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EXAMINING THE ANTECEDENTS AND OUTCOMES OF ROMANIAN ENTREPRENEURIAL ORIENTATION

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Abstract. *The purpose of the current study is to examine the impact of Romanian entrepreneurs' thinking styles on their entrepreneurial orientation (EO) and emotional intelligence (EI). More specifically, we examine how thinking style and risk preference – both separately and interactively – contribute to an individual's EO and EI. In addition, we examine the ways in which EO and EI impact affective organizational commitment. Consistent with expectations, Romanian entrepreneurs with high risk preference demonstrated greater EI than those with low risk preference. Furthermore, Romanian entrepreneurs with a nonlinear thinking style and high risk preference exhibited greater EO than those with a linear thinking style and low risk preference. Finally, Romanian entrepreneurs with high EI and high EO demonstrated greater affective organizational commitment than entrepreneurs with low EI and low EO. We conclude with a discussion of the study's findings, research limitations, and implications for future research.*

Key words: Entrepreneurial cognition; entrepreneurial orientation; international entrepreneurship.

1. Introduction

The concept of entrepreneurship has been applied to many different levels, from individuals to groups, organizations, and nations. Entrepreneurship often is thought to be applied primarily by individuals because frequently it is associated with the introduction of a revolutionary product or service. Also, some theorists consider it to apply mainly to the domain of small businesses because they are responsible for the majority of economic growth and new-job creation in markets. More recently, entrepreneurship has been extended and applied at corporate level of analysis.

The act of entrepreneurship may be initiated by an individual, a small firm, or a strategic business unit of a large corporation. Entrepreneurship researchers have conducted numerous studies to describe alternate perspectives of entrepreneurship and depict differences in entrepreneurship considering various levels of analysis (Lumpkin & Dess, 1996). Lumpkin and Dess (1996) highlight the importance of distinguishing between the concepts of entrepreneurship and entrepreneurial orientation (EO). For example, Miller (1983) defines an entrepreneurial firm as one that "engages in product market innovativeness, undertakes somewhat risky ventures, and is first to come up with proactive innovations, beating competitors to the punch. A non-entrepreneurial firm is one that innovates very little, is highly risk averse, and imitates the moves of

competitors instead of leading the way" (p. 84). Miller used three dimensions to characterize and test entrepreneurship: innovativeness, risk-taking and proactiveness.

Covin and Slevin (1989) define the entrepreneurial strategic posture as "characterized by frequent and extensive technological and product innovation, an aggressive competitive orientation, and a strong risk taking propensity by top management" (p. 104). They used the same three dimensions to measure entrepreneurship. According to Lumpkin and Dess (1996), the essential act of entrepreneurship is entering a new or established market with new or existing products. EO refers to the processes, practices, and decision-making activities that help a company be more proactive than competitors toward new marketplace opportunities, which lead to new entry. Lumpkin and Dess (1996) define five dimensions to operationalize EO as follows: autonomy, innovativeness, proactiveness, risk taking, and competitive aggressiveness. For example, *autonomy* refers to the independent action of an individual or a team in bringing forth an idea or a vision and caring it through to completion. Lumpkin and Dess define *innovativeness* as "the willingness to support creativity and experimentation in introducing new products/services, and novelty, technological leadership and R&D in developing new processes" (p. 205). *Proactiveness* is an opportunity seeking, forward looking perspective involving introducing new products or services ahead of the competition and acting in anticipation of future demand to create change and shape the environment. *Risk taking* is the tendency to take bold actions such as venturing into unknown new markets, committing a large portion of resources to ventures with uncertain outcomes, and/or borrowing heavily. *Competitive aggressiveness* refers to a firm's propensity to directly and intensely challenge its competitors to achieve entry and improve position, that is, to outperform industry rivals in the marketplace.

Entrepreneurial orientation and entrepreneurs' thinking styles have been widely explored in the US business environment, but similar studies are very limited in the context of emerging regions or countries, including Romania (Thang et al., 2007). The dearth of empirical research examining entrepreneurial orientation and cognition in emerging countries constitutes a critical gap in the entrepreneurship literature that needs much more attention from scholars.

