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Does decision-making style predict managers' entrepreneurial intentions?

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Abstract

The purpose of this paper is to investigate whether the way managers make decisions (their decision-making style—DMS) predicts their entrepreneurial intentions (EI), a research subject that has been largely ignored in the literature. Developing an understanding of entrepreneurial intention factors that attract managers to entrepreneurship is indispensable for organizations. A sample of 230 managers of companies based in Kosovo was asked to take the entrepreneurial intention questionnaire and the General Decision-Making Style (GDMS) questionnaire. Bridging two strands of literature on decision-making and entrepreneurial intention and using the Structural Equation Model (SEM), it is concluded that spontaneous and intuitive styles predict managers' entrepreneurial intentions. Considering the limitations of this single-country study, the implications for theory and policy are discussed.

Keywords: Decision-making style, Cognitive style, Intuitive, Spontaneous, Entrepreneurial intention

Introduction

There is a growing research interest in investigating the role of individual differences in entrepreneurial behavior and intentions (Barbosa, et al., 2007). According to Liñán, Rodríguez-Cohard and Rueda-Cantuche (2005), the actual behavior of entrepreneurs can be best predicted by measuring intention. Fishbein and Ajzen (1975) claim that "if one wants to know whether an individual will perform a given behavior, the simplest and probably most efficient thing one can do is to ask the individual whether he (or she) intends to perform that behavior."

Most studies on entrepreneurial intention use student samples (Schlaegel & Koenig, 2014; Bird, 2015). To the best knowledge of the authors of this paper, only a handful of studies have used non-student samples in entrepreneurial intention research. Bird (2015) observes that there are differences between students and non-students in the way their intentions are formed. Hamidon et al. (2017) observed that the extent of research concerning the entrepreneurial intention of employees is small. Costa et al. (2016) investigated the entrepreneurial intention of temporary workers. Some studies include employees in general, without distinguishing managerial roles (Lee, et al., 2011). Some other studies compare entrepreneurial intent between entrepreneurs and managers (e.g., Smith, et al. 1988; Allinson, Chell and Hayes 2000). One of the very few studies to use a sample of managers is the Paul and Shrivatava (2016) study. Their research examines whether young managers in India show stronger entrepreneurial

intentions than those in Japan. Their findings suggest that there is no significant difference in entrepreneurial intention between Indian and Japanese managers.

Pearce II et al. (1997) indicate that there is a research deficit on a concurrent comparison of entrepreneurial behavior and general management practice. Opting out of managers into an entrepreneurial venture has not been abundantly investigated. Manager's intention to leave has been studied by several authors (Good, Sisler and Gentry 1988; Rosin and Korabik 1991; Katsikea, Theodosiou and Morgan 2015). A growing stream of research is concerned with self-employment preferences and business start-up intentions (Kolvereid, 2016). Most of the research on the manager's turnover investigates job characteristics and job satisfaction, whereas studying individual characteristics and entrepreneurial intentions of managers as determinants of quitting to create their ventures are scarce. The propensity of individuals within organizations to become entrepreneurs has not been studied and understood thoroughly. Researchers (e.g., Krasniqi, 2014) ask for further inquiry into how people change their employment status and how potential entrepreneurs change their behavior. This paper investigates entrepreneurship as a personal phenomenon, therefore taking a managerial approach (Gürbüz & Aykol, 2009). The study addresses this gap in the literature by investigating how individual differences affect entrepreneurial intentions. The paper examines how the decision-making style of managers can predict their propensity to create new ventures.

The remainder of the paper is organized as follows. The next section presents a literature review on entrepreneurial intention, followed by a discussion of the cognitive perspective of entrepreneurship research and the relationship between entrepreneurial intention and the constructs of cognitive and decision-making style. The following section presents a description of the participants, measures used in the questionnaire, and the method used to test hypotheses. After presenting the results, their practical and theoretical implications are discussed.

Literature review

Research on factors triggering employee's entrepreneurial behavior predominantly lies in realms of corporate entrepreneurship and intrapreneurship. Entrepreneurship literature has lacked studies and theoretical frameworks aimed at investigating factors influencing the employee's decision to become entrepreneurs. One of the first and most comprehensive frameworks has been developed by Hornsby et al. (1993). Their model suggests that a combination of organizational and individual characteristics precipitate the decision to act entrepreneurially. Considerable merit for contribution to literature on the manager's entrepreneurial orientation is attributed to Kuratko and colleagues (Kuratko, Ireland, & Hornsby, 2004; Kuratko, Ireland, Covin, & Hornsby, 2005a; Kuratko, Hornsby, Bishop, 2005b).

