCCT)**

Within the careers literature, SCCT is one of the most accepted and validated models used to understand the psychological processes underlying career interests and goals (e.g. Lent et al., 2002; Swanson & Gore, 2000).

Anchored in Bandura’s (1997) Social Cognitive Theory and concept of self-efficacy, Lent et al. (1994) developed SCCT to explain the process through which individuals develop career interests and goals, make career choices, and achieve career-related performance outcomes. SCCT emphasizes the importance of human agency and cognitive, self-regulatory processes in affecting human behavior through focusing on the following three inter-related sociocognitive mechanisms that represent the motivational processes underlying career choices and behaviors:

- a. Self-efficacy beliefs, which are the dynamic set of beliefs about one’s capacity to execute a course of action within a given performance domain (e.g. ‘Can I do this?’), strongly predict career goals or intentions (Lent et al., 1994).
- b. Outcome expectations, which involve the anticipated consequences of the action (e.g. ‘If I do this, what will happen?’), are critical determinants of career goals or intentions (Gore & Leuwerke 2000; Lent et al., 1994).
- c. Goals, which involve the intention to engage in a particular behavior or produce a particular outcome (Bandura, 1997).



Moreover, SCCT theorists posit, and research confirms, that person inputs (e.g. individual differences and predispositions) as well as background variables (e.g. environmental factors and geographic contexts) influence self-efficacy beliefs and outcome expectations, which in turn affect the formation of intentions (e.g. Lent & Brown, 1996; Lent et al., 1994, 2000, 2002; Schaub & Tokar, 2005).

Starting a business requires different levels of motivation, unique goals, resource commitment, and support that are not present in most traditional employment careers. The key SCCT constructs therefore hold great utility in predicting entrepreneurial intent. For example, Segal et al. (2002) found that self-efficacy beliefs and outcome expectations together explained over half of the variance in undergraduate business students' entrepreneurial intentions.

Recent empirical work paves the way for SCCT's adoption into entrepreneurship. Existing theoretical and empirical applications of SCCT to the entrepreneurship domain have focused on only a subset of SCCT constructs. We contend that the usefulness of the SCCT model for explaining entrepreneurial intent has not yet fully been realized. The preceding review of previous theoretical approaches for examining entrepreneurial beliefs suggests that multidimensional frameworks stemming from explanatory and integrative career development theories such as the Social Cognitive Career Theory may help career counselors and entrepreneurship educators better understand entrepreneurial beliefs in career decision-making. Therefore, we intend to build on existing literature to develop and test a more thorough SCCT model of entrepreneurial intent. Below are a few examples of recent research studies that have implemented SCCT tenets to investigate entrepreneurial behavior.

Lanero et al. (2016) tested a model of entrepreneurial career choice in 400 university students based upon Social Cognitive Career Theory. They hypothesized that entrepreneurial interests affect career choice and that perceived self-efficacy is related to outcome expectations and both constructs affect interests and career choice. The findings indicate that self-efficacy exerted positive effects on outcome expectations, entrepreneurial interests, and career choice, which holds for students across disciplines. However, interests were not associated with career choice.

Meoli et al. (2020) explored the role of social context in entrepreneurial career choices (new venture creation) building on SCCT. They modeled how immediate and larger contextual influences may favor or inhibit the translation of entrepreneurial intention into new venture creation, using longitudinal data from almost the entire population of Italian university graduates. Findings demonstrated that relevant others' and organizational influences enhance the translation of entrepreneurial intention into behavior, whereas environmental influences may inhibit it.

Always based on the SCCT framework, Belchior and Lyons (2021) conducted both a cross-sectional and a longitudinal research to test the applicability of social cognitive career theory (SCCT) in explaining EI and EB for a sample of 1,149 Portuguese college students. The cross-sectional results supported SCCT's ability to explain students intentions in this large student population. Furthermore, with a

smaller subsample, longitudinal analysis confirmed intentions, as predictive of nascent EB, towards successful new business creation. However, in contrast to the theory's propositions, the authors revealed that entrepreneurial self-efficacy beliefs and outcome expectations did not add to EI's ability to predict EB.

Another interesting study (Liguori et al., 2020) in a sample of 320 undergraduate business students at a large U.S. university emphasized the important influences of prior exposure to entrepreneurship, as well as social support mechanisms on formation of entrepreneurial intentions and entrepreneurial outcome expectations. Additionally, entrepreneurial attitude mediated the relationship between entrepreneurial motivation and intention, acting as important precursor to entrepreneurial intent. In this case of research SCCT offered additional explanations to the existing underspecified model and complexity of entrepreneurial intentions.

