An Integrated Model of Intentional Entrepreneurial Action

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Abstract The psychological perspective of entrepreneurship has a rich history in entrepreneurship research. While personality and psychology have both been identified as key components in explaining how and why entrepreneurs act, many questions remain about what different factors lead to entrepreneurial action and outcomes as well as the role these factors have in the process. We shed light on these important questions by integrating two leading models of the individual psychology of entrepreneurship: the Action-Characteristics Model (ACM) of Entrepreneurship and the Theory of Planned Behavior (TPB). We create the Intentional Entrepreneurial Action Model by integrating these two perspectives together to address concerns about the ACM and TPB considered separately. By synthesizing these two models into the Intentional Entrepreneurial Action Model and presenting supporting propositions, we develop an explanation about how entrepreneurs think and how this intentional process leads to entrepreneurial action and outcomes.

Keywords Action-characteristics model of entrepreneurship • Theory of planned behavior • Entrepreneurial outcomes

1 Introduction

Entrepreneurship has been defined as the identification, evaluation, and exploitation of opportunities (Shane and Venkataraman 2000). The phenomenon of entrepreneurship is largely centralized around the individual-opportunity nexus (Shane 2003). Therefore, unsurprisingly, a wide variety of individual factors influence the processes of identification, evaluation, and exploitation. The psychological perspective offers considerable insight into how various individual factors influence these processes.

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Psychological and cognitive perspectives have a rich history in the entrepreneurship domain (e.g. Comegys 1976; McClelland and Winter 1971; McGaffey and Christy 1975) some of which are regarded as foundational works during the early emergence of entrepreneurship as a distinctive field of study (e.g. Schumpeter 1934; McClelland 1961). More recently, the psychological perspective has emerged as an effective and appropriate perspective for entrepreneurship research. This focus on the psychological perspective has led to numerous theoretical developments and research findings that have informed the field of entrepreneurship and provided important insight into the role of the entrepreneur throughout the entrepreneurial process. Psychology based perspectives may offer the most fruitful insight into the "the people side of entrepreneurship", and address some of the entrepreneurship's most fundamental questions (Mitchell et al. 2002, p. 93).

To date, the psychological perspective has provided considerable contribution to the entrepreneurship domain via the continued evolution of more accurate and sophisticated models of an array of psychological influences particularly relevant to the process of entrepreneurship. However, research focused directly on the outcomes (e.g. opportunity identification, new venture performance) associated with psychological and cognitive influences remains underdeveloped. This is the fundamental challenge faced by the overwhelming majority entrepreneurship research steeped in the psychological perspective. The result is either research which fails to directly address fundamental entrepreneurial outcomes, or weak theoretical linkages paired with empirically driven findings. Both of which inaccurately link psychological factors directly to entrepreneurial outcomes.

The central purpose here is to develop an integrated and comprehensive model of psychological factors that influence entrepreneurial action and entrepreneurial outcomes. Our model effectively integrates the Theory of Planned Behavior (TPB) and Action-Characteristics Model (ACM) of entrepreneurial behavior. The intent is to establish clearly delineated links between psychological factors, entrepreneurial action characteristics, and subsequent entrepreneurial outcomes that are directly related to entrepreneurial thinking. The intended result is the development of a more complete explanation and clear depiction of the role of psychological factors in the process of entrepreneurship.

2 Literature Review

2.1 Overview

The objective of the following sections is to provide an extensive review of the existing models which attempt to provide a comprehensive explanation about entrepreneurial action and outcomes. We provide a complete overview and explanation of the theoretical frameworks [the Action-Characteristics Model of entrepreneurial success (ACM) and the Theory of Planned Behavior (TPB)] along with

more recent important theoretical and empirical developments relevant to the application of each model in the entrepreneurship domain. This serves as the theoretical foundation upon which we will build our integrative conceptual model.