Kuratko et al. (2004) claim that the motives of entrepreneurial behavior among managers are not fully understood and specified. Authors have proposed a manager-centered model of corporate entrepreneurship process suggesting that entrepreneurial behavior of managers has two stimuli: the external transformational triggers and organizational antecedents. Aside from comprehensive models, several models of factors affecting the manager's entrepreneurial behavior focus on middle-level managers (Hornsby, et al., 2002; Kuratko, et al., 2005b; Mustafa, et al., 2016).

Fayolle and Liñán (2014) consider entrepreneurial intention a consolidated area of research within the field of entrepreneurship. Entrepreneurial intentions offer a means to better explain and predict entrepreneurship (Krueger, et al., 2000). The intention of an entrepreneur to create new ventures falls in the pre-decision stage (Volery, et al., 1997). Crant (1996) defines entrepreneurial intention as "one's judgments about the likelihood of owning one's own business." Bird (1988) sees intentionality as a state of mind that directs a person's attention, experience, and action toward a specific object or a path to achieve something. The author stresses that entrepreneurial intentions' aims are twofold: creating a new venture or creating new values in existing ventures.

Reviewing recent entrepreneurship research, Thompson (2009), stresses that entrepreneurial intent is not a direct indicator of entrepreneurial activity. However, the author points out that since not every intention turns into action, the entrepreneurial intent construct is needed in new business formation theory and research. For Krueger, Reilly and Carsrud (2000), intentions, rather than situational and individual variables, are the best predictors of entrepreneurial behavior. Attitudes influence behavior by their impact on intentions. Intentions and attitudes depend on the situation and person. Accordingly, intention models will predict behavior better than either individual or situational variables (Krueger, et al., 2000). Most researchers interested in entrepreneurial intentions have developed their own research instruments (Chandler & Lyon, 2001). This has triggered Liñán and colleagues (Liñán 2004; Liñán 2005; Linan, Rodríguez-Cohard and Rueda-Cantuche 2005; Liñán and Chen 2009) to take the "task of building a measure that may be statistically robust and theoretically sound." Measures of entrepreneurial intention vary from single-item measures, 3-item measures to 6-item measures, as is the Liñán and Chen (2009) measure (Kolvereid, 2016).

According to Ferreira et al. (2012), there are two approaches to entrepreneurial intention: psychological and behavioral. Typical characteristics associated with entrepreneurship are the need for achievement (McClelland, 1961), locus of control (Shapero 1975) tolerance for ambiguity (Budner, 1962), and type A behavior (Friedman & Rosenman, 1974). Marques et al. (2012) postulate that the literature on entrepreneurial behavior is broadly based upon the personalities and demographic variables of the respective entrepreneurs as a predictive factor for success or failure.

The bulk of entrepreneurial intention research emanates from Entrepreneurial Event Theory (Shapero & Sokol, 1982) and Theory of Planned Behavior (Ajzen, 1985) as the main theory-driven models. The theory of planned behavior is usually applied to decision making (Conner and Armitage 1998; Ajzen 2011). The cognitive approach embodied in Ajzen's theory has encouraged many authors to apply it in organizational settings, given the rational nature of decision making in organizational behavior. Gerardus, Vermeulen and Curşeu (2008) argue that there are differences in entrepreneurs' decision-making styles, which are related to the content of their cognitions concerning the decisions they make. The following sections present a review of research with a cognitive style approach to entrepreneurship intention.

Brigham, De Castro and Shepherd (2007) posit that behavior is best understood by studying the person and the situation. According to them, this makes the psychology of the entrepreneur central in the cognitive perspective in entrepreneurial research. This is supported by Allinson et al. (2000) and Baron (2004) who claim that the cognitive perspective has the potential to contribute importantly to the study of entrepreneurship. According to Kickul et al. (2009) cognitive style may influence the preference for