## **5. Integrating additional cognitive dimensions in the study of entrepreneurial intentions**

### **5.1 Dysfunctional beliefs**

The dysfunctional career thoughts have been recognized as an important factor in the career decision-making process (Austin et al., 2004). They refer to prejudiced or twisted career beliefs, unreasonable expectations, various career myths, negative estimations regarding the individual's actions and professions, which influence each one's ambitions and his actions. Career counselors have observed that many clients express some dysfunctional thoughts and beliefs about their careers, which affect and impede the resolution of problem solving and decision making (e.g. some people expect to find the perfect career, others believe that career choice is only possible once and cannot be changed in the future, etc.). Such dysfunctional beliefs may lead the individual to avoid the decision-making process, to give up when difficulties arise at some stage of the decision-making process, or cause uncertainty about the appropriateness of the choice and lack of commitment to it. The recognition of the individual's dysfunctional beliefs about career issues is a particularly critical issue for the provision of career counselling and educational services (Hechtlinger et al., 2019).

Career Thoughts Inventory (CTI) (Sampson et al., 1996) assesses dysfunctional thoughts in the decision making process on the basis of the following sub-scales:

- a. Decision-making Confusion, which refers to the individual's weakness to put into practice or to maintain the career decision-making process, as a result of weak feelings, lack of understanding of the career decision-making process itself and/or lack of capacity to combine the knowledge for him/herself with the knowledge for the professional world.
- b. Commitment Anxiety, which counts the individual's weakness to commit him/herself to a specific career choice and a generalized concern for the result of the career decision process.
- c. External Conflict, which refers to the individual's difficulty to balance between the importance of his/her own opinion for him/herself and the importance of the

relevant opinions of significant others, resulting to the individual's unwillingness to take responsibility for the decision making.

The Dysfunctional Career Decision-Making Beliefs (DCB) (Hechtlinger et al., 2019) model propose five dimensions relate to the following types of beliefs:

- i. The role of chance or fate.
- ii. The criticality of the decision.
- iii. The role of significant others.
- iv. The role of professional help.
- v. The role of gender stereotypes.

## **5.2 Success beliefs**

The newly developed ASKO framework (Kakouris, 2018, 2019, Figure 1) draws upon the individual in interaction with the environment adopting dialectics toward deploying and interpreting entrepreneurial beliefs. More specifically, ASKO framework refers to beliefs about entrepreneurial success. These beliefs relate to entrepreneurial thinking and can be considered analogous to the behavioral ones in the model of planned behavior. They are also indicative of the type of entrepreneurship in which the person has a preference. We then present the ASKO framework (Kakouris, 2018, 2019) which adopts a dialectical approach to entrepreneurial thinking.

The individualistic dimension includes knowledge (K) dialectically opposed to ability (A) and the societal opportunity (O) dialectically opposed to support (S). Dialectical opposition refers to what individuals perceive as more important for the success of a new venture. Depend on the prioritization of the ASKO poles in time-limited decision-making (i.e., entrepreneurial beliefs for success), four different and complementary conceptualizations ('styles') emerge (denoted by I-IV in Figure 1). Domain I refers to habitual entrepreneurs or venture capitalists, II to corporate entrepreneurship and social venturing, III to craftsmen and self-employed and IV to knowledge intensive start-ups for growth. The novel ASKO interpretation aims at settling the huge spectrum of factors and concepts thought as relevant to entrepreneurship. It can be used in strategic fostering the entrepreneurial mindset where certain goals have to be met by instruction, counseling or consultancy. Effects of various interventions on entrepreneurial attitude can be mapped in the ASKO framework. Using a minimal ASKO configuration (i.e., with 8 factors), promising results have been derived for entrepreneurship education (Kakouris, 2018), career counseling (Tampouri & Kakouris, 2019) and in entrepreneurial opportunity perception (Kakouris, 2017).

