

MODELS OF THE DETERMINANTS OF ENTREPRENEURIAL BEHAVIOUR: A LITERATURE REVIEW

Charalampos A. BOTSARIS
botsaris@otenet.gr

Vasiliki VAMVAKA
v.vamvaka@ucg.gr

University of Central Greece, Department of Regional economic Development

Abstract

Entrepreneurship has become a growing trend with growing importance within the global marketplace, seen as providing a satisfying and rewarding working life at the level of the individual, and as contributing to prosperity and economic growth at a national level. Thus, answering the questions of why people demonstrate entrepreneurial behaviour and what factors affect their decision to become entrepreneurs has been and still remains a topic of intense research interest. Towards identifying the factors that shape the entrepreneurial decision several explanatory models of entrepreneurship determinants have been developed. The aim of this study was to provide a review of extant literature related to models of the determinants of entrepreneurial intention and behaviour. The models reviewed were of three types: traits models, situational models and intention-based models of entrepreneurship.

Keywords: *Entrepreneurial behaviour, models, traits, situation, intention*

JEL classification: *L26*

Introduction

Understanding entrepreneurship is considered important, because, evidently, economic development is strongly influenced by entrepreneurial activities (Stam, Bosma, Van Witteloostuijn, De Jong, Bogaert, Edwards, & Jaspers, 2012). Thus, explaining and predicting the choice of an entrepreneurial career has been and still remains an important research issue (Pruett, Shinnar, Toney, Llopis, & Fox, 2009). Towards identifying the factors that shape the entrepreneurial decision several explanatory models of entrepreneurship determinants have been developed (Kennedy, Drennan, Renfrow, & Watson, 2003).

As the theoretical development of the entrepreneurship concept changed trajectories early in the 20th century, methodologies used to study the entrepreneurial activities have been also changing along the years (Liñán & Chen, 2006; Solymossy, 1998), while numerous personal and environment-based determinants of entrepreneurial activities, such as personality traits, attitudes toward entrepreneurship, or social environment have been proposed and extensively discussed in the literature (Guerrero, Rialp, & Urbano, 2008; Liñán & Chen 2009; Raposo, Ferreira, Paço, & Rodrigues, 2008; Schwarz, Almer-Jarz, & Wdowiak, 2006, as cited in Do Paço, Ferreira, Raposo, Rodrigues, & Dinis, 2011).

Traits models

Entrepreneurship has been historically conceptualized and studied as a phenomenon at an individual level (Ribeiro-Soriano & Urbano, 2009). As Gartner (1989, p.47) points out, much research in the entrepreneurship field has focused on the person of the entrepreneur, asking the question: "Why do certain individuals start firms when others, under similar conditions, do not?". Gartner further notes that asking *why* has led us to answering with

who:” Why did X start a venture? Because X has a certain inner quality or qualities”. This led to an overwhelming perception that the entrepreneur is importantly different from the non-entrepreneur (Gan, 2010). Towards distinguish entrepreneurs from non-entrepreneurs traits and demographic variables differentiating entrepreneurs from non-entrepreneurs were initially looked for.

Personality traits are defined as “*enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts*” (APA, 2000, p. 686). The rationale behind the explanatory models of entrepreneurship determinants attempting to predict entrepreneurial activities from personality traits relied on the assumption that individuals who have similar personality characteristics to a typical entrepreneur would behave entrepreneurially (Izquierdo & Buelens, 2008). Later on, other studies have pointed to the importance of demographic characteristics of the person such as age, gender, origin, religion, level of studies, labour experience, and so on (Reynolds, Storey, & Westhead, 1994; Robinson, Stimpson, Huefner, & Hunt, 1991; Storey, 1994, as cited in Liñán, 2004).

Both lines of analysis have allowed the identification of significant relationships among certain traits or demographic characteristics of the individual, and the fulfilment of entrepreneurial behaviors (Liñán & Chen, 2006). Personality characteristics that have been suggested in the literature as being good predictors of the entrepreneurial behaviour are the need of self-achievement, the creativity and initiative, the innovativeness, the proactiveness, the propensity of risk, the self-confidence and the locus of control, the independence and autonomy, the motivation, energy and commitment, the persistence, the values and the attitudes, the personal objectives, the Big Five personality traits (neuroticism, extraversion, conscientiousness, openness and agreeableness), the assertiveness, the self-efficacy, and the self-esteem (Brandstätter, 1997; Caliendo, Fossen, & Kritikos, 2011; Gorman, 1997; Kourilsky, 1980; Liñán & Chen, 2006; Raposo et al., 2008; Rauch & Frese, 2007; Robinson et al., 1991; Wood, 2009). Yet, three personality constructs have emerged as ‘classic’ characteristics associated with the entrepreneurial personality: internal locus of control, high need for achievement, and a moderate risk-taking propensity (Korunka, Frank, Lueger, & Mugler, 2003, as cited in Reimers-Hild, King, Foster, Fritz, Waller, & Wheeler, 2005).

However, the extant literature has shown that models predicting entrepreneurial activities only from individual (for example, demographic characteristics or personality traits) variables have small explanatory power and even smaller predictive validity (Izquierdo & Buelens, 2008; Krueger, Reilly, & Carsrud, 2000). Thus, the role of personality traits in the entrepreneurial decision is discussed controversially in entrepreneurship research and many researchers raised serious doubts as to whether personality plays any role in the start-up phase and for business success (Rauch & Frese, 2007). Gartner (1985) argued that new venture creation is a complex phenomenon: entrepreneurs and their firms vary widely, and that it is not enough for researchers to seek out and focus on some concept of the “average” entrepreneur and the “typical” venture creation. In a similar vein, Blanchflower and Oswald (1998, p.51) concluded that “*psychology apparently does not play a key role*”, while Aldrich (1999) claimed that research on personality traits has reached an apparent empirical dead end.

Despite these critics and inconclusive research findings, other researchers believe that personality variables, traditionally studied by psychologists and incorporated only more recently by economists, are a potential source to explain the development of self-employed entrepreneurs (Caliendo et al., 2011); and that personality research plays a critical role in the investigation of the entrepreneurial personality (Reimers-Hild et al., 2005). Rauch and Frese (2007), in their meta-analysis on the relationship between business owners’ personality traits, business creation, and success, argue that the person should be put back into entrepreneurship research. Their results indicate that traits matched to the task of running a business produced higher effect sizes with business creation than traits that were not matched to the task of running an enterprise. Moreover, traits matched to the task produced higher correlations with success. On the basis of their findings, Rauch and Frese (2007) proposed to study specific traits, such as achievement motive rather than broad categories of traits, such as the Big Five to predict entrepreneurial behaviour. They also suggested to ask the question whether the trait

is matched to the task or not. Rauch and Frese (2007) concluded that the traits matched to entrepreneurship which significantly correlated with entrepreneurial behavior (business creation, business success) were need for achievement, generalized self-efficacy, innovativeness, stress tolerance, need for autonomy, and proactive personality.