different types of learning, knowledge gathering, information processing, and decision making, which are critical behaviors of entrepreneurs. Knockaert et al. (2015) maintain that growth intention research has surprisingly neglected to incorporate a cognitive style perspective. Allinson, Chell and Hayes (2000) hypothesize that owner-managers who are successful entrepreneurs have a more intuitive cognitive style compared to the general population of managers, middle and junior managers, whereas there is no difference in cognitive style from senior managers and executives. Busenitz and Barney (1997) have examined differences between managers and entrepreneurs in the decision-making process, building on the behavioral decision theory models of non-rational decision making. Their findings suggest that entrepreneurs are more prone than managers to use biases and heuristics. The bounded rationality of individuals' decision-making processes is a widely studied topic in management studies (Caputo, 2014). Busenitz and Barney (1997) maintain that future research should examine whether the use of biases and heuristics in strategic decision making remains stable over time. Although largely neglected in the literature, decision-making style measures may be just the right tools to test how managers make decisions and whether they predict their intention for entrepreneurship as the ultimate step toward action.

There are very few studies observing the relationship between cognitive styles and the entrepreneurial behavior of managers (Sadler-Smith 2004; Kickul, et al. 2009). Barbosa, Gerhardt and Kickul (2007) examine how cognitive style and risk preference contribute to an individual's assessment of their skills, abilities, and entrepreneurial intentions. The authors conclude that cognitive style predicts entrepreneurial intention, with intuitive style entrepreneurs exhibiting a higher level of opportunity identification efficacy.

Kickul et al. (2009) attest that deep cognitive structures are at play concerning how entrepreneurial intentions evolve. Their findings show that individuals with intuitive cognitive style show confidence in their ability to identify and recognize opportunities, whereas individuals with analytic cognitive style are more confident in their abilities to assess, evaluate, plan, and marshal resources. For Bird (1988), rationality versus intuition is a dimension of entrepreneurial intention. Krueger (2003) asserts that in cognitive psychology, the intention is the cognitive state immediately prior to executing a behavior.

Entrepreneurship researchers perceive cognition as an agenda for understanding how some individuals identify and exploit opportunities to create something of value (Sadler-Smith 2004; Sassetti, et al. 2018). Krueger (2000) points out that many authors have argued that there is a need to use cognition-based perspectives to describe and explain managerial and entrepreneurial behavior. Intentionality is deeply ingrained in how people process information into action (Krueger, 2000).

Crant (1996) explored the relationship between individual differences and entrepreneurial intention, concluding that higher entrepreneurial intention was associated with male rather than female, MBA students rather than undergraduates and their parent's business ownership. Markman and Baron (2003) assert that research provides evidence that individual differences are important in entrepreneurship success, as different people may be better suited in opportunity exploitation than others.

According to Appelt et al. (2011), "individual differences is a broad term, covering any variable that differs between people, from decision style to cognitive ability to personality." The term cognitive style is used to refer to individual differences in the way people process information to make decisions (Ruble & Cozier, 1990). The authors

claim that the literature refers to individual differences construct as decision-making styles and problem-solving styles. There is a lack of consensus on whether decision-making style and cognitive style are interchangeable concepts (Anderson, 2000), or decision-making style is a subset of cognitive style (Kozhevnikov, 2007). Thunholm (2004) moves to the other extreme, claiming that cognitive styles are a subset of decision-making style. Decision-making style is defined as a habitual pattern used by individuals when making decisions (Driver & Rowe, 1979). Scott and Bruce (1995) define decision-making style as "the learned, habitual response pattern exhibited by an individual when confronted with a decision situation." Penino (2002) and Gambetti et al. (2008) claim that decision-making styles differ by situation and as such are different from cognitive styles and psychological types that remain unchanged across situations. Other authors (Rowe & Boulgarides, 1983; Betsch & Iannello, 2010) refer to decision styles as personality traits, whereas for Scott and Bruce (1995), decision-making style is not a personality trait, but a habit-based propensity to react in a certain way in a specific decision context. A growing body of literature uses either the Decision Style Inventory (DSI; Rowe & Mason, 1987) or the General Decision-Making Style (GDMS; Scott & Bruce, 1995) to measure decision-making style (Berisha, et al., 2018). Decision-making style in this research is operationalized with GDMS. Scott and Bruce (1995) define decision-making styles in behavioral terms: rational style is characterized by a thorough search for information and logical evaluation of alternatives, intuitive style is characterized by a reliance on hunches and feelings, dependent style is characterized by a search for advice and direction from others, and avoidant style is characterized by attempts to avoid decision making and spontaneous style is characterized by a feeling of immediacy and a need to make decisions quickly. According to Scott and Bruce (1995), the patterns of correlations between five style scales suggest conceptual independence. Therefore, the decision-making styles measured by GDMS are not mutually exclusive, meaning that individuals do not rely on a single decision-making style.

