

# **EMOTIONAL INTELLIGENCE, INTERPERSONAL PROCESS EFFECTIVENESS, AND ENTREPRENEURIAL PERFORMANCE**

AMY E. INGRAM  
College of Business and Behavioral Sciences  
Clemson University  
Clemson, SC 29634

WHITNEY PEAKE  
Western Kentucky University

WAYNE H. STEWART JR.  
Clemson University

WARREN E. WATSON  
University of North Texas

## **ABSTRACT**

We test a partial mediation model of emotional intelligence, interpersonal processes and venture performance in a large sample of entrepreneurs. The results indicate that emotional intelligence has both a direct effect on venture performance, which is moderated by gender, and an indirect effect on venture performance via interpersonal processes.

## **INTRODUCTION**

Despite the importance of emotion and research linking emotional intelligence (EI) to a host of important organizational phenomena, research concerning EI in entrepreneurship is very sparse (Ahmetoglu, Leutner, & Premuzic, 2011). Entrepreneurship scholars emphasize the role of emotion in entrepreneurial behavior (cf. Baron, 2008; Cardon, Der Foo, Shepherd, & Wiklund, 2012), including how positive affect influences entrepreneurs' engagement and performance (Baron, 2000; Cardon, Zietsma, Saporito, Matherne, & Davis, 2005). Thus, the ability to maintain an even emotional focus and effectively interact with others, which EI encompasses, appears important for favorable venture outcomes, but has not been investigated.

We develop and test a model that incorporates EI and interpersonal processes, which influence functioning in the venture, thereby incorporating the effects of accurately assessing and managing one's and others' emotions and reactions, to predict perceptions of venture outcomes. We also examine the role of gender in the model. The results make several important contributions to the literature. First, the examination of EI holds promise for a better understanding of the functioning of the entrepreneur, thereby contributing to a growing literature that deals with affect and cognition. Notably, EI can be nurtured and enhanced, and thus has practical implications for practitioners. Second, we also examine the joint influence of EI and interpersonal processes associated with successful business functioning to determine if EI influences these processes and the performance implications. Finally, we extend and deepen the extant literature concerning gender by examining whether or not gender influences associations between EI, interpersonal processes and performance.

## THEORY AND HYPOTHESES

### Emotional Intelligence

Mayer and Salovey (1997: 401) define EI as “the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotions, and regulate emotion in self and others.” According to Gardner (1993), EI encompasses both social and cognitive components, capturing both interpersonal (observe and evaluate others’ temperaments, motivations and intentions) and intrapersonal (deal with oneself to recognize and manage complex sets of feelings) dimensions of emotional recognition and management. Overall, EI is a set of individual abilities that promote emotional and intellectual growth (Mayer & Salovey, 1997), and influences many important workplace outcomes, including job performance, work-family conflict, leadership and negotiation (cf. O’Boyle, et al., 2011). Yet there has been limited attention to the effects of EI on behavior and venture performance, although indications are that individuals higher on EI tend to behave more entrepreneurially (cf. Ahmetoglu et al., 2011; Cross & Travaglione, 2003; Nikolaou & Tsousis, 2002; 2005), and have a higher entrepreneurial orientation for their ventures (Awwad & Ali, 2002).

Scholars argue that entrepreneurial success stems, in part, from an entrepreneur’s cognitive abilities and social skills (e.g., Baron & Markman, 2003), which are addressed by EI. Furthermore, emotional awareness fosters optimal cognitive processing, thereby aiding the discovery of opportunities (Andrade & May, 2004) and enhancing problem solving abilities (Schutte, Scheuttpelz, & Malouff, 2000). Additionally, because EI entails one’s ability to read and manage others’ emotions, in addition to his or her own, it is likely that EI influences key interpersonal processes that can determine interpersonal functioning in the venture, and influence venture outcomes. Moreover, we propose that gender differences in EI will moderate these influences.

Entrepreneurs higher in EI should have a more emotionally balanced, constructive and positive approach to the challenges in the venture (Wong, Wong, & Law, 2007), as entrepreneurs bear the ultimately responsibility of the venture, and their leadership behavior is important in the functioning of the firm. Leadership is inherently social, making emotional awareness and regulation important in the caliber of the interactions, and good leaders need to understand their emotions and those of others, and to be able to regulate their emotions to modulate perceptions of the work environment (Wong & Law, 2002). Additionally, entrepreneurs higher in EI might more effectively interact with important external constituents who are important for the venture. Particularly, higher EI should not only favorably influence decision making (cf. Baron, 2008), but also enable the initiation and development of social ties necessary for obtaining resources and information from others, and help develop better working relationships with employees, suppliers and customers. These social relationships, enabled by EI, should benefit the performance of the venture (cf. Shane, 2003). Thus, we expect that EI influences entrepreneurial behavior, and the performance of the venture.

*Hypothesis 1. EI is positively related to venture performance.*

### EI and Interpersonal Relationships: The Role of Interpersonal Processes

Entrepreneurs, in addition to a myriad of intrapersonal skills necessary for self-awareness and insight, must have interpersonal skills to develop relationships and social capital to sustain the venture. Specifically, the interpersonal component of EI surrounds an individual's ability to recognize and assess others' emotions while also using those emotions to facilitate outcomes. Many recognize the importance of EI in interpersonal tasks (e.g., O'Boyle, et al., 2010; Zeidener, Matthews, & Roberts, 2009). Scholars suggest that the juxtaposition of emotional and social intelligence, as captured in EI, leads to and fosters interpersonal interactions (Baron & Markman, 2000; Goleman, 1995; Saarni, 1999). Indeed, Kunnanatt (2004) insisted that EI is a tool that individuals leverage to increase interpersonal effectiveness, guiding them towards interpersonal success in social interactions.