2.2 The Action-Characteristics Model of Entrepreneurship

The ACM of entrepreneurship represents a recent evolution of what was initially referred to as the Giessen-Amsterdam model of entrepreneurial success (i.e. Rauch and Frese 2000). The earlier Giessen-Amsterdam Model is an interdisciplinary model that takes into consideration several different areas investigated in entrepreneurship research beyond psychological factors. However, this earlier version of what eventually evolved to the full ACM, is an action-based model because no direct relationships are proposed between personality, human capital, or environment and entrepreneurial success, although many of these relationships have been, and continue to be, studied. Although perhaps controversial, the model rests upon the fundamental assumption that there cannot be success without action (Rauch and Frese 2000). As such, action is essential and central to the model and the goal oriented strategies and tactics of actions are the conduit through which all entrepreneurial success is accomplished (or not accomplished). Sometimes goals, strategies, and tactics will be wrong, or inefficient, which is one example of how prior failure (or success) influences strategies that explain the proposed reciprocal relationship between success and strategy. Preliminary empirical findings focused on the indirect effect of personality traits on entrepreneurial success via action strategies and growth intentions provide initial support for the model (e.g. Baum and Locke 2004; Frese et al. 2007). However, this earlier model is necessarily less specific and more all-encompassing as it is designed for application at different levels of analysis (organizational or individual). Therefore, we next focus specifically on the revised versions of the ACM.

The second version of the ACM of entrepreneurship (i.e. Frese 2009) represents more recent and individually oriented evolution. This framework describes characteristics of active performance and postulates how they are influenced by personality and human capital as well as how active performance is directly related to entrepreneurial success. It also assumes that active performance may influence environmental conditions and is also influenced by the environment.

Continuing to the most comprehensive and recent ACM (i.e. Frese 2009; Frese and Gielnik 2014), the most fundamental and important premise of the ACM is the associated action-based assumptions underlying the model. Specifically, there is only a direct path to success from actions. Thus, just as with the previous derivations of the model, personality, motivation, education, cognition and even the environment are not expected to have a direct effect on success. Factors other than action only influence success indirectly through an entrepreneur's actions, as there is no sound theoretical rationale to expect a direct relationship between these various factors and entrepreneurial success. Instead, it is argued that the factors

depicted only influence success if they influence action, and otherwise have no significant effect.

A few other important aspects of the ACM are also worth noting. First, action characteristics are not explicitly action, but instead ways of performing an action (Frese and Gielnik 2014). Thus, actual action is required, but the way it is performed is of considerable importance. Second, it is assumed that more active action characteristics lead to actions that are more likely to be successful (e.g. more personal initiative, proactivity etc.) (Frese 2009). Third, the framework is organized such that the more distal construct (on the left) are assumed to have less eventual influence on success; whereas those which are nearer (on the right) are to have stronger influences on action and eventual success. Finally, the ACM offers a process oriented perspective of entrepreneurial actions and entrepreneurial success in suggesting that different actions are important at different stages throughout the entrepreneurial process. The ACM is the primary conceptual framework and serves as the foundation which the theoretical model derived here is built upon.

The ACM is a "loose model" that actually "is more of a framework than a real theoretical model" (Frese and Gielnik 2014, p. 428). In its current form, the ACM does not adequately distinguish between intention and action (or action characteristics) but instead lumps them together. This is evident in that "goals/visions," are included as action characteristics while in fact goals, objectives, and the like are much more closely related to intentions (although they certainly influence action). Thus, we propose using the TPB to "tighten" the ACM. Borrowing from and integrating aspects of the TPB enables a theoretically sound distinction between intentions and actions therefore strengthening the eventual conceptual model developed here. The underlying logic, accuracy, and usefulness of the TPB are reviewed in the following section.

2.3 The Theory of Planned Behavior

The fundamental premise of the TPB is that the relationship between an individual's attitudes towards a behavior, the subjective norms surrounding the behavior, and the perceived control over the behavior are all mediated by the individual's intentions. Intention is defined as a person's readiness to perform a given behavior, and it is assumed to be the immediate antecedent of behavior (Ajzen 2011a, b). The three cognitive antecedents to intention include: (1) attitude, which refers to the degree to which a person has a favorable or unfavorable evaluation of the behavior; (2) subjective norms, which refer to the perceived opinions of reference groups (or social pressure) regarding whether or not the behavior should be performed; and (3) perceived behavioral control, which refers to the perceived ease or difficulty of performing the behavior (Ajzen 1991).