Authors that investigate individual differences in decision making acknowledge the lack of attention toward individual differences and claim that they are indispensable for understanding decision-making behavior (Parker and Fischhoff 2005; Mohammed and Schwall 2009; Appelt, et al. 2011). Brigham, De Castro and Shepherd (2007) suggest that stable individual differences, such as cognitive style and decision-making style, can play an important role in explaining the entrepreneurial phenomenon. According to Sadler-Smith and Badger (1998), "cognitive style is widely recognized as an important determinant of individual behavior." Albeit cognitive styles usefulness in the conceptualization of entrepreneur characteristics, they have received little attention in entrepreneurship literature (Sadler-Smith, 2004). Past research on cognition processes in entrepreneurship has focussed on identifying differences between entrepreneurs and non-entrepreneurs (Busenitz & Barney, 1997). Their findings suggest that entrepreneurs compared to managers are more likely to use decision-making biases and heuristics.

Decision-making style has been used in studies in the context of small business survival (Gray, 1999). Brigham, De Castro and Shepherd (2007) claim that decision-making style research of owner-managers and entrepreneurs can prove worthy for the person-organization fit approach. Researching a sample of owner-managers in high-technology firms, they found that decision-making style predicts satisfaction, intentions to exit, and entrepreneur actual turnover.

Research method

Sample and data collection

The data was collected through a survey of managers of Kosovan companies varying in size and industry. Because of the absence of a comprehensive list of company managers in Kosovo, non-probability sampling is used. An email was sent to businesses registered in several databases of chambers of commerce asking for their approval of participation in the survey and permission to contact managers. The pen-and-paper questionnaire was delivered in a drop-off survey to managers who responded positively to the email request to take part in the study. From the 400 questionnaires delivered, 259 were returned, of which 230 were usable. Concerning gender, 171 were male managers and 59 were females. 47.8% of managers were aged between 18 and 34, whereas the majority (52.2%) of managers were aged between 35 and 65. Twelve percent of managers worked in manufacturing and 26% in trade, while the majority (62%) worked in the service industry. Nearly half of the respondents had an undergraduate degree (47.8%), and another 34.8% had a graduate or Ph.D. degree, whereas 17.4% had no university degree.

Measures

The independent variable in this study is the decision-making style, which is operationalized with the General Decision-Making Style (GDMS) instrument (Scott & Bruce, 1995). The dependent variable is the entrepreneurial intention, which is based on the EI questionnaire (Liñán & Chen, 2009) used to measure entrepreneurial intention. Questions for all variables in the GDMS instrument and EI questionnaire are presented in Table 1.

Studies have tested psychometric properties and support the reliability and validity of GDMS (Scott & Bruce,1995; Sager & Gastil, 1999; Loo, 2000; Spicer & Sadler-Smith, 2005; Galotti, et al., 2006; Gambetti, et al., 2008; Baiocco, Laghi & D'Alessio, 2009; Allwood & Salo, 2012) and EIQ (Liñán & Chen, 2009; Do Paco, et al. 2011; Iakovleva, Kolvereid and Stephan 2011; Bullough, Renko and Myatt 2014; Miralles, Giones and Riverola 2016).

GDMS comprises statements describing how individuals go about making important decisions (Thunholm, 2004). Decision-making styles measured by GDMS are rational intuitive, dependent, avoidant, and spontaneous. The instrument contains 25 statements, 5 for each decision-making style, which are scored on a 5-point Likert scale.

Entrepreneurial intention was measured using six questions from the entrepreneurial intention section of the Entrepreneurial Intention Questionnaire (Liñán & Chen, 2009). The items are scored on a 5-point Likert scale indicating the level of agreement. Liñán et al. (2005) report Cronbach's alpha above .9 for the entrepreneurial intention section of EIQ, which is an important indicator of the instrument reliability.

Cronbach's alpha coefficients for all scales in the sub-samples for both GDMS and EI were calculated. Cronbach's alpha is calculated for all 5 decision styles and the entrepreneurial intention section. For entrepreneurial intention, the Cronbach's alpha coefficient is as high as .89. Alphas for GDMS range from .65 for dependent and avoidant styles to .75 for rational style. Cronbach's alpha for GDMS is .73, which is a good indicator of internal consistency (Table 2).