Situational models: Incorporating individual and environmental factors

The existing literature reveals that personality alone has limited explanatory power in predicting entrepreneurial activities. Noticing that individuals do not exist and do not act in isolation, as atomized decision-makers who operate as autonomous entities but they also take environmental conditions into account by their decision-making processes, many researchers viewed environment as an explanation why the relationship between personal-related factors and entrepreneurial intent and activity is not always deterministic in nature (Aldrich & Zimmer, 1986; Lüthje & Fanke, 2003; Schwarz, et al., 2006). Thus, studies on the entrepreneurship started to focus on environmental conditions as determinants of people's aspiration to start a company (Schwarz et al., 2006). Researchers argued that the interaction between individuals' characteristics and situational conditions would predict entrepreneurial behavior better than any one of these factors alone, and they suggested to integrate the social context into models that explore personality characteristics (Magnusson & Endler, 1977; Schwarz et al., 2006).

In 1980 Van de Ven (1980, p. 86) urged entrepreneurship researchers to follow leadership researchers in terms of concepts studied and models employed, by writing: *“Researchers wedded to the conception of entrepreneurship for studying the creation of organizations can learn much from the history of research on leadership. Like the studies of entrepreneurship, this research began by investigating the traits and personality characteristics of leaders. However, no empirical evidence was found to support the expectation that there are a finite number of characteristics or traits of leaders and that these traits differentiate successful from unsuccessful leaders. More recently, research into leadership has apparently made some progress by focusing on the behavior of leaders (that is, on what they do instead of what they are) and by determining what situational factors or conditions moderate the effects of their behavior and performance.”*

In a similar vein, Gartner (1985, p. 698), in his seminal paper, presented a framework for describing the creation of a new venture across four dimensions: (a) individual(s)-the person(s) involved in starting a new organization; (b) organization-the kind of firm that is started; (c) environment-the situation surrounding and influencing the new organization; and (d) new venture process-the actions undertaken by the individual(s) to start the venture. This behavioral approach views the creation of an organization as a contextual event, the outcome of many influences (Gartner, 1989, p. 57).

Following Van de Ven (1980) and Gartner (1989), many researchers included situational factors in the traits approach conceptualizing entrepreneurship as a contextual phenomenon, affected by the economic, political, social, and cultural environment in which it occurs, and linking cultural and situational factors to the body of literature that emphasizes a psychological-based explanation for entrepreneurship (Pruett et al., 2009; Schwarz et al., 2006). Busenitz, West, Shepherd, Nelson, Gaylen, and Zacharakis (2003), in their review of entrepreneurship research, concluded that researchers should focus on the exploration of the nexus of opportunities, enterprising individuals, and the wider environment. Examples of situational factors that have received significant attention in the literature on business start-ups are time constraints, task difficulty, the influence of other people through social pressure (Lee & Wong, 2004); unemployment and family commitments (Kennedy et al., 2003; Lawrence & Hamilton, 1997); and exposure to personal entrepreneurial role models (Feldman, Koberg, & Dean, 1991; Pruett et al., 2009; Rajiman, 2001; Zhao, Seibert, & Hills, 2005).

Shapero and Sokol (1982, as cited in Lorz, 2011) proposed a model which assumes that inertia guides human behaviour until some event ‘displaces’ that inertia and unblocks previously undesired behaviours. With this perspective, the situational variables are seen as life path changes. Shapero and Sokol (1982) classified these life path changes into three

categories: negative displacements or push factors (such as forcefully emigrated, fired, insulted, angered, bored, reaching middle age, divorced or widowed), being between things (such as graduating from high school, university, finishing military duty or being released from jail), and positive pulls from the partner, mentor, investor or customers.

The push/pull classification of situational factors in the external environment used by Shapero and Sokol (1982) was also adopted by other researchers (Cooper & Dunkelberg, 1986; Feeser & Dugan, 1989). Push factors are negative factors which drive individuals towards entrepreneurship due to negative circumstances. Some examples of push factors are dissatisfaction by previous work experiences, protection from unemployment, low income position, difficulty in finding a job, and dependence nature of a salaried job. The Global Entrepreneurship Monitor (GEM) refers to this group as 'necessity' entrepreneurs as they pushed into starting up a business not so much out of choice but out of necessity (Gray, Foster, & Howard, 2006; Orhan, 2005).

In contrast, pull factors are positive factors which attract individuals into entrepreneurship because of the potential for the business concept and the prospective future value for the individual (Orhan, 2005). Some examples of pull factors are spotting opportunities from past experiences, having a family relative bequeath a business to them, self-fulfilment, demonstration of personal capabilities, desire for wealth, desire for independence, social status and power, and social mission (Akpor-Robaro, 2012; Gray et al., 2006; Orhan, 2005; Solymossy, 1997). The 'pull' entrepreneurs who have sensed an opportunity that needed to be exploited and marshalled all their efforts to create new business, are referred to by the Global Entrepreneurship Monitor as 'opportunity' entrepreneurs (Gray et al., 2006).

Brush (1990, as cited in Orhan, 2005), notes that there is rarely a clear-cut situation of necessity or choice, and most entrepreneurs are influenced by a combination of both push and pull components. However, some analysts of the 'pull' and 'push' factors dichotomy have observed that the 'push' entrepreneurs are less successful than the 'pull' entrepreneurs (Akpor-Robaro, 2012).

Another model that brings together the characteristics that would define a 'quality entrepreneur' and the environmental factors that would influence these characteristics was proposed by Guzmán and Santos (2001). Their model views entrepreneurship as a multidimensional concept where the influence of sociological, institutional, political and personal factors are essential in the behavior of entrepreneurs and in their relationship with economic growth and development (Audretsch, 2002; Reynolds, Hay, & Camp, 1999; Verheul, Wennekers, Audretsch, & Thurik, 2003, as cited in Santos-Cumplido & Liñán, 2007). In the model, developed to configure the quality of entrepreneurs and the factors that determine it from a theoretical point of view, Guzmán and Santos (2001) selected four main components: *the necessary, although not sufficient, condition to be an entrepreneur*, that is, the preference for working as self-employed; *the qualitative exponents of the energizer sub-function*, where the psychological process is developed and booster actions are undertaken; *the factors of the personal environment of the entrepreneur*, which are those that create the attitudes and abilities and, therefore, influence the psychological processes undertaken by the entrepreneur; and *the factors of the global environment of the entrepreneur* which will also impact on the factors of the personal environment and the energizer sub-function, creating opportunities and sourcing information for the entrepreneurs. This model is illustrated in Figure 1.