The purpose of the current paper is to examine the impact of Romanian entrepreneurs' thinking styles on their entrepreneurial orientation and emotional intelligence. More specifically, we examine how thinking style and risk preference – both separately and interactively – contribute to an individual's entrepreneurial orientation and emotional intelligence.

Based on prior theory and research in the field, we developed a conceptual model of the antecedents and outcomes of entrepreneurial orientation. This model, which is depicted in Figure 1, is based largely on the prior work of Lumpkin and Dess (1996). The antecedents of entrepreneurial orientation, namely, thinking style, risk preference and emotional intelligence, are influential factors that determine an individual's entrepreneurial orientation. The outcomes of entrepreneurial orientation, namely, individual and organizational outcomes (e.g., sales, market share, years in

business, organizational commitment, stakeholders' satisfaction, etc.) are the results of an entrepreneur's actions taken in the entrepreneurial process.

One of the objectives of this paper is to examine the importance of linear–nonlinear thinking style balance, or the versatile utilization of both linear and nonlinear thinking styles depending on contextual demands, and its impact on entrepreneurial orientation for Romanian entrepreneurs. Another objective is to examine the link between the level of linear–nonlinear thinking style balance (e.g., high linear style, balanced linear–nonlinear style, and high nonlinear thinking style), risk preference, and emotional intelligence. Based on different conceptual frameworks from the research literature, we formulate specific hypotheses concerning the relationships among these constructs. The methodology used to test these hypotheses is further described and then the preliminary results are presented. The study concludes with a discussion on our findings and research limitations, and implications of these results for future research.

2. Thinking style

Thinking style has been defined as "one's preferred manner of using mental abilities to govern daily activities, including understanding and solving problems and challenges" (Vance et al., 2007). Thinking styles may vary depending on various factors. Prior research indicates that, in problem solving and decision-making processes, individuals utilize both logic, rationality, reason, analysis, on one hand and intuition, emotions, creativity on the other hand. Vance et al. (2007) explain that linear thinking style can be measured by an individual's preference for considering external data and facts and the processing of this information through rational thinking to guide subsequent action, while nonlinear thinking style can be assessed by an individual's preference for attending to internal sources, such as feelings and intuition, and using inner processes such as feelings, hunches, and insight to inform and guide subsequent action.

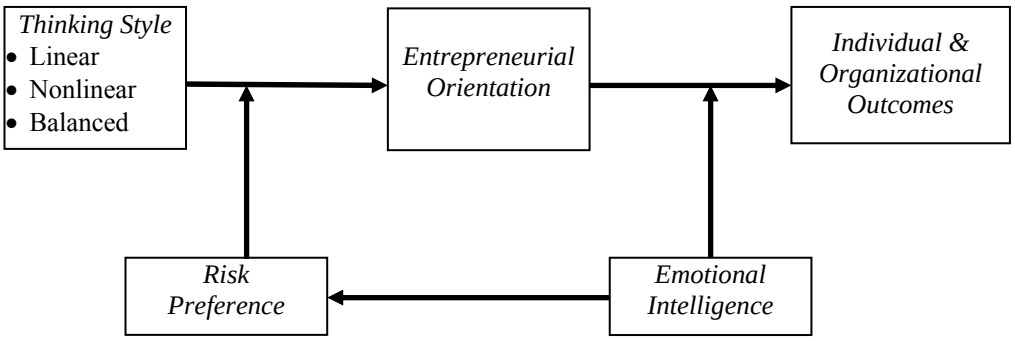


Figure 1. Conceptual model of antecedents and outcomes of entrepreneurial orientation

2.1. The impact of thinking style on entrepreneurial orientation

Most studies of entrepreneurial orientation tend to examine its three common features only (openness towards risk, innovativeness, and pro-activeness), merging these into a construct of entrepreneurial orientation and then analyzing its effect on business performance (Miller, 1983; Covin and Slevin, 1986, 1989; Hughes and Morgan, 2007). Lumpkin and Dess stressed an entrepreneurial orientation is best characterized by five dimensions which can vary independently and may not be equally valuable across performance metrics or at different stages of development (Lumpkin & Dess, 1996).