Table 1 The measurement instruments

Construct	Items	Statements
Entrepreneurial intention	EI1	I am ready to do anything to be an entrepreneur
	EI2	My professional goal is to become an entrepreneur
	EI3	I will make every effort to start and run my own firm
	EI4	I am determined to create a firm in the future
	EI5	I have very seriously thought of starting a firm
	EI6	I have the firm intention to start a firm some day
Decision-making style		
Rational	GDMS1	I double-check my information sources to be sure I have the right facts before making a decision
	GDMS6	I make decisions in a logical and systematic way
	GDMS11	My decision making requires careful thought
	GDMS16	When making a decision, I consider various options in terms of a specific goal
	GDMS21	I explore all of my options before making a decision
Intuitive	GDMS2	When making a decision, I rely upon my instincts
	GDMS7	When I make decisions, I tend to rely on my intuition
	GDMS12	I generally make decisions that feel right to me
	GDMS17	When I make a decision, it is more important for me to feel the decision is right than to have a rational reason for it
	GDMS22	When I make a decision. I trust my inner feelings and reactions
Dependent	GDMS3	I often need the assistance of other people when making important decisions
	GDMS8	I rarely make important decisions without consulting other people
	GDMS13	If I have the support of others, it is easier for me to make important decisions
	GDMS18	I use the advice of other people in making my important decisions
	GDMS23	I like to have someone to steer me in the right direction when I am faced with important decisions
Avoidant	GDMS4	I avoid making important decisions until the pressure is on
	GDMS9	I postpone decision making whenever possible
	GDMS14	I often procrastinate when it comes to making important decisions
	GDMS19	I generally make important decisions at the last minute
	GDMS24	I put off making many decisions because thinking about them makes me uneasy
Spontaneous	GDMS5	I generally make snap decisions
	GDMS10	I often make decisions on the spur of the moment
	GDMS15	I make quick decisions
	GDMS20	I often make impulsive decisions
	GDMS25	When making decisions, I do what seems natural at the moment

Scott and Bruce (1995) report Cronbach's alpha scores ranging from .68 to .94, claiming that the scales have acceptable internal consistency. Reliability scores lower than .7 for GDMS scales are reported in various studies (Thunholm 2004; Spicer and Sadler-Smith 2005; Baiocco, Laghi and D'Alessio 2009; Salo and Allwood 2011; Allwood and Salo 2012; Berisha, Shiroka Pula and Krasniqi 2018). These authors suggest that the small number of items per style (5), sample size, and cross-cultural and linguistic differences and wording issues may influence lower than the .7 threshold Cronbach's alpha scores. The reliability for Entrepreneurial intention is $\alpha = .89$, which is strong and consistent with studies using this measure.

Table 2 Mean, standard deviation, and Cronbach's alpha for GDMS and EI

	Mean	SD	Cronbach's alpha
GDMS			.73
Rational	20.98	3.66	.75
Intuitive	17.33	4.24	.71
Dependent	18.62	3.78	.65
Avoidant	12.02	4.34	.65
Spontaneous	12.9	4.02	.61
EI	22.63	5.39	.89

Analytical approach: structural equation model (SEM)

Following Jöreskog (1973) and Jöreskog and Sörbom (1996), general structural equation model is used, which comprises two parts: the structural part linking latent variables (decision-making styles and entrepreneurial intention) to each other via systems of simultaneous equations, and the measurement part which links latent variables to observed variables via a restricted (confirmatory) factor model. The structural part of the model can be written as

$$\eta = B\eta + \Gamma\xi + \zeta$$

where η is a vector of endogenous (criterion) latent variables, ξ is a vector of exogenous (predictor) latent variables, B is a matrix of regression coefficients relating the latent endogenous variables to each other, Γ is a matrix of regression coefficients relating endogenous variables to exogenous variables, and ζ is a vector of disturbance terms.

The latent variables are linked to observable variables via measurement equations for the endogenous variables and exogenous variables. These equations are defined as

$$y = \Lambda_y\eta + \varepsilon$$

and

$$x = \Lambda_x\xi + \delta$$

where Λ_y and Λ_x are matrices of factor loadings, respectively, and ε and δ are vectors of uniqueness, respectively.