Guzmán and Santos (2001) included in their model two exponents of the quality of entrepreneurs: the *entrepreneurial motivation* and the *energizer behaviours* (the ambition or capacity to grow; the innovation capacity; the spirit of collaboration; and the proactiveness or leadership). These entrepreneurial qualities would be influenced by two types of environmental factors: factors of the entrepreneur's personal environment, such as education, professional experience, and family; and factors of the entrepreneur's global environment, composed of social, cultural, political, institutional and productive aspects that have an impact on the whole society in which entrepreneurs live. Contrary to the factors of the entrepreneur's personal environment, those factors belonging to the global environment affect all

entrepreneurs, regardless of their education, experience or family support (Guzmán & Santos, 2001). At the same time, while the factors of the personal environment provide abilities and attitudes, the factors of the global environment provide opportunities and information (Guzmán & Santos, 2001; Santos-Cumplido & Liñán, 2007).

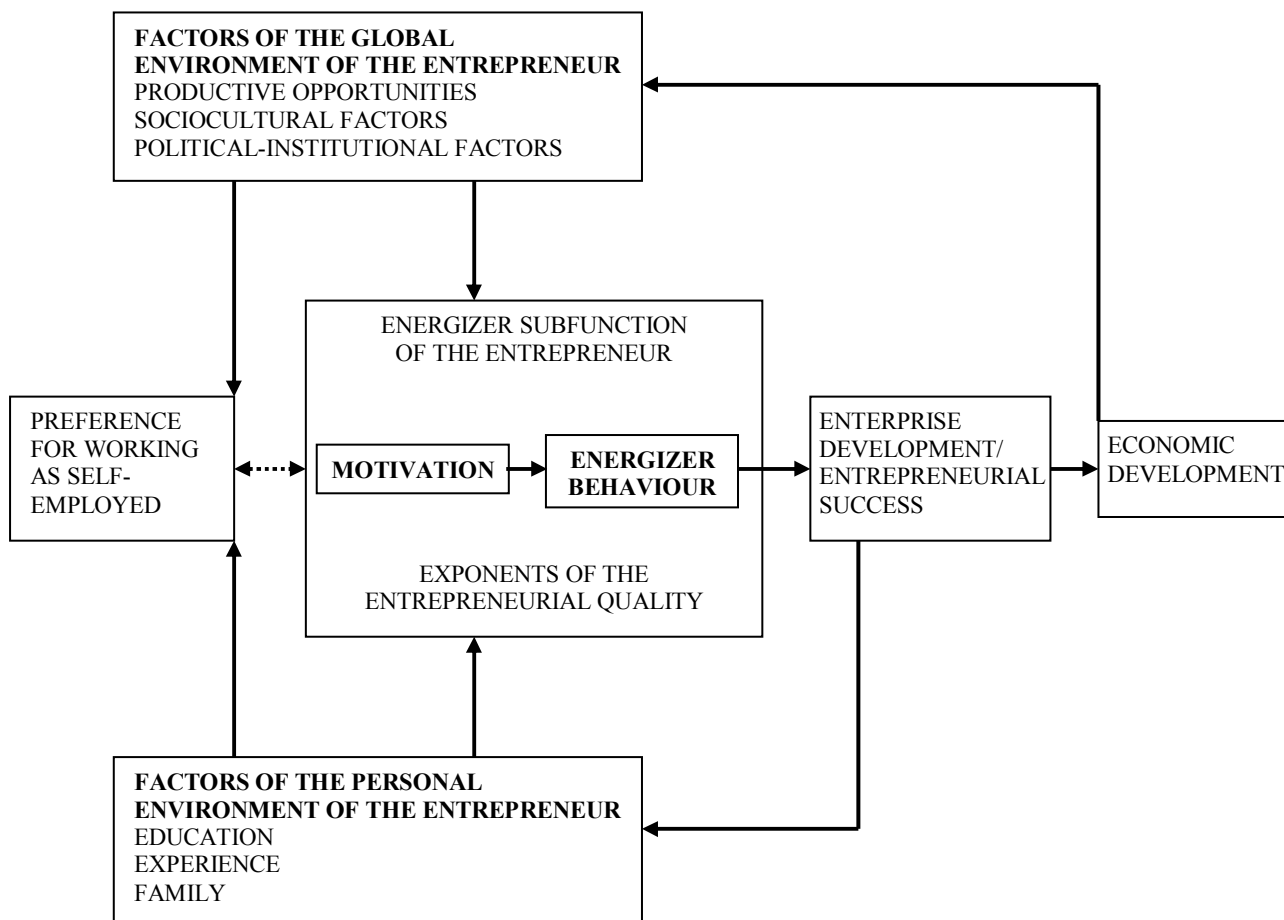


Figure 1. Entrepreneurial quality configuration model. Source: Guzmán and Santos (2001)

Intention-based models: From traits to attitudes

The extant literature has shown that models of the determinants of entrepreneurial behaviour, focusing on how psychological traits, demographic, and situational factors distinguish entrepreneurial individuals from non-entrepreneurial individuals, were disappointing with respect to both explanatory power and predictive validity (Hindle, Klyver, & Jennings, 2009; Krueger et al., 2000). The failure of situational and personality measures to significantly predict entrepreneurial activity suggested another approach (Krueger et al., 2000) and, as a reaction, different entrepreneurial intention models developed (Hindle et al., 2009; Krueger et al., 2000).

The entrepreneurial intention approach emerged in the 1980s drawing heavily on Bandura’s (1977) social learning theory also called social cognitive theory (Hindle et al., 2009). Social cognitive theory posits that individual behaviour is part of an inseparable triadic structure in which behaviour, personal factors and environmental factors constantly influence each other, reciprocally determining each other (Carillo, 2010). Social cognitive theory postulates also that an individual’s behaviour is primarily learned through his or her observation of others as well as through interaction with his or her environment (Dimopoulou, 2012).

Bird (1992: 11) defined intention as “a state of mind directing a person’s attention, experience and behavior towards a specific object or method of behaving”.. According to

Boyd and Vozikis (1994: 64) an entrepreneurial intention is “the state of mind that directs and guides the actions of the entrepreneur toward the development and implementation of the business concept”. Along a similar line, Fini, Grimaldi, Marzocchi, and Sobrero (2012) suggest to keep in mind that entrepreneurial intention reflects a state of mind directing a person’s attention and action toward the enactment of entrepreneurial behaviour. In an attempt to clarify the construct of intention –in particular entrepreneurial intention– Thompson (2009: 676) suggested that “individual entrepreneurial intent is perhaps most appropriately and practically defined as a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future”.