The TPB has proven to be a very robust predictor of a wide array of different behaviors as evident by the numerous meta-analyses that support intentions as strong predictors of behavior in many different applied settings (e.g. Armitage

and Conner 2001; Sutton 1998). Perhaps more importantly, within the entrepreneurship domain the TPB has been effectively utilized as a framework for predicting an array of different entrepreneurial intentions such as new venture creation intentions (Kolvereid 1996) and new venture growth intentions (Cassar 2006) as well as a number of relevant behaviors such as venture creation behavior (Chrisman 1999) and new venture growth behavior (Delmar and Wiklund 2008). Additionally, previous entrepreneurship studies have found the three antecedents to explain between 30 and 45% of the variation in intentions (e.g. Linan and Chen 2009; Van Gelderen et al. 2008). Overall, the TPB has been established as a highly relevant and robust framework for predicting business start-up intentions and subsequent behaviors (Kautonen et al. 2013).

3 Intentional Entrepreneurial Action Model

Upon close inspection of the ACM and the TPB it becomes evident that although they are clearly distinctive, the two theoretical frameworks can effectively be integrated. Specifically, the more precise psychological constructs uniquely relevant to entrepreneurship included in the ACM can be appropriately placed within the framework delineated by the TPB. Therefore, the theoretical model developed here integrates specific constructs included in the with the intention-behavior link established by the TPB resulting in a more comprehensive model of how and in what ways psychological factors influence intention and actions of entrepreneurs. This fully integrated model labeled as the *Intentional Entrepreneurial Action Model* is depicted below in Fig. 1.

In reading the Intentional Entrepreneurial Action Model seen in Fig. 1, our general theorizing becomes evident. We believe that by enveloping the TPB in the ACM antecedents and outcomes, a true representation of the psychology of entrepreneurs becomes clear. What entrepreneurs accurately think becomes more evident. The following sections will expand on these proposed relationships as we argue for specific propositions. We note that the relationships within the TPB that we are not altering are already established in the literature, and therefore, there will not be any additional propositions for those relationships since we believe the standard arguments for TPB will hold true.

Personality and Attitudes Towards Action

Largely stemming from the psychological perspective, personality has been previously identified as influential in a wide array of different contexts and related to all types of different outcomes (e.g. leadership style, occupational preference). In the context of entrepreneurship, earlier work focused on personality characteristics yielded very little, and even faced considerable criticism (e.g. Gartner 1989). More recently meta-analytic results suggest that personality does have important role within the context of entrepreneurs even if one's personality does not predict entrepreneurship (e.g. Rauch and Frese 2007; Frese and Gielnik 2014; Zhao et al.