Structural equation model (SEM) is used to define the impact of decision-making styles on the entrepreneurial intentions of managers. It is appropriate for data in which a series of regressions are being performed. The dependent variable for one regression analysis is also the independent variable for another (Hopwood, 2007; Hair et al., 2010). SEM in this study consists of two components. The first component is the measurement model, which reduces observed variables (decision-making style items) to a smaller number of latent factors (decision-making styles). The same way is used to reduce observed variables of entrepreneurial intentions questionnaire items to a single latent factor—entrepreneurial intentions. The second component is the structural equation model, which defines causal relationships among these latent factors, and the relationship between decision-making styles (independent variables) and entrepreneurial intentions (dependent variable).

Procedure

This study uses AMOS 23 to estimate the structural equation model. The advantage of SEM is its ability to test the relationship between latent constructs (decision-making styles) instead of observed constructs, SEM partial measurement error out of observed constructs (see Iakovleva, Kolvereid and Stephan 2011). In line with the SEM literature (e.g., Kline 2011; Hooper, Coughlan and Mullen 2008; Vandenberg and Lance 2000; Kadriu et al. 2018), the fit for all models was evaluated based on the following fit indices. All models show a good fit of data—all above .9. Root mean square error of approximation (RMSEA) with a value of .47 indicates a very good model fit, and PCLOSE < 0.08 indicates an acceptable model fit. The Tucker-Lewis index (TLI) and the comparative fit index (CFI) for both values are > 0.90, which shows sufficient model fit (Vandenberg & Lance, 2000). For the sake of completeness, χ^2 is reported as it highly depends on the sample size (see Vandenberg and Lance, 2000). The sample for this research is larger than 200 observations. For models with about 75 to 200 cases, the χ^2 is generally a reasonable measure of fit. The model is empirically tested with the total sample, as Fig. 1 shows. The chi-square of 633.23 (< .05) should be higher, but the sample used in this study is larger than 200. In this sense, Tabachnick and Fidell (1996) mention that when in a structural equation model the chi-square is not significant but the other indices present reasonable results, it is feasible to continue working with the data. One explanation about this result is that the total sample was integrated by all types of managers and this has an influence on the measures of GDMS styles and intention.

Results and discussion

Figure 1 represents a path diagram that allows the determination of the set of relationships among all variables that integrate the critical construct based on the GDMS and entrepreneurial intention model. In this structural equation, 5 decision-making styles and intention are latent variables (factors) that are not directly measured but are assessed indirectly using the measure of rational, intuitive, dependent, avoidant, and spontaneous scales as measured by GDMS (Scott and Bruce 1995). This model was tested using the whole sample of 230 managers.

Figure 1 reports standardized regression coefficients. Each path diagram of item to measure loadings contains a regression weight as indicated by numbers in the arrows. Measurement errors are reported with u1-u32. Because the standardized effects of coefficients are usually used to judge relative size effect, all variables of mean zero and standard deviations of one are converted, while for unstandardized coefficients, original units are kept. Therefore, in this study only, standardized coefficients are reported.

The model shows that only for the spontaneous decision style regression weight is significantly different from zero at the 95% confidence level. The principal regression weights show that the spontaneous style effect in the prediction of intention (0.73) differs significantly from zero at the 0.026 level (two-tailed). Consequently, the manager's intention to start a new business is impacted positively and significantly by the spontaneous decision style. Besides, the covariance matrix between the latent variables in the GDMS shows that spontaneous and intuitive have significant covariance. The covariance between intuitive and spontaneous is significantly different from zero at the 0.001 level (two-tailed). The spontaneous decision style is also statistically significant