The basic rationale behind the intention models is that most behaviours of social relevance are under volitional control and are thus predictable from intention (Ajzen & Fishbein, 1980; p.41). This view is supported by existing research which reveals that intentions are the best single predictor of such volitional behaviors (Ajzen, 1991; Bagozzi, Baumgartner & Yi, 1989; Sutton, 1998, as cited in Fini et al., 2012). For Ajzen (2002a), intention is assumed to be the immediate antecedent of behavior. Meta-analyses show that intention toward a behavior would be a strong predictor of that behavior (Armitage & Conner, 2001; Sutton, 1998). Souitaris, Zerbinati, and Al-Laham (2007) indicate that intention proved to be the best predictor of planned behaviour, particularly when that behaviour is rare, hard to observe, or involves unpredictable time lags.

Many scholars argue that the decision to become an entrepreneur may be plausibly considered as voluntary and conscious, and that setting up a business involves careful planning and a thinking process which is highly intentional (Autio, Keeley, Klofsten, Parker, & Hay, 2001; Bird, 1988; Krueger et al., 2000). Thus, entrepreneurship has been seen as a good example of planned intentional behaviour and therefore applicable for intention models (Autio et al., 2001; Bird, 1988; Davidsson, 1995; Fayolle, 2006; Krueger et al., 2000; Shapero & Sokol, 1982). In this sense, entrepreneurial intentions would be the first step in the evolving and, sometimes, long-term process of venture creation, and a previous and determinant element towards performing entrepreneurial behaviours (Fayolle & Gailly, 2004; Kolvereid, 1996; Lee & Wong, 2004, as cited in Liñán & Chen, 2006).

According to Bird (1988: 442) “entrepreneurs’ intentions guide their goal setting, communications, commitment, organization, and other kinds of work”. In a similar vein, Krueger et al. (2000: 412) argue that intentions are “the single best predictor of any planned behavior, including entrepreneurship”. For Thompson (2009: 670) “entrepreneurial intent is substantially more than merely a proxy for entrepreneurship –it is a legitimate and useful construct in its own right that can be used as not just a dependent, but as an independent and a control variable”.

Deeply connected to intentional and volitional behavior are beliefs and attitudes (Elfving, 2008). Fishbein and Ajzen (1975: 6) define an attitude as “learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object”. For Souitaris et al. (2007: 570), “attitude towards self-employment is the difference between perceptions of personal desirability in becoming self-employed and organisationally employed”. According to Fini et al. (2012: 390) “attitude toward behavior, refers to the degree to which a person has a favorable or unfavorable appraisal of the behavior under scrutiny”.

The overall tenet of the intention models is that intention is the immediate antecedent of behaviour, while in turn intention is determined by attitudes, and attitudes are affected by exogenous influences (such as traits, demographics, and situational variables) (Ajzen, 1991; Krueger et al., 2000; Shapero & Sokol, 1982). A more favourable attitude would increase the intention to carry out the intended behaviour (Fini et al., 2012; Liñán, 2004). Without a positive attitude towards a behavior one is not likely to intend to engage in the behavior. (Elfving, 2008).

As such, intentions toward behavior are absolutely critical to understanding other antecedents and serve as important mediating variables between the act of starting a business venture and potential exogenous influences which affect attitudes and indirectly intentions

and behaviour (Krueger et al., 2000; Shapero & Sokol, 1982). Intentions and their underlying attitudes are perception-based, which should mean they are learned, and accordingly, they will vary across individuals and across situations (Krueger et al., 2000). Researchers note that, like individuals who do not exist in isolation, attitudes do not similarly exist in isolation (Robinson et al., 1991). Thus, as attitudes are relative less stable than personality traits, they can change according to time and situation in virtue of individual's interaction with the environment (Liñán, 2004; Robinson et al., 1991). In this manner, the attitude approach would be preferable to the trait or the demographic approaches (Robinson et al., 1991; Krueger et al., 2000, as cited in Liñán, 2004).

Kim and Hunter (1993) conducted a series of meta-analyses, integrating the findings of 92 attitudes-behavioral intentions correlations and 47 behaviors-behavioral intentions correlations, and found that attitudes explain over 50% of the variance in intentions and intentions account for over 30% of the variance in behavior. Krueger et al. (2000) note that, explaining 30% of the variance in behavior compares favorably to the 10% typically explained directly by trait measures or attitudes. A similar conclusion was reached by a meta-analysis of meta-analyses done by Sheeran (2002) who found that intentions account for 28% of the variance in behavior, on average, in prospective studies.

A variety of intention models have been proposed and tested by entrepreneurship researchers. However, the two models of intentions that have received predominate attention, are Ajzen's Theory of Planned Behavior and Shapero's Model of the Entrepreneurial Event.

The Ajzen Model of Planned Behaviour

The Theory of Planned Behaviour (TPB) is rooted in the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975), and Ajzen and Fishbein (1980) which was grounded in various theories of attitude such as learning theories, expectancy-value theories, consistency theories, and attribution theory. Based on a literature review examining the theories used in the context of entrepreneurial intention, Lorz (2011) concluded that Ajzen's theory of planned behaviour is the most often used theory.

The TRA, illustrated in Figure 2, consists of three major constructs: behavioural intention, subjective norm, and attitudes. The constructs of intention and attitudes have been extensively discussed previously. Subjective norm refers to perceived social pressure to perform a specific behaviour originating from significant others such as friends, family, peers, networks or mentors; it is the person's perception of the extent to which 'reference people' would approve of the decision to manifest the behaviour, or not (Ajzen, 2001; Elfving, 2008; Friedkin, 2010; Lorz, 2011). As is evident in Figure 2, TRA implies that the immediate antecedent of a specific voluntary deliberative behavior is a person's intention to engage in the behaviour, while intention follows from the person's attitudes and subjective norm. Thus, attitudes and subjective norm are the immediate antecedents of a behavioural intention. Consequently, if a person evaluates the suggested behavior as positive (attitude), and if he or she thinks his or her significant others want him or her to perform the behavior (subjective norm), this results in a higher intention (motivation) and he or she is more likely to do so.

In terms of the standard notation for the theory s , this functional form is expressed as follows:

$$B \leftarrow I = w_{PA}A_B + w_{SN}SN$$

In the above equation, the behaviour (B) is a function of the intention (I), which in turn is a function of the person's attitude toward the behaviour (A_B) and the person's subjective norm (SN). The coefficients w_{PA} and w_{SN} are relative weights. Furthermore, a person's attitude toward the behavior is impacted by his or her beliefs that the behavior will lead to particular outcomes and by his or her evaluations of those outcomes (behavioural beliefs), while a person's subjective norm is determined by his or her perceptions of the attitudes of others and by his or her motivation to comply with the attitudes of these referents (normative beliefs) (Ajzen, 2002b; Friedkin, 2010).