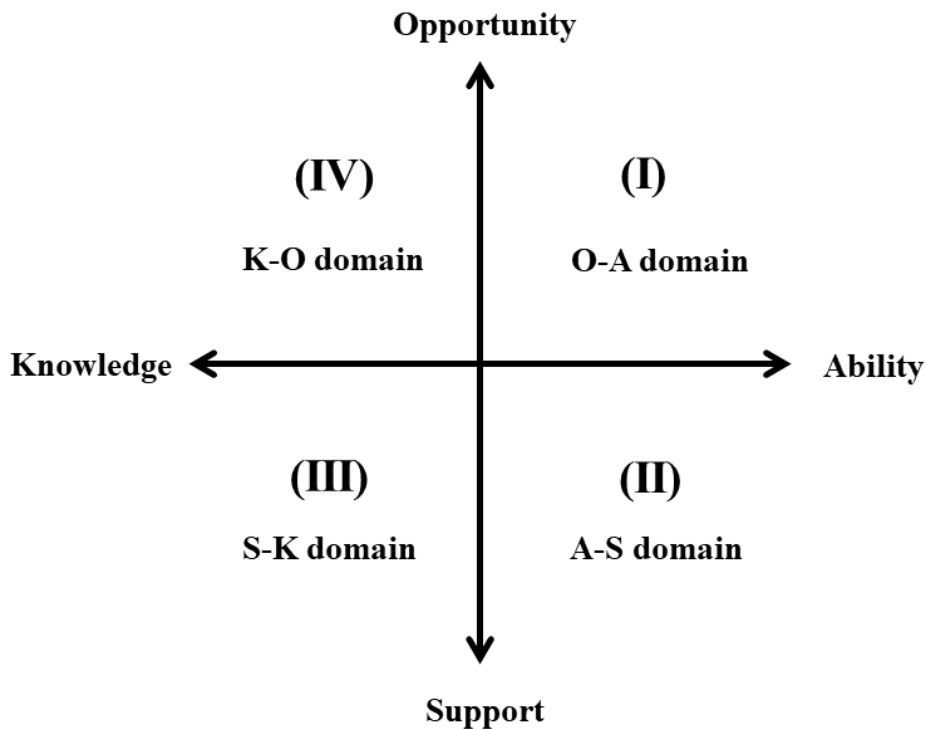


Figure 1: The ASKO interpretation (Kakouris, 2018, 2019)

## 6. Locus of control

Locus of control (Rotter, 1990) refers to an individual's perception about the causes of their life conditions. External locus of control describes an individual that believes that most of their life conditions are determined by forces outside of their control, such as like deities, governments, power structures, institutions, and also fate or luck. Internal locus of control describes an individual that believes that they are their own master and can act to change their own life conditions. They are viewed as a continuum and most individual are situated between the two extremes of complete external control and total internal control orientations.

When applied to entrepreneurs, those with an external locus might believe that their survival or success chances are determined by market and institutional forces they cannot control. Conversely, entrepreneurs with an internal locus of control believe that success is determined by his or her own efforts and abilities. The main idea is that internal locus of control is associated with positive intentions to become entrepreneur, and attempt an entrepreneurial entry.

## 7. Proposed research hypotheses

According to the previous literature which is indicative for a large volume of relevant literature, a research agenda is presented in the last part of the present conceptual article. The following motivation underlies our objectives: (a) to shed light on the entrepreneurial intentions literature through the lens of SCCT and (b) to suggest a holistic, in-depth research that will provide rich explanatory information on a wide range of entrepreneurial behaviors. Hence, we articulate five research questions to be empirically investigated in future research.

*(Q1) How are entrepreneurial intention and entrepreneurial behavior associated with sociocognitive factors that are embedded in SCCT, specifically, generalized self-efficacy, entrepreneurial self-efficacy and entrepreneurial outcome expectations?*

*(Q2) Do dysfunctional career thoughts, entrepreneurial success beliefs and locus of control play a mediating role in the relationship between entrepreneurial self-efficacy and entrepreneurial intention?*

*(Q3) Do dysfunctional career thoughts, entrepreneurial success beliefs and locus of control play a mediating role in the relationship between entrepreneurial intention and entrepreneurial behavior?*

*(Q4) How do dysfunctional career beliefs relate to the various constructs comprising SCCT and the various entrepreneurial success beliefs?*

*(Q5) Are there differences in the aforementioned constructs among potential entrepreneurs, actual entrepreneurs and non-entrepreneurs?*

It is noted that despite some of the previous concepts have been measured and studied in many contexts (especially educational), dysfunctional career beliefs along with success beliefs are recommended for the first time in the extant literature. Thus, the present framework enriches the cognitive toolbox in order to seek for the longstanding missing links between entrepreneurial beliefs and attitudes, entrepreneurial intention and entrepreneurial behavior.

Finally, the present paper provides new opportunities for implementations as, for example, to think about the nature and potential influence of support interventions in the context of entrepreneurship education and career counseling. More specifically, the co-evaluation of a set of factors (difficulties in career decision-making, self-efficacy, success beliefs, locus of control) is especially useful in career counseling and entrepreneurial education, as it can lead to planning of suitable services of career guidance and educational programs, in order to hopefully lead the person to a more desirable career path.

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