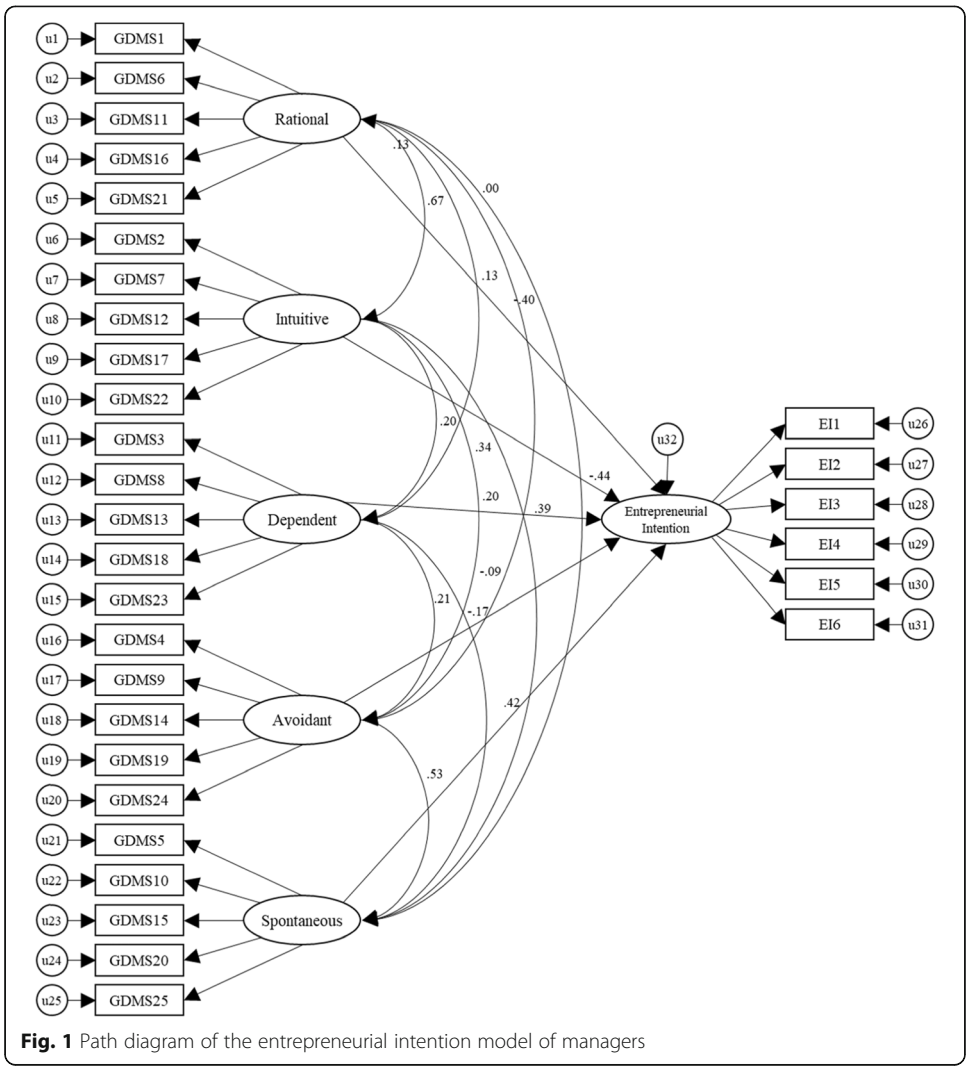

Fig. 1 Path diagram of the entrepreneurial intention model of managers

and negative; the covariance between rational and spontaneous is significantly different from zero at the 0.001 level (two-tailed). This may suggest that the intuitive style can impact the entrepreneurial intention of managers through spontaneous decision-making style (Table 3).

Intuitive managers rely on hunches and feelings rather than logical reasoning, whereas spontaneous style managers make fast decisions (Scott & Bruce, 1995). In the early stages of instrument development, Scott and Bruce (1995) retain spontaneity as an aspect of the intuitive style. The positive correlation between these two styles is attested in many studies (Spicer & Sadler-Smith, 2005). As Spicer and Sadler-Smith (2005) suggest, managers with a spontaneous and intuitive style are prone to "rushing in." La Pira (2011) points out that entrepreneurs use their intuition in making decisions. Forbes (2005) explains that entrepreneurial strategic decision-making speed differs by individual characteristics, with entrepreneurial people making faster decisions than others.

Findings from this study are consistent with Allison et al. (2000) who found that people who show entrepreneurial behavior are more intuitive than analytical. Intuitive entrepreneurs show a larger propensity for entrepreneurship (Armstrong & Hird,

Table 3 Regression weights for whole sample

Relationship			Estimate	S.E.	C.R.	*P*
Entrepreneurial intention	GDMS decision style					
EI	←	Rational	0.101	0.223	0.451	0.652
EI	←	Intuitive	− 0.004	0.093	− 0.038	0.970
EI	←	Dependent	0.162	0.22	0.737	0.461
EI	←	Avoidant	− 0.373	0.418	− 0.892	0.372
EI	←	Spontaneous	0.733	0.329	2.226	0.026**

**$p < 0.05$

2009). According to Busenitz and Barney (1997), there is utility to the non-rational decision making, as intuitive people use biases and heuristics as they go through the entrepreneurial decision-making process. Intuition is considered synonymous with being entrepreneurial (Clara, et al., 2018). Managers that use intuitive and spontaneous decision-making styles make brave and fast decisions. As entrepreneurial intention precedes decision making, there is an increased propensity that intuitive and spontaneous managers will behave more entrepreneurially than others.