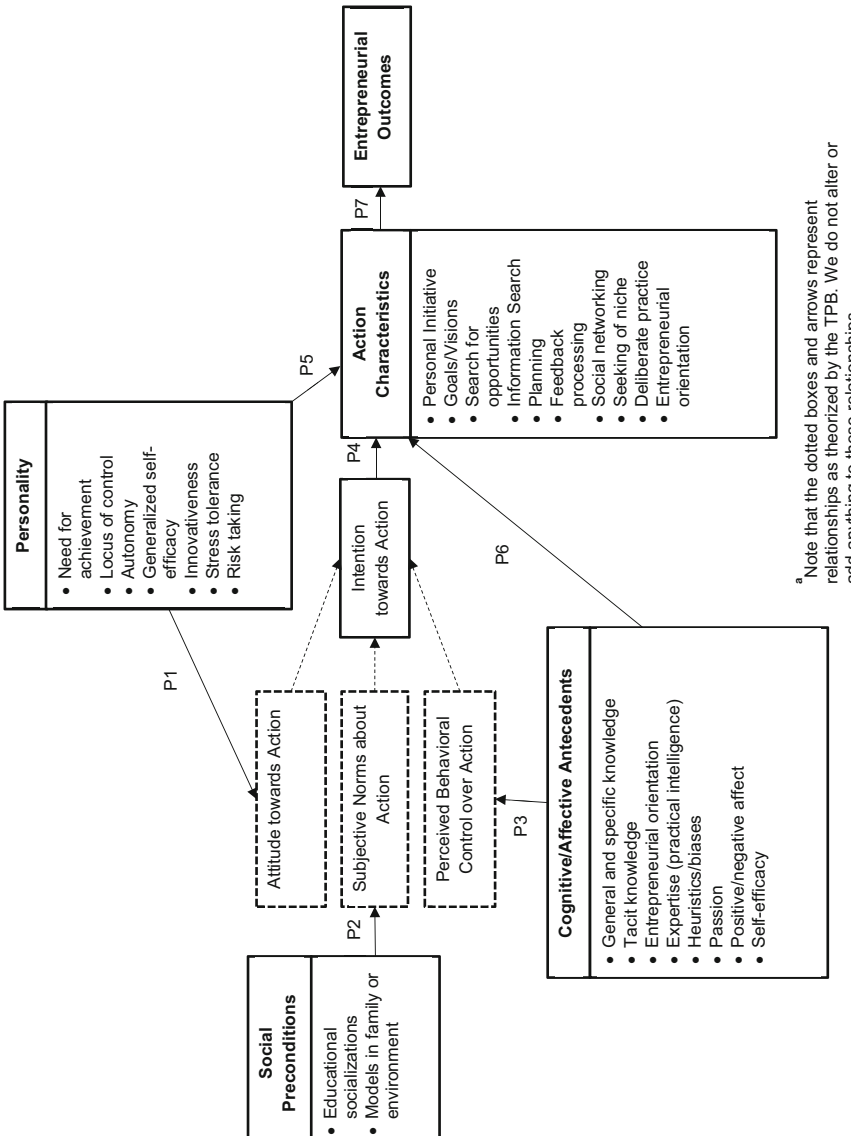

Fig. 1 An integrated model of Intentional Entrepreneurial Action

2010). Building on these (and other) findings we posit that personality directly influences one's attitude towards an entrepreneurial action.

An attitude towards an action refers to the degree to which performance of the action is positively or negatively valued. Further, per the expectance-value model, attitude toward action is determined by the entire set of accessible behavioral beliefs which link the action to various outcomes and other attributes (Ajzen 1991). It is this set of behavioral beliefs which is influenced by various personality-based constructs and then necessarily influences one's attitudes towards an action. For example, consider the implications of need for achievement (nAch) (McClelland 1961). Research focused on nAch suggest that individuals characterized by high levels of need for achievement prefer action associated with intermediate levels of difficulty and risk which subsequently influence attitudes towards action characterized by moderate risk which is support by meta-analytic findings (i.e. Stewart and Roth 2004). Conversely, individuals not characterized by high need for achievement will not form the same attitudes about actions characterized be moderate levels of risk. The same rationale has similar implications for a wide array of different personality traits. Therefore, we argue that personality directly influences one's attitude toward action.

Proposition 1 Personality factors are positively related to the attitude towards an action an individual holds.

3.1 Social Preconditions and Subjective Norms

Social preconditions are expected to influence subjective norms about action. The TPB's definition of subjective norms relates to the perceived opinions of reference groups regarding whether the action should be performed (Ajzen 2011a). In effect, the subjective norms Ajzen theorized about relate to whether or not the individual believes the action in question is appropriate. This belief about "appropriateness" is directly related to what the ACM theorizes about "social preconditions" and factors such as education and role models in the individual's environment. We argue further that these social preconditions that that affect individuals' subjective norms are more well defined as what Berger and Luckmann (1966, 1991) called primary and secondary socializations. Primary socializations are those socializations that individuals receive from their immediate family during the younger formative years of life while secondary socializations are those socializations received from other societal groups other than the family.

Accordingly, the educational socializations reminiscent of the ACM are similar to what Berger and Luckmann (1966) argued were sources of secondary socializations while family role models are primary socializations. We argue that the ACM was close to externalizing "social preconditions", but that a better understanding is via socializations. In terms of integrating the ACM and TPB, these environmental socializations become individualized via an individual's specific subjective norms.

The perceived opinions that people form about an action are ultimately determined by the experiences that they received concerning those actions from the primary and secondary socializations that existed in their lives. In effect, the social preconditions of the ACM allow for a better understanding of where the individual psychological opinions of an action come from for a specific individual.