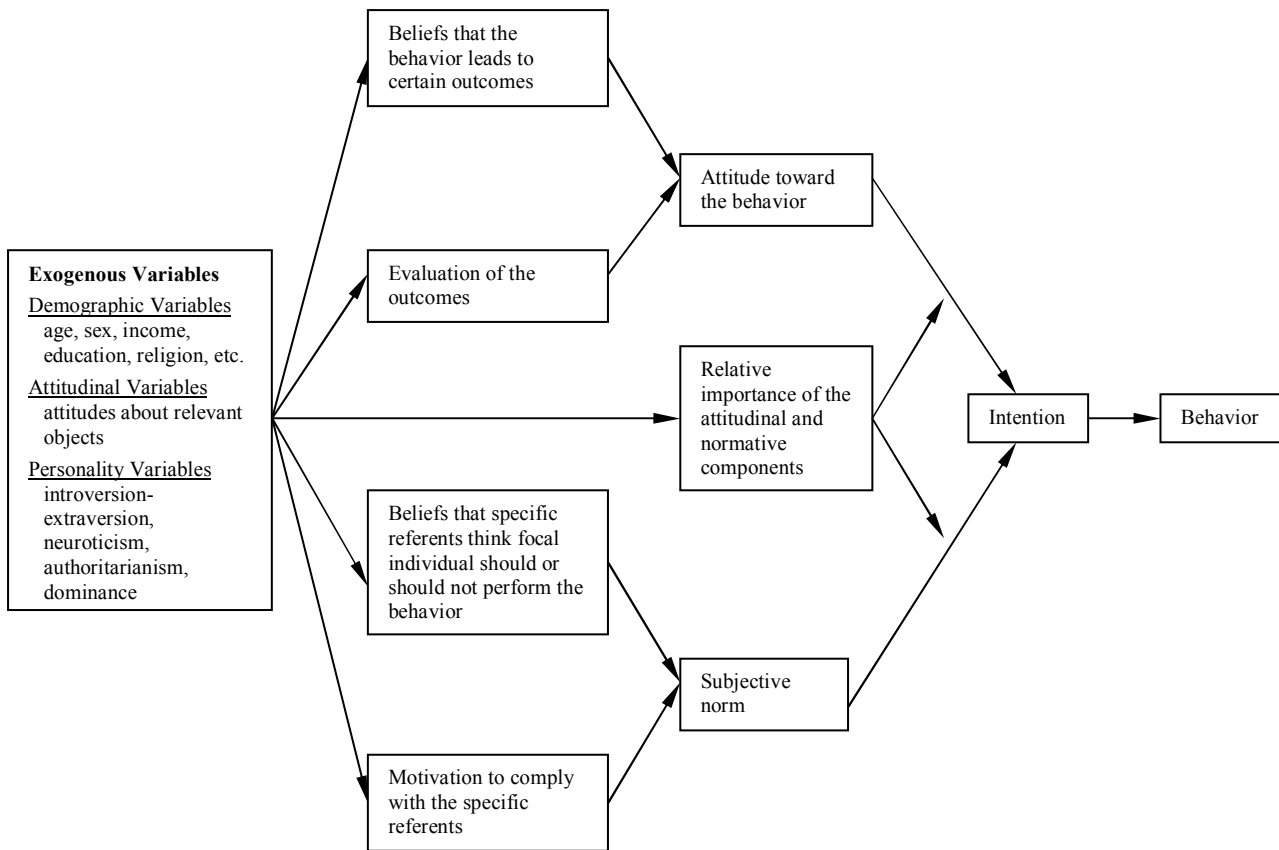


Figure 2. The theory of reasoned action. Source: Noran (2010)

Belief strength and outcome evaluation can serve to compute a behavioural belief composite that is assumed to determine the attitude toward the behavior (A_B) in accordance with an expectancy-value model, as shown symbolically in the following equation (Ajzen, 2002b):

$$A_B = \sum_{k=1}^K b_k e_k$$

Belief strength (b_k) is multiplied by outcome evaluation (e_k), and the resulting products are summed over all accessible behavioral outcomes. (Friedkin, 2010).

In a similar manner, an overall normative belief composite is obtained in accordance with an expectancy-value model, as shown in the following equation:

$$SN = \sum_{j=1}^n b_j m_j$$

where here b_j is the person's belief that referent j thinks that he or she should or should not adopt or discard the behavior and m_j is a person's motivation to comply with referent j (Friedkin, 2010). Combining the three equations above yields:

$$B \leftarrow I = w_{PA} A_B + w_{SN} SN = w_1 \sum_{k=1}^K b_k e_k + w_2 \sum_{j=1}^n b_j m_j$$

Although the theory of reasoned action was highly functional in some areas, some researchers (e.g. Bagozzi, 1992; Bagozzi & Dholakia, 1999; Bagozzi & Warshaw, 1990) claimed that it is unsuitable for some types of behaviour. In order to expand the applicability of the model and respond to the critique Ajzen (1991) developed further the TRA and proposed the Theory of Planned Behaviour (TPB) by adding an additional construct, Perceived Behavioural Control (PBC) (Ajzen, 1985). Figure 3 presents a schematic diagram of the theory. As a general rule, TPB suggests that the more favorable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behavior in question. Finally, given a sufficient degree of actual control over the behavior, people are expected to carry out their intentions when the opportunity arises (Ajzen, 2002b).