Conclusions

Entrepreneurial intention as an antecedent business manager's behavior has been insufficiently researched. This paper aimed to investigate the relationship between decision-making styles and entrepreneurial intention. No prior research has examined whether decision-making style is associated with entrepreneurial intention using a manager sample.

This research provides conclusive evidence that decision-making style can predict the manager's propensity to create new business ventures. Managers that score high in intuitive and spontaneous styles show a higher entrepreneurial intention.

Implications and recommendations

This research paper has several theoretical and practical implications for entrepreneurship research and entrepreneurship education. The practical implication of this study is that it provides a better understanding of individual differences that facilitate the scanning of managers' behaviors, specifically their propensity to quit their job and become self-employed through the new venture creation.

Another important implication of this paper is that it provides policymakers and organizations the means to test to what extent decision-making style of managers predicts their proclivity for entrepreneurship. Identifying people with strong entrepreneurial intentions with a set of measurable individual differences could prove handy for organizations to empower them in intrapreneurial activities (Douglas & Fitzsimmons, 2013) rather than lose their services for good. Organizations should nurture corporate entrepreneurship (Rutherford & Holt, 2007) and encourage managers to create value within existing organizations (Bird, 1988). Markman and Baron (2003) suggest person-entrepreneurship fit as a concept and research agenda for identifying the set of individual differences necessary for entrepreneur success. For Bird (1988), the entrepreneurial intention has a significant impact in all organizations, as it plays an important role in developing the culture of the organization, it impacts the organization

especially in the birth stage and growth plans, and eventually affects venture success. Entrepreneurial intentions shape the manager's strategic behavior and the organization's entrepreneurial activity (Krueger, 2000). Therefore, identifying managers with high entrepreneurial intentions should be a prerequisite for top management to give the right set of tasks to the right people to achieve organizational goals. There is a challenge for large organizations in how they manage entrepreneurial individuals in their firms and how they accommodate such individuals (Busenitz & Barney, 1997). In particular, the problem of keeping such individuals with high entrepreneurial potential is a challenge for developing and transition economies because of the lack or limited use of incentive schemes for intrapreneurial activities to support individuals with entrepreneurial intentions.

This paper has some theoretical implications. Entrepreneurship research has integrated cognitive style research recently, and this paper confirms that stylistic research is a worthy area of investigation. Decision-making style construct should be used as an individual difference in studies of entrepreneurship. Decision-making style measures should be used to research entrepreneurship from a cognitive perspective.

Limitations and future research

The major limitation of this research is that it only evaluates the role of GDMS in explaining entrepreneurial intention in a single-country context, namely Kosovo. Future research needs to replicate this survey in other contexts because it is unknown whether similar findings result when analyzing other countries and other global regions. Moreover, there is a need to include other decision-making styles' instruments in entrepreneurial intention models. Another limitation is possibly the survivorship bias in these types of studies (Krasniqi and Mustafa 2016; Krasniqi 2012)—unable to sample those managers who left managerial jobs and started their own companies. Future studies should take into account these limitations by conducting longitudinal studies to observe career shifts.

Abbreviations

CFI: Comparative Fit Index; DMS: Decision-making style; EI: Entrepreneurial intention; EIQ: Entrepreneurial Intention Questionnaire; GDMS: General decision-making style; RMSEA: Root mean square error of approximation; SEM: Structural equation modeling; SME: Small and medium enterprise; TLI: Tucker-Lewis Index

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Authors' contributions

Authors work in the same department and cover fields of SME Management and Entrepreneurship. JP outlined the general idea for research and contributed with literature review on entrepreneurial intention. GB conducted the field research and contributed to decision-making style literature review. BK contributed with a model proposition, data analysis, and discussion of findings.

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Availability of data and materials

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Competing interests

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