Lumpkin and Dess (1996) suggest that entrepreneurial orientation represents key entrepreneurial processes and is concerned with *how* new ventures are undertaken, whereas entrepreneurship refers to the content of decisions taken: *what* is undertaken. To date, a number of researchers have presented potential conceptualizations and theories on entrepreneurs thinking styles. Decisions and communications among individuals in organizations are frequently initiated, managed and concluded almost entirely from within a framework of linear-logical thinking. Although managers are taught to use the quantitative, linear approach to problem solving, recent studies show that many managers rely on intuition in the decision-making process (Dane & Pratt, 2007; Goldstein et al., 1985). Furthermore, entrepreneurs seem to present stronger intuitive thinking, characterized by an intense use of intuitive thinking heuristics, which determine their entrepreneurial orientation (Allinson et al., 2000). Research on cognitive style is inconclusive concerning whether individuals having an intuitive thinking exhibit higher levels of entrepreneurial intentions than individuals having an analytical cognitive style (Barbosa et al., 2007). However, the assertion that entrepreneurs generally present an intuitive cognitive style is supported by research on entrepreneurial cognition (Mitchell et al., 2002; Allinson et al., 2000).

Researchers indicated a positive relationship between entrepreneurs' internal locus of control and the firm performance, and no mediating role of entrepreneurial orientation in this relationship. In contrast, generalized self-efficacy had no direct effects on firm performance; however, it influenced firm performance positively through its effect on entrepreneurial orientation (Poon et al., 2006). Based on this literature, we can hypothesize that a balanced linear/nonlinear thinking style will be associated with higher levels of entrepreneurial orientation.

H1a: Romanian entrepreneurs with a balanced linear/nonlinear thinking style will demonstrate greater entrepreneurial orientation than entrepreneurs with a linear thinking style.

H1b: Romanian entrepreneurs with a balanced linear/nonlinear thinking style will demonstrate greater entrepreneurial orientation than entrepreneurs with a nonlinear thinking style.

2.2. Emotional intelligence and its impact on risk preference

Emotional intelligence (EI) describes an ability, capacity, or skill to perceive, assess, and manage the emotions of one's self, of others, and of groups (Mayer & Salovey, 1997). EI has been studied since the early 1990s, but only in recent years has it entered the mainstream media and the modern workforce. The original work by Salovey and Mayer (1990) provided a definition of emotional intelligence as the "ability to monitor one's own and other's feeling and emotions, to discriminate among them, and to use this information to guide one's thinking and action". Goleman (1995), on the other hand, defines emotional intelligence as comprising emotional awareness, emotional management, motivation, empathy and social skills.

Mayer and Salovey's (1997) model of emotional intelligence comprises four iterative dimensions: (a) emotional awareness, being aware of own and others emotions, (b) facilitating emotion, using emotions to direct thought, (c) understanding emotion, or knowledge about behavioral responses to emotion, and (d) managing emotions in self and in others to enhance personal growth and relationships. Importantly, Mayer and Salovey do not see motivation as a factor of emotional intelligence. The link between emotions and motivation has been explicitly stated in a broad range of research (Christie et al., 2007). An important factor that may impact the emotional intelligence is the risk preference. In the current study we explore the relationship between entrepreneur openness to risk and emotional intelligence.

Research has demonstrated that the individuals who are more successful take more risks than individuals who are less successful (Calvert, 1993). Over 30 years of research confirm greater risk taking among individuals who are more successful. Calvert cites data that support the notion that taking a moderate number of calculated modest-sized risks was characteristic of top executives and that taking balanced risks equates with successful careers. Research based on entrepreneurs' risk preference when it comes to implementing business decisions (Barbosa et al., 2007) demonstrated that higher preference for risk is associated with higher levels of entrepreneurial orientation. We hypothesize the following:

H2: Romanian entrepreneurs with a high preference for risk will exhibit a higher level of emotional intelligence than individuals having a low preference for risk.