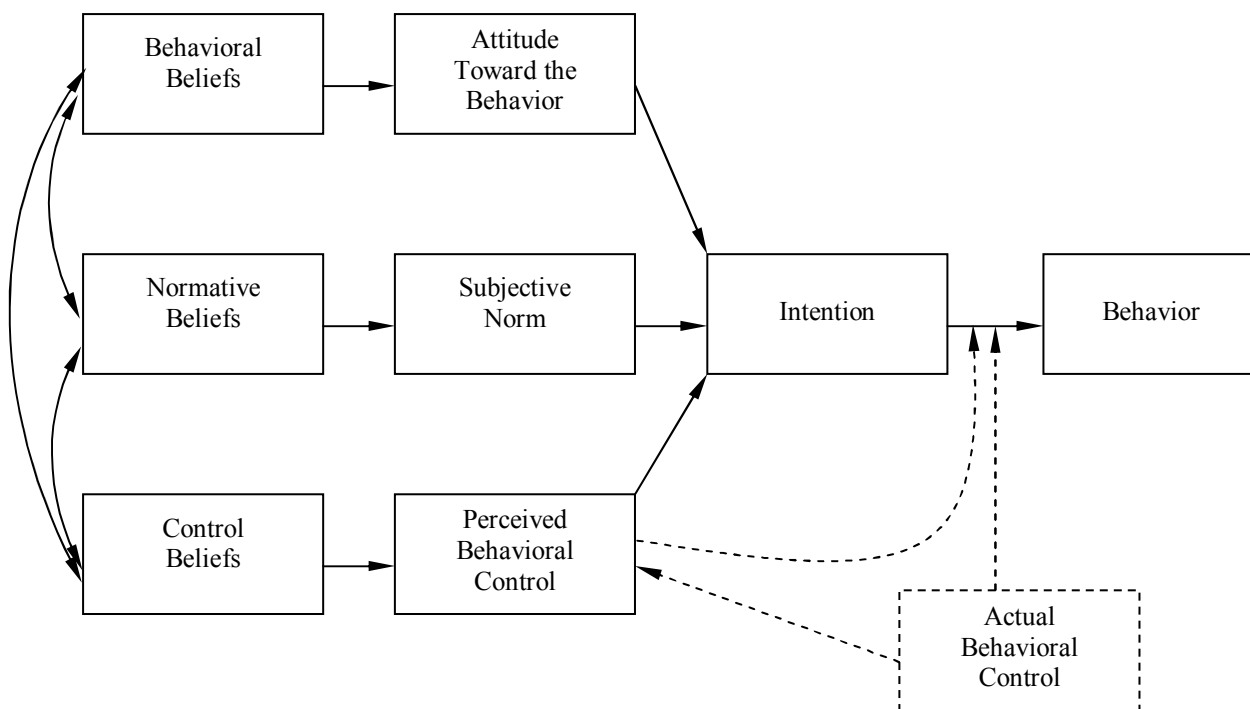


Figure 3. The theory of planned behavior. Source: Ajzen (2002b)

PBC is a person's belief about how easy or how difficult it will be to perform a behaviour (Ajzen, 1985). It is, therefore, a concept quite similar to Bandura's (1986) view of perceived self-efficacy, though some authors consider it to be wider (Fayolle & Gailly, 2004, as cited in Liñán (2004). A person's PBC is determined by his or her beliefs about the presence of factors that may facilitate or impede performance of the behavior and the perceived power of these factors (control beliefs) (Ajzen, 2002b). In accordance with an expectancy-value formulation, a control belief composite can be obtained by multiplying belief strength and power, and summing the resulting products over all accessible control factors, as shown in the following equation (Ajzen, 2002a):

$$PBC = \sum_{i=1}^m c_i p_i$$

Elfving (2008) notes that the items of questionnaires tapping perceived behavioral control tend to load around two factors although researchers have not yet reached consensus as to what precisely these factors include, with some researchers arguing that they reflect

internal versus external control and others suggesting that one factor represents self-efficacy and the other control beliefs.

Ajzen and Fishbein (2005) combined the theory of reasoned action and the theory of planned behavior in a model in which the behavioral, normative and controllable beliefs are a function of a wide range of background factors such as personal, cultural and situational factors. This model is illustrated in Figure 4. It is noteworthy that the relative contribution of attitudes, subjective norm and perception of control in the prediction of intentions varies as a function of contextual factors (Elfving, 2008).

The TPB has significantly influenced entrepreneurial intention research as the entrepreneurial intention studies have been dominated by variations of this theory (Elfving, 2008).

The Shapero Model Entrepreneurial Event

Another well recognized model is the Shapero's Entrepreneurial Event model (SEE) (Shapero, 1975; Shapero & Sokol, 1982) that is conceptually similar to Ajzen's theory of planned behaviour (Sánchez, 2012). However, in contrast to the theory of planned behavior, which was developed to explain planned behavior in general, Shapero and Sokol (1982) used planned behaviour theory in an entrepreneurial context and their model was developed in order to explain entrepreneurial behavior specifically. The SEE model is illustrated in Figure 5.

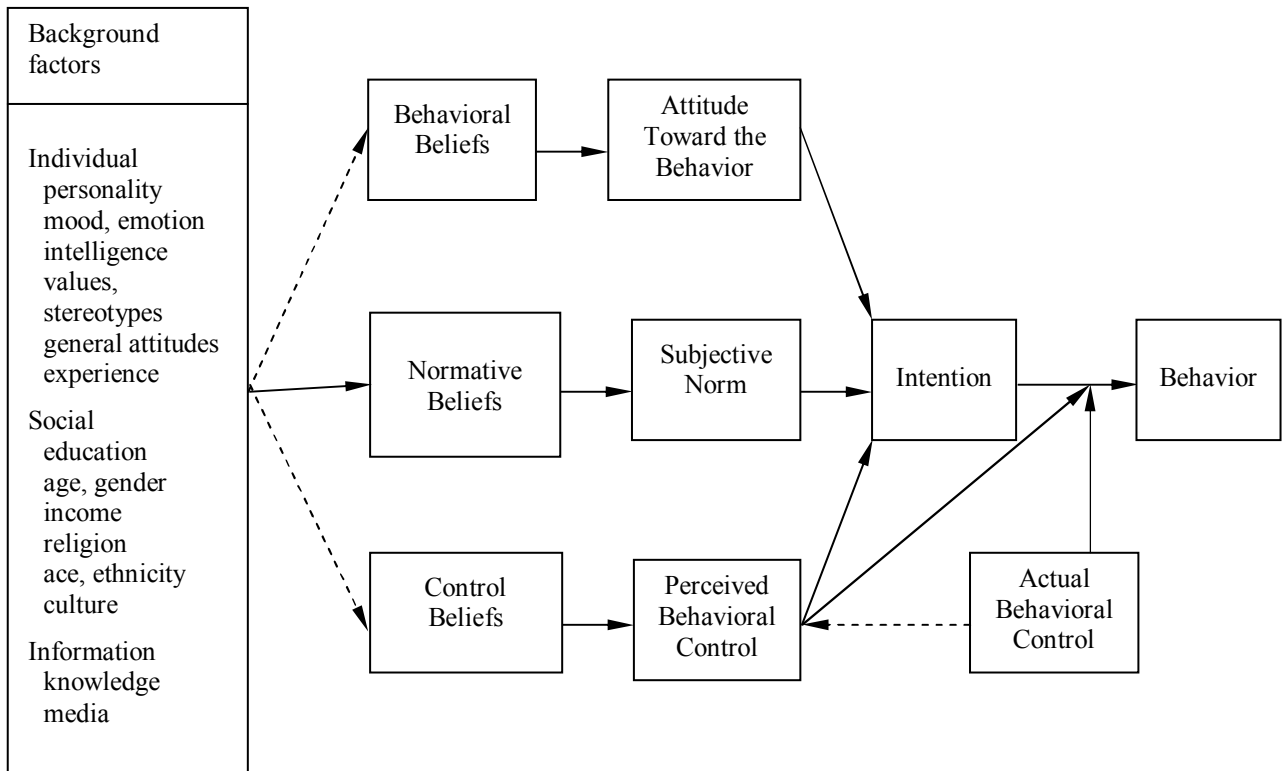


Figure 4. The theory of reasoned action and planned behavior. Source: Ajzen & Fishbein (2005)

The aim of the model was to provide an explanation for the processes that lead to the moment when people decide to really exploit an entrepreneurial opportunity, the so-called by Shapero entrepreneurial event (Kollmann & Kuckertz, 2006). As such SEE is a process model. The greatest reason for an entrepreneurial activity is an event that precipitates a change in the person's life and career path and breaks the routine.