Proposition 2 Social preconditions are positively related to the subjective norms about an action that an individual holds.

3.2 Cognitive/Affective Antecedents and Perceived Behavioral Control

Both cognitive and affective antecedents have been previously established as having an important role in the process of entrepreneurship (e.g. Baron 2007, 2008; Mitchell et al. 2002, 2007). But as discussed previously, there is insufficient rationale to expect that these factors directly influence entrepreneurial outcomes because action determines outcomes. Instead, we can expect that cognitive and affective antecedents directly influence perceived behavioral control over action.

As one example, consider the self-efficacy construct (Bandura 1982) and the subsequently research specifically relevant to the context of entrepreneurship focused on entrepreneurial self-efficacy. Entrepreneurial self-efficacy is defined as "a person's belief in their ability to successfully launch an entrepreneurial venture" (McGee et al. 2009, p. 965). As such, it represents one's perceived ability to successfully perform tasks and associated demands specifically relevant to the context and domain of entrepreneurship. Relatedly, perceived behavioral control refers one's perceptions of their ability to perform a given behavior. Analogous to the expectant-value model associated with one's attitude toward action, perceived behavioral control is determined by the complete set of accessible control beliefs which refer to beliefs about the presence of factors that may facilitate or impede performance. Clearly then it would be expected that entrepreneurial self-efficacy will directly influence one's perceived control over action related to entrepreneurial initiatives. Therefore, we argue that this complete set of control beliefs is directly influenced by an array of different cognitive and affective antecedents (entrepreneurial self-efficacy being just one example). Thus, we expect cognitive and affective antecedents to influence perceived behavioral control over action.

Proposition 3 Cognitive and affective antecedents are positively related to the perceived behavioral control over an action that an individual holds.

3.3 Intention Towards Action and Action Characteristics

The link between intentions and action characteristics seen in the integrated model of intentional entrepreneurial action is very similar to that of the original arguments made by Ajzen about intentions and behaviors (Ajzen 1991). No behavior can occur without some type of intention on the part of the individual. In terms of integrating intentions with the action characteristics of the ACM, the arguments are very similar. In effect, the actions described by the ACM are intentional actions that require a certain level of intentionality on behalf of the individual prior to those actions being carried out. From an entrepreneurship standpoint, all of the entrepreneurial actions depicted by the original ACM are inherently actions that require some type of physiological energy and thought on behalf of the entrepreneur to carry them out. They are actions that are not random, they do not come about by the entrepreneur drifting into them. Instead, they take intentionality on behalf of the entrepreneur to psychologically plan and prepare for that specific action in question.

Proposition 4 Intention towards an action is positively related to entrepreneurial action characteristics

3.4 Personality and Action Characteristics

We also posit that personality will influence action characteristics for a variety of reasons. First, it should be noted that action characteristics refer not to the actions themselves, but instead to ways of performing actions. This is important because different personality attributes are likely to influence the ways in which various actions are performed, not the action itself. Different personality traits result in different preferences in the way action is performed.

Consider again the preceding example of need for achievement and its implications for action characteristics. Obviously, with most general action there an infinite variation in the way it can be performed. As such, we would expect individuals characterized by high nAch to prefer performing actions in certain ways that will vary from those not characterized by high nAch. For example, in the entrepreneurial context it is likely that nAch will influence opportunity search (among other action characteristics). Need for achievement is related to a preference for moderate difficulty and risk (and subsequently risk propensity). As such, this will influence the search for opportunities. Specifically, opportunities requiring moderate difficulty and moderate risk to exploit will be viewed more favorably compared to opportunities that are easier to exploit and have less risk. Based on this application of this rationale to other personality traits and action characteristics we expect that personality will influence action characteristics resulting in the following proposition.

Proposition 5 Personality is positively related to action characteristics.