2.3. The dual-interactive role of thinking style and risk preference

A broad range of research has demonstrated that intuitive, non-linear thinking individuals with a high preference for risk present the highest levels of entrepreneurial intentions and the strongest beliefs concerning their capacity of identifying and exploiting opportunities (Barbosa et al., 2007). Furthermore, the analytic, linear thinking individuals having a low preference for risk exhibit lower levels of entrepreneurial intentions. Hughes and Morgan (2007) examined the independent

impact of risk-taking, innovativeness, pro-activeness, competitive aggressiveness, and autonomy on performance of young high-technology firms at an early stage of development. Their results support the assumptions of Lumpkin and Dess (1996). Specifically, they demonstrated that pro-activeness and innovativeness have a positive influence on business performance while risk-taking has a negative relationship. Furthermore, competitive aggressiveness and autonomy appear to hold no business performance value at the early stage of a firm development (Hughes & Morgan, 2007).

Calvert (1993) stated that individuals oriented to high achievement take moderate risks and avoid perceived high-risk activities that are beyond their grasp. Furthermore, they also avoid low-level risks that provide a limited sense of accomplishment as well as risks in which chance is likely to determine the outcome (Calvert, 1993). In order to test those assumptions and fully examine the interactive role of thinking style and risk preference on entrepreneurial orientation, we hypothesize the following:

> *H3: Risk preference will moderate the relationship between thinking style and entrepreneurial orientation. Romanian entrepreneurs with a nonlinear thinking style and high preference for risk will demonstrate greater entrepreneurial orientation than those with a linear thinking style and a low preference for risk.*

2.4. The dual interactive role of entrepreneurial orientation and emotional intelligence

Entrepreneurship research results suggest that high entrepreneurial orientation owner/managers are innovative, proactive and risk seeking, and, as a consequence, they are more likely to exploit opportunities and thus demonstrate a higher level of commitment to organization (Mostafa et al., 2006). Export sales growth was significantly higher among firms with high entrepreneurial orientation owner/managers, which provides further support for EO improving a firm's financial performance (e.g., Mostafa et al., 2006; Barrett et al., 2000). Emotional intelligence enables entrepreneurs to be able to manage their own emotions and to read the emotions of others. This assists the entrepreneur in building relationships that are so critical to effective leadership and organizational commitment. An emotionally intelligent team needs an extra set of skills. This includes being inclusive and working collaboratively, staying open to new opportunities, and being adaptable to change. Furthermore, people within a team also need to be able to engage in direct and honest communication; knowing what they stand for individually and collectively (Landale, 2007).

Organizational commitment has been conceptualized and measured in many ways. Although there is no consensus on the precise definition and key elements, recent conceptions incorporate three key facets: affective, continuance, and normative commitment (Allen & Meyer, 1990). *Affective commitment* refers to an employee's emotional attachment to, identification with, and involvement in the organization. *Continuance commitment* refers to an employee's perceived costs of leaving the organization. *Normative commitment* refers to an employee's obligation to remain in

an organization. Carmeli and Colakoglu (2005) found significant interaction between emotional intelligence and affective commitment in predicting altruistic behavior. The positive relationship between affective commitment and altruism, a key organizational citizenship behavior, was stronger for high emotional intelligence individuals. Using a linear model, Luchak and Gellatly (2007) found that affective commitment is more strongly related to work outcomes (turnover cognitions, absenteeism, and job performance) than continuance commitment. In order to explore the relationships among EO, EI, and organizational commitment, we state the following:

H4. Emotional intelligence will moderate the relationship between entrepreneurial orientation and affective organizational commitment. Romanian entrepreneurs with high emotional intelligence and high entrepreneurial orientation will demonstrate greater affective organizational commitment than entrepreneurs with low emotional intelligence and low entrepreneurial orientation.