Shapero’s unique conceptual contribution to the explanation of the determinants of entrepreneurial intention is the notion of the ‘triggering event’. Shapero asserts that most individuals are bound to given life paths by inertia until a major life change or ‘trigger event’ disrupts the binding inertia and ‘displaces’ the person from the position in which he or she is established (Shapero & Sokol, 1982). Although disruption tends to be a negative factor (e.g., the loss of one’s job, a midlife crisis), it also may be positive where individuals are attracted to entrepreneurship by entrepreneurial training, an innovation or an opportunity to take the risk after a financial situation becomes more secure (Stewart, Watson, Carland, & Carland, 1999).

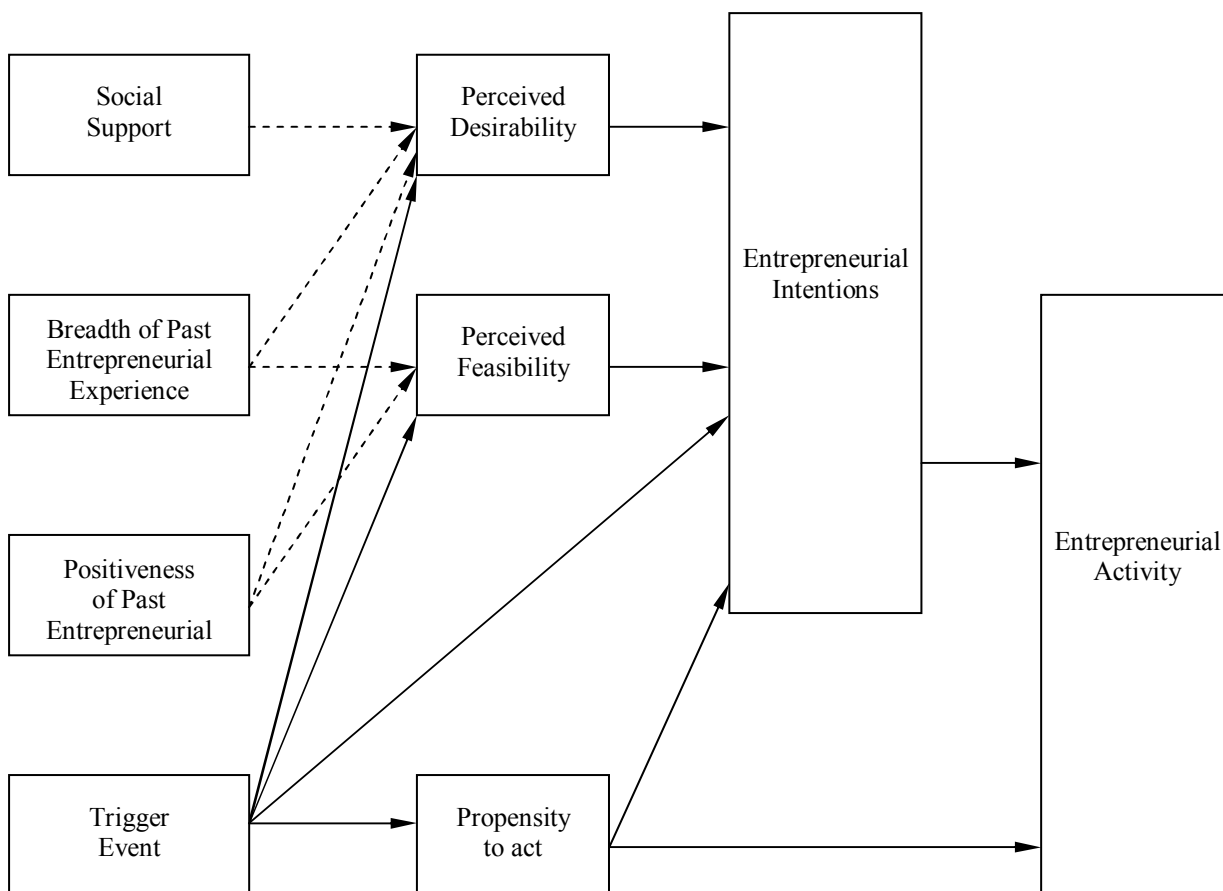


Figure 5. Shapero model of entrepreneurial event. Source: Meeks (2004)

Representing the theory of entrepreneurial event, Shapero argued that entrepreneurial intentions have three main determinants: the perception of the desirability; the perception of feasibility; and the propensity to act (Shapero, 1982; Shapero & Sokol, 1982). Furthermore, Shapero suggested that the breadth and positiveness of past experiences influence perceptions of desirability and feasibility. Perceived desirability is also impacted by cultural and social factors through their influence on the individual’s value system, while a trigger event may initiate entrepreneurial action.

Perceived desirability is defined as the extent to which a person finds a given behaviour (to become an entrepreneur) attractive. As people are particularly influenced by role models in their social environment, comprised of family and friends, and intentions are influenced by the perception that the entrepreneurial behaviour is not only personally desirable but also socially desirable, the perceived desirability of entrepreneurial behaviour is expected to be directly affected by cultural and social factors (Gasse & Tremblay, 2011).

Perceived feasibility is the degree to which the person considers himself or herself personally able to carry out that behaviour (performing entrepreneurial tasks) (Krueger & Carsrud, 1993). Feasibility depends on the perceived availability of the resources needed to create a business, on previous experience and on one's general sense of self-confidence in his or her skills and abilities to successfully execute tasks. Perceived feasibility is similar to Bandura's self-efficacy, which is often used as a proxy for perceived feasibility (Krueger et al., 2000) and has repeatedly been identified as the critical antecedent variable to one's feasibility perceptions (Kuehn, 2008).