3.5 Cognitive and Affective Antecedents and Action Characteristic

Cognitive and affective antecedents strongly influence action characteristics, or the ways in which actions are performed. There are various implications that cognitive and affective antecedents have on action characteristics as an example we consider the potential effects of cognitive biases. Cognitive biases are uniquely important to the entrepreneurial context because empirical research suggests that entrepreneurs may be more susceptible to certain biases (e.g. Busenitz and Barney 1997), which influence decision making processes, eventually impact the way certain actions are performed. Specifically, consider entrepreneurs have been found to be more susceptible to bias associated with overconfidence (Keh et al. 2002), optimism (Hmieleski and Baron 2009), and optimistic overconfidence (Simon and Shrader 2012). Now consider the implications that these distinctive, but related biases would have in the entrepreneurial planning process. Planning is likely to be conducted with the best-case scenario in mind. Conversely, individuals would do not exhibit these optimistic biases will engage in more careful and systematically planning that takes into account various *what if* scenarios. When this same rationale is applied to other cognitive and affective constructs it becomes clear that they will have a direct effect on action characteristics resulting in the following proposition.

In addition, the Azjen posited in the TPB that perceived behavioral control had a direct relation with behavior. While meta-analysis has shown partial support for this direct relationship (e.g. Rauch and Frese 2007; Frese and Gielnik 2014; Zhao et al. 2010), we believe that the lack of full support is due to the idea that perceived behavioral control does not fully represent psychological aspects the way the cognitive and affective antecedents of the ACM do. In these respects, we believe that when accounting for the direct relationship between cognitive and affective antecedents on action characteristics, the supposed link between perceived behavioral control and action should become moot.

Proposition 6 Cognitive and affective antecedents are positively related to action characteristics.

3.6 Action Characteristics and Entrepreneurial Outcomes

Finally, action characteristics refer to how various entrepreneurial actions, or activities are performed rather than the action themselves. We know that a wide variety of activities are uniquely relevant to the process of entrepreneurship (e.g. business planning, opportunity identification and evaluation, networking,

etc.), yet empirical results about how these various activities lead to success is often unclear, inconsistent, or even contradictory. We posit that simply engaging in these various actions will not necessarily lead to entrepreneurial success and that instead what matters is how these activities are performed. There is considerable discretion concerning how various entrepreneurial actions are enacted and how these various activities are undertaken will largely determine whether or not any entrepreneurial objectives are successfully achieved. Therefore, we argue that action characteristics are directly related to entrepreneurial outcomes.

Proposition 7 Action characteristics are positively related to entrepreneurial outcomes.

4 Conclusion

First, this research addresses challenges associated with linking psychological constructs to entrepreneurial outcomes (as discussed above), and therefore address one of the primary shortcomings of psychology-based entrepreneurship research. Identifying how specific psychological factors influence action will shed considerable insight into role that these factors have in indirectly influencing outcomes that are particularly important for entrepreneurship. This research has important significance for theory, future research, practice, and policy.

In terms of theory, the primary objective is to provide an integrated and comprehensive conceptual framework of action-based model of entrepreneurship. This provides a consolidated theoretical foundation for the psychological perspective in entrepreneurship research by clearly establishing links between psychological factors and eventual outcomes relevant in entrepreneurship. This proposed model serves as the missing link between psychology and outcomes—*action*.

The model developed here has important significance for future research as it can easily be applied as a framework. This framework is capable of testing an incalculable number of future hypotheses and proposed relationships among psychology based constructs, intentions, actions, and entrepreneurial outcomes. In fact, the framework is well-suited for testing the influence of most if not all psychological constructs of interest to entrepreneurship researchers.

The relationships identified between action characteristics and entrepreneurial outcomes will be of primary significance to practitioners as these relationships will be directly linked to entrepreneurial outcomes of interest (e.g. performance). Understanding how specific action characteristics influence entrepreneurial outcomes can potentially inform practitioners about the types of actions they may want to purposefully engage in (or avoid) throughout different phases of the entrepreneurship process. Additionally, the links identified between certain psychological factors and entrepreneurial action characteristics will have direct implications for practitioners.

Finally, the research initiative proposed here has clear implications for policy related to entrepreneurship. Most directly, future research findings will have implications the development entrepreneurship education programs. Identifying action characteristics that are positively related to desirable entrepreneurial outcomes can inform education design and implementation such that it is appropriated aligned with teaching and training students to be proficient in the identified actions.

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