3. Research method

3.1. Sample and data collection

The sample consisted of 88 Romanian entrepreneurs who met the following sampling criteria: (1) founder or current owner of a Romanian company, (2) current company has been in operation at least three years, and (3) current company employs at least three employees. The entrepreneurs' companies represented a range of industries, including construction (n = 14), importing/exporting commerce (n = 11), manufacturing (n = 9), media (n = 9), services (n = 11), retail (n = 7), information technology (n = 7), pharmacology (n = 6), food manufacturing (n = 5), and a mix of other industries. The sample consisted of 64 men (73%) and 24 women (27%), while the mean age was 42.11 years (s.d. = 10.23). The entrepreneurs' companies had been in operation for a significant number of year (Mean = 9.27, s.d. = 4.90) and included an average of 118.74 employees (s.d. = 513.01). The educational background of the entrepreneurs consisted of the following: high school diploma (n = 14, 16%), some undergraduate course work (n = 5, 6%), undergraduate degree (n = 44, 50%), some graduate level coursework (n = 7, 8%), master's level graduate degree (n = 13, 15%), and doctoral level graduate degree (n = 5, 6%). All but five of the entrepreneurs reported Romania as their national origin. Hungary, Lebanon, Mongolia, Montenegro, and Italy were the other national origins.

The data were collected by students who completed an entrepreneurship course at the Faculty of Business Administration at Academy of Economic Studies Bucharest. As part of the course requirements, 114 freshman students conducted an interview with a Romanian entrepreneur. The interview consisted of a series of self-report scale items that are detailed below. Of the 102 Romanian entrepreneurs who were asked to participate in the study, 88 agree to meet with the students and complete the interview for an 86% response rate.

3.2. Measures

Thinking style. All participants completed the Linear/Nonlinear Thinking Style Profile (LNTSP) (Vance et al., 2007), a 26-item forced-choice self-report measure of decision-making style. The LNTSP is comprised of two types of forced-choice items, including five pairs of statements describing alternative behaviors (10 total items) and eight pairs of alternative words or phrases that influence decision-making (16 total items). Using a Likert-type scale (3 = „very often", 2 = „moderately often", 1 = „occasionally", and 0 = „rarely or never"), respondents were asked to allocate exactly three points across each pair of alternative statements according to how frequently they perform such behaviors. An example pair of statements includes, „I primarily rely on logic when making career decisions" and „I primarily rely on feelings when making career decisions." Also using a Likert-type scale (3 = „very strong influence on how I behave," 2 = „strong influence on how I behave," 1 = „moderate influence on how I behave," and 0 = "little or no influence on how I behave"), respondents again were asked to allocate exactly three points across each pair of alternative words or phrases. Example item pairs include „Feelings" and „Facts," „Inner Knowing" and „Logic," and „Felt Sense" and „Reason".

The four LNTSP subscales include external information sources (EIS), inner information sources (IIS), linear decision-making (LDM), and nonlinear decision-making (NDM). The EIS subscale (eight items) reflects external sources of information, data, and influences that guide an individual's decision-making and behavior. IIS also contains eight items, however of a nonlinear nature, representing inner or internal information sources such as feelings, sensations, and impressions that influence an individual's decision-making and behavior. LDM (five items) includes linear items that represent the mental processing of external sources of information, including verifiable facts, analytical reasoning, and objective factors, for the purpose of rational decision-making and subsequent action. Finally, NDM contains five nonlinear items that reflect the processing of internal sources of information, such as feelings and intuitive sense, for the purpose of guiding subjective decision-making and subsequent action. For the purposes of the present study, EIS and LDM were combined to form linear thinking (r = .79) while IIS and NDM were combined to form nonlinear thinking (r = .79).

Emotional intelligence. The Groves et al. (2008) emotional intelligence self-description inventory (EISDI) was utilized to measure EI. The self-report EISDI includes the following six-item scales, which are based upon the Mayer and Salovey (1997) model of emotional intelligence: perception/appraisal of emotions (PE), facilitating thinking with emotions (FE), understanding emotions (UE), and regulation/management of emotions (RE). A sample item includes „I can accurately identify a range of emotions that I feel from day to day" (PE). Participants rated the degree to which each item was descriptive of them on a 7-point scale ranging from „Strongly Disagree" (1) to „Strongly Agree" (7). For the purposes of the present study, the overall EI scale (r = 86) was utilized for hypothesis testing.