Propensity to act is a person's ability and readiness to act on his or her decision (Krueger, 1993). Shapero and Sokol (1982) suggested using internal locus of control as a measure of the propensity to act. However, there is no agreement as to how to best assess propensity to act, as other researchers have conceptualized propensity to act as learned optimism (Krueger et al., 2000) or risk-taking propensity and tolerance of ambiguity (Kuehn, 2008). The variable itself, however, is argued to be a complex one, having both indirect and direct impact on intentions; that is, acting directly on intentions, mediating through desirability and feasibility variables and as a moderating influence on these variables on intentions (Kuehn, 2008). The propensity to act is what differentiates the Shapero entrepreneurial events model from the theory of planned behavior model (Mhango, 2006).

The Krueger Entrepreneurial Intention Model

While Shapero and Sokol (1982) did not propose their model as an intentions based model, it was quickly seen as precisely that by many and has since been so utilized in entrepreneurship literature (Kuehn, 2008). However, there is only one model, developed by Krueger and his associates (see for example Krueger, 1993; Krueger & Brazeal, 1994; Krueger et al. 2000) and called the Entrepreneurial Intention Model (EIM), which has been empirically tested to such an extent that it can be viewed as reliable and useful (Elfving, 2008). This model is illustrated in Figure 6. The EIM assumes that perceived feasibility and perceived desirability mediate the influence of perceived social norms and perceived self-efficacy on intent (Krueger & Brazeal, 1994), although social norms have not always a significant impact (Krueger et al., 2000).

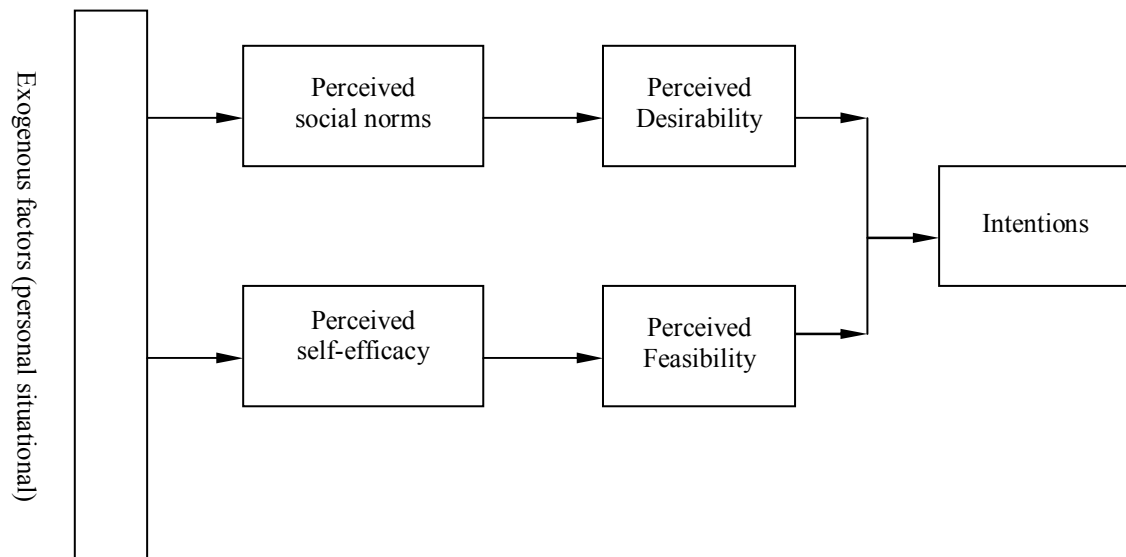


Figure 6. Krueger entrepreneurial intentions model. Source: Meeks (2004)

Krueger and Brazeal (1994) modified the EIM by including the concepts of credibility and entrepreneurial potential. The basic tenet of the Model of Entrepreneurial Potential and Intention, which is illustrated in Figure 7, is that the decision to become an

entrepreneur depends on the ‘credibility’ of the best opportunity available to the decision maker from her or his enacted set of alternative behaviors plus some ‘propensity to act’ (without which the decision maker may not take any significant action) (Krueger & Brazeal, 1994: 93). Credibility requires that the behavior be seen as both desirable and feasible. The entrepreneurial event requires a preexisting preparedness to accept that opportunity (Krueger & Brazeal, 1994: 91), that is ‘potential’ (credibility and propensity to act), followed by a precipitating negative or positive event that displaces the decision maker from his or hers career path.

Conclusion

The present literature review revealed that intention-based models of entrepreneurship have moderate to high predictive power in explaining the entrepreneurial behaviour. Both of the two main intention-based models reviewed in this study, the theory of planned behaviour and the theory of entrepreneurial event, as well as their variants, offer researchers a valuable tool for understanding the process of organizational emergence.

However, studies have shown that, although these models are conceptually different, they have similar explanatory power, whereas each one of them provides important information related to entrepreneurial activity. Thus, combining the constructs with the highest unique explanatory power in each of the existing models into a single model would yield a model with increased predictive power.

In conclusion, more sophisticated models are required in order to better understand entrepreneurial behaviors and these models need to be tested in different entrepreneurial settings.

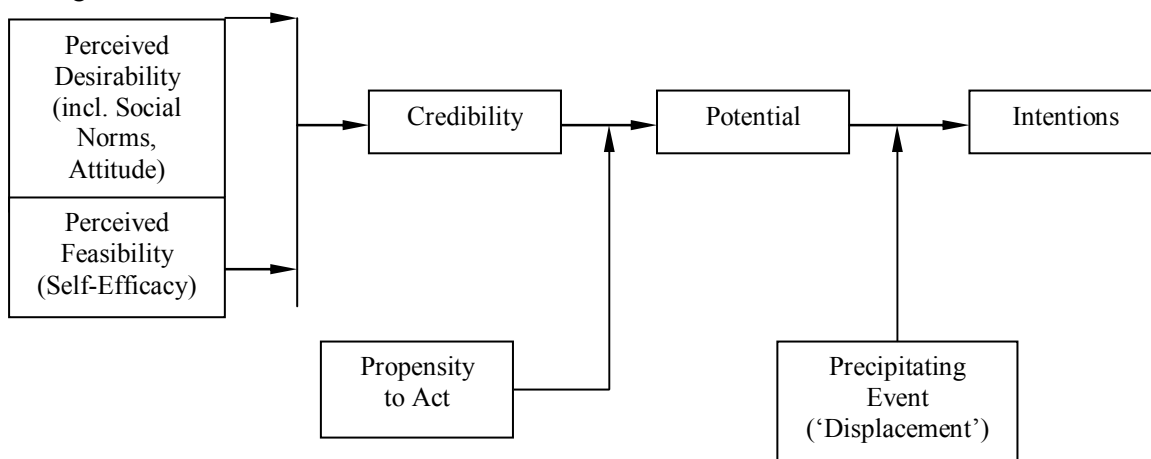


Figure 7. Model of entrepreneurial potential. Source: Krueger & Brazeal (1994)

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