Affective organizational commitment. Allen and Meyer's (1990) self-report, six-item scale was utilized to assess participants' affective commitment to their organizations. A sample item includes „I really feel as if my organization's problems are my own". Participants rated the degree to which each item was descriptive of them on a 7-point scale ranging from „Strongly Disagree" (1) to „Strongly Agree" (7). For the current study, the alpha reliability estimate was .73.

Risk preference. Risk preference was measured by a six-item scale created for the purposes of the present study. The measure was comprised of three pairs of forced-choice statements describing alternative behaviors associated with risk tolerance. Using a Likert-type scale (3 = „very often", 2 = „moderately often", 1 = „occasionally", and 0 = „rarely or never"), respondents were asked to allocate exactly three points across each pair of alternative statements according to how frequently they perform such behaviors. The three statement pairs included: „I value boldness in decision and action, even under conditions of ambiguity" and „Under certain conditions, I prefer being passive and reactive"; „I believe that reasonable risks should be taken only be people at the top level of the organization" and „I believe that reasonable risks should be taken by people at all levels of the organization"; and „I believe that failure is a source of learning and people who try something new and fail yet learn from their experience should be rewarded" and „I believe that failure is a source of shame and people who experiment with new solutions to problems and fail should be punished". The internal reliability estimate for this measure was .74.

Entrepreneurial orientation. Covin and Slevin's (1989) 9-item self-report scale was utilized to measure entrepreneurial orientation or posture. Participants were provided nine pairs of statements that describe the entrepreneurial orientation of a business unit, and asked to indicate on a scale from 1 to 7 according to which statement best describes their orientation. A sample pair of statements included „…owing to the nature of the environment, it is best to explore it gradually via cautious, incremental behavior" and „…owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives". A seven-point scale was placed between each pair of statements as participants were asked to circle the number that best described their orientation or posture. For the present study, the internal reliability estimate was .82.

4. Results

Table 1 presents the descriptive statistics and zero-order correlations among the variables of interest in the present study. Overall, organizational commitment was associated with linear thinking ($r = .33$, $p < .01$), nonlinear thinking ($r = -.33$, $p < .01$), and emotional intelligence ($r = .27$, $p < .01$). Age was positively associated with both education ($r = .22$, $p < .05$) and organizational commitment ($r = .19$, $p < .10$). Finally, risk preference was mildly associated with emotional intelligence ($r = .18$, $p < .10$).

Table 1

Correlations and Descriptive Statistics

	Mean (s.d.)	1	2	3	4	5	6	7	8	9
1. Gender	1.27 (.44)	--								
2. Age	42.11 (10.23)	-.01	--							
3. Education	4.17 (1.37)	.05	.22*	--						
4. Linear Thinking	1.97 (.36)	-.09	.09	.12	*.79*					
5. Nonlinear Thinking	1.03 (.36)	.09	-.09	-.11	--	*.79*				
6. Entrepreneurial Orientation	4.24 (1.09)	-.02	-.07	.08	-.02	.02	*.82*			
7. Organizational Commitment	6.11 (.93)	.16	.19+	.10	.33**	-.33**	.09	*.73*		
8. Risk Preference	2.07 (.55)	-.08	-.10	.08	-.17	.17	.15	-.04	*.74*	
9. Emotional Intelligence	5.41 (.62)	.17	.11	.05	-.14	.14	.10	.27**	.18+	*.86*

n = 88

[a] Standardized regression coefficients are shown.

* p < .05

** p < .01

Hypothesis testing. Hypotheses 1a and 1b predicted that entrepreneurs with a balanced linear/nonlinear thinking style would demonstrate greater entrepreneurial orientation (EO) than entrepreneurs with a linear or nonlinear thinking style. The entrepreneurs were classified as balanced, linear, or nonlinear thinkers according to arithmetic difference between their LNTSP linear and nonlinear thinking style scores. Nonlinear thinkers (n = 12) included those entrepreneurs with large negative difference scores between linear and nonlinear thinking. Linear thinkers (n = 59) included those entrepreneurs with large positive difference scores between linear and nonlinear thinking. Finally, balanced thinkers (n = 17) included those entrepreneurs with small negative or small positive difference scores between linear and nonlinear thinking. To test Hypothesis 1, the mean EO differences across the three thinking style groups were testing using ANOVA. While the mean EO scores across linear (Mean = 4.16), nonlinear (Mean = 4.17), and balanced (Mean = 4.50) entrepreneurs were in the expected direction, the overall ANOVA results did not indicate significant mean differences ($F(2, 85) = .731$, ns). Furthermore, Tukey's HSD test did not reveal any specific group differences among linear, nonlinear, and balanced thinkers. Thus, there is no support for Hypothesis 1.

Hypothesis 2 predicted that entrepreneurs with high risk preference would exhibit a higher level of emotional intelligence. Table 2 presents results of hierarchical regression analyses predicting emotional intelligence. After entering gender, education, age, and years in business as control variables in Step 1, risk preference explained unique variance in emotional intelligence in Step 2 of the regression model ($R^2\Delta = .06$, $p < .05$). Furthermore, risk preference ($\beta = .27$, $p < .05$) was the sole significant predictor of emotional intelligence in the final regression model. Thus, Hypothesis 2 is supported.

Table 2

Results of Hierarchical Regression Analyses Predicting Emotional Intelligence

Variables	Step 1	Step 2
Gender	.10	.15
Education	-.06	-.05
Age	.04	.08
Years in Business	-.02	.02
Risk Preference		.27*
ΔR^2	.02	.06
Total R^2	.02	.08
ΔF	.24	4.03*

n = 88

[a] Standardized regression coefficients are shown.

* $p < .05$

** $p < .01$

Hypothesis 3 stated that risk preference would moderate the relationship between thinking style and EO. Table 3 illustrates results from a regression model in which the main and interactive effects of risk preference and thinking style are regressed onto EO. As predicted, the risk preference—thinking style interaction ($R^2\Delta = .05$, $p < .05$) explained unique variance in EO after the main effects and several control variables were entered in previous steps. Furthermore, the risk preference—thinking style interaction was a significant predictor of EO ($\beta = .27$, $p < .05$) in the final regression model. Overall, Hypothesis 3 was supported.

Table 3

Results of Hierarchical Regression Analyses Predicting Entrepreneurial Orientation

Variables	Step 1	Step 2	Step 3	Step 4
Gender	-.02	-.01	-.01	.04
Education	.10	.09	.09	.07
Age	-.09	-.07	-.07	-.08
Years in Business	.11	.10	.09	.11

Variables	Step 1	Step 2	Step 3	Step 4
Risk Preference		.14	.14	.19
Nonlinear Thinking Style			.01	.03
Risk Preference X Nonlinear Thinking Style				.32*
ΔR^2	.01	.02	.01	.05
Total R^2	.01	.03	.04	.09
ΔF	.40	1.55	.20	4.69*

n = 88
[a] Standardized regression coefficients are shown.
* $p < .05$
** $p < .01$

Hypothesis 4 predicts that EI will moderate the relationship between EO and affective organizational commitment (AOC). Consistent with expectations, Table 4 illustrates the EO—EI interaction ($R^2\Delta = .07$, $p < .05$) explained unique variance in AOC beyond the main effects and several control variables. Furthermore, the interaction term ($\beta = .36$, $p < .5$) was a significant predictor of AOC in the final regression model. Thus, Hypothesis 4 is supported.

Table 4

Results of Hierarchical Regression Analyses Predicting Organizational Commitment

Variables	Step 1	Step 2	Step 3	Step 4
Gender	.16	.16	.13	.12
Education	.05	.04	.04	.03
Age	.18	.19	.16	.16
Years in Business	.22	.22	.21	.19
Entrepreneurial Orientation		.07	.07	.09
Emotional Intelligence			.22*	.15
Entrepreneurial Orientation X Emotional Intelligence				.36*
ΔR^2	.06	.01	.05	.07
Total R^2	.06	.07	.12	.19
ΔF	1.92	.85	4.38*	5.86*

n = 88
[a] Standardized regression coefficients are shown.
* $p < .05$
** $p < .01$

5. Discussion

The purpose of the current study was to examine the impact of Romanian entrepreneurs' thinking styles on their entrepreneurial orientation and emotional intelligence. We examined how thinking style and risk preference – both separately and interactively – contribute to an individual's entrepreneurial orientation and emotional intelligence. Based on a conceptual model of antecedents and outcomes of entrepreneurial orientation, we examined the importance of linear–nonlinear thinking style balance in problem solving and making decisions and its impact on entrepreneurial orientation. Another objective was to examine the link between level of linear–nonlinear thinking style balance (e.g., high linear vs. balanced linear–nonlinear vs. high nonlinear thinking style), risk preference and emotional intelligence.

The results of this study indicate a number of potentially meaningful relationships among several key antecedents and outcomes of entrepreneurial orientation among Romanian entrepreneurs. Specifically, Romanian entrepreneurs with high risk preference demonstrated greater emotional intelligence than those with low risk preference. Furthermore, Romanian entrepreneurs with a nonlinear thinking style and high risk preference exhibited greater entrepreneurial orientation than those with a linear thinking style and low risk preference. Finally, Romanian entrepreneurs with high emotional intelligence and high entrepreneurial orientation demonstrated greater affective organizational commitment than entrepreneurs with low emotional intelligence and entrepreneurial orientation. These findings provide further support for the Lumpkin and Dess (1996) model of entrepreneurial orientation and point to a number of important future research directions.

The scope of the study could be extended by including contextual variables like the regulatory environment, competition, corporate strategy, and outcome variables such as organizational performance. Future research should be focused on addressing how entrepreneurs' thinking styles influence strategic decisions and performance in different settings and industries. Researchers should investigate the processes through which entrepreneurs' thinking styles determine a firm's competitive position in the marketplace and its performance. Furthermore, future studies should investigate the direct and moderating role of emotional intelligence on entrepreneurial orientation.

There are several limitations of the current study that warrant discussion. First, the sample was relatively small and limited to a single nationality. Clearly, more empirical research is needed with samples from multiple nations, particularly emerging regions and nations, to test cross-cultural differences concerning the antecedents and outcomes of entrepreneurial orientation. Second, the cross-sectional nature of the study precludes any discussion of causality concerning entrepreneurial orientation. We encourage future research to incorporate longitudinal research designs that allow testing of mediation and moderation over time as new ventures are created

and developed. Finally, we recommend the use of qualitative research to better understand the contexts in which thinking style, risk preference, and emotional intelligence impact entrepreneurial orientation and ultimately organizational performance.

6. Practical implications

The study should be of practical interest for several reasons. First, by providing entrepreneurs with knowledge about the way they make decisions and with the resulting consequences, entrepreneurs can become more conscious of how their information processing and decision making style impacts their business practices. They may use such self-assessment data to continuously improve their underdeveloped thinking style (e.g., high linear thinkers work to improve their nonlinear thinking, high nonlinear thinkers work to improve their linear thinking), and improve how they make business decisions. Indeed, recent research suggests that individuals can improve their underdeveloped thinking and decision-making style through self-assessment, problem solving, and case study activities (Vance et al., 2007; Sadler-Smith & Shefy, 2004).

Second, cumulative results in this area can be used to design and improve educational and training programs, particularly those designed for business professionals and aspiring or current entrepreneurs. Such an approach may be useful for business schools and educational programs in both developing as well as in developed countries. In developed countries, particularly the US, there has been a recent trend toward redesigning business education and entrepreneurship programs to include greater emphasis on nonlinear thinking and emotional intelligence competencies (Boyatzis et al., 2002; Shinn, 2003). As the present study suggests, cognitive style and emotional intelligence assessment activities may provide critical developmental value to current and aspiring entrepreneurs in business education and entrepreneurship programs.

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