Research supports this supposition, finding that EI is strongly related to many interpersonal competencies, including decision-making, conflict management and negotiations, that are reliant on effective interpersonal interactions. Actors who have a greater awareness of their own and others' emotions tend to effectively communicate and engage in conflict resolution, enhancing team performance (Druskat & Wolff, 2001; Jordan & Troth, 2004). Indeed, team members capable of this self- and other-awareness during interaction make better decisions and resolve conflicts (Yang & Mossolder, 2004). Additional research finds that EI fosters effective negotiation because EI influences information acquisition and manipulation of others' emotions (Fulmer & Barry, 2004). Negotiators with higher EI are more likely to operate strategically and influence others' emotions by using emotional management tactics.

Although research has focused on how EI impacts interpersonal processes in teams and organizations, little focus has been given to how EI influences interpersonal processes in the entrepreneurial context. Yet entrepreneurial activity is embedded in a web of interpersonal, social activities wherein new venture creation involves a "tapestry of human interaction, cooperation and coordination" (Forbes, Borchert, Zellmer-Bruhn, & Sapienza, 2006: 225). Therefore, individuals and their interactions play a vital role in the entrepreneurial process. Supporting the social, interpersonal view of entrepreneurship, scholars note that the complex interactions between intrapersonal and interpersonal (social) resources are vital for entrepreneurial sustainability (Sarasvathy, 2001, 2006), including acquiring needed resources and knowledge (Hitt, Ireland, Sirmon, & Trahms, 2011). In a recent meta-analytic investigation of the link between entrepreneurial personal networks and firm performance, Stam, Arzlanian and Elfring (2013) reiterate that entrepreneurial activity stems from complex interpersonal network relationships, enabling entrepreneurs to obtain critical resources, to identify opportunities, and to obtain needed legitimacy. Others have found that entrepreneurial team functioning and performance are directly influenced by interpersonal processes (Watson, Ponthieu, & Critelli, 1995; Watson, Stewart, & BarNir, 2003). Overall, research recognizes how one's social skills, combined with an interpersonal social network, influence outcomes for the new venture (Baron & Tang, 2009).

EI has also been linked to job performance and satisfaction, but little work has examined the link between EI and specific interpersonal activities, which, in turn, have performance implications. Scholars note that EI may be particularly important in businesses where interaction is necessary on a regular basis (O'Boyle, et al., 2010), as interpersonal processes influence small business performance (Bird, 1989; Goslin & Barge, 1986; Kamm & Nurick, 1993). For instance, Marques (2008) found that interpersonal issues account for over three quarters of employee problems. In establishing an effective interpersonal relationship, an entrepreneur has basically two overall perspectives: assessing himself or herself within the social context, and assessing

others in that context. The task is then to use these views to optimize work relationships, the essence of effective interpersonal processes.

In addition to the direct influence of EI on performance, we argue that EI also likely impacts venture performance via the influence upon interpersonal processes in the venture, as entrepreneurship is an inherently social process. With its focus on appraisal of one's own and others' emotions, and regulating and using emotion, we argue that EI should influence the interpersonal functioning in the venture, which is captured by interpersonal processes. Those higher in EI will report higher levels of interpersonal process effectiveness, which affects perceptions of venture performance (Watson, et al., 2003). Therefore, we expect that, because EI impacts interpersonal processes, which, in turn, will impact firm performance, interpersonal processes will mediate the relationship between EI and venture performance.

*Hypothesis 2. Interpersonal processes mediate the relationship between EI and venture performance.*

### **Moderating Role of Gender**

Researchers generally agree that women and men differ in how they experience and express emotion, although more differences are found concerning expression (Geer & Shields, 1996; LaFrance & Banaji, 1992) and regulation (Brody & Hall, 1997). Women have consistently higher EI scores than men (e.g. Brackett, Mayer, & Warner, 2004; Extremera, Fernández-Berrocal, & Salovey, 2006; Kafetsios, 2004; Palmer, Gignac, Manocha, & Stough, 2005; Mandell and Pherwani, 2003; Myatt, 2007; Salguero, Extremera, & Fernandez-Berrocal, 2012). McIntyre (2010) discovered that the intrapersonal dimensions of EI were higher for men, and that women were higher on the interpersonal dimensions, supporting research that women are more empathetic and express more emotions, whereas men are more intrapersonal, and control emotions. Tsaousis and Kazi (2013), while investigating the equivalence of the measurement structure of EI across gender and age groups, found that females demonstrate higher scores on caring and empathy, but were lower on emotion regulation. This extends prior findings that show women consistently demonstrate and report higher EI than men on the subscales of EI (Brackett, et al., 2006). As notable EI gender differences exist, we expect that gender will affect the relationships between EI and interpersonal processes and performance, as women are more likely to foster more social empathy and use emotional skills, but men are more likely to be self-aware and regulate accordingly. Consequently, we argue that gender will moderate the relationships between EI, interpersonal processes and venture performance.

*Hypothesis 3. Gender moderates the direct relationship between EI and performance, such that the relationship between EI and performance is stronger for women than for men.*

*Hypothesis 4. Gender moderates the relationship between EI and interpersonal processes, such that the relationship between EI and interpersonal processes is stronger for women than for men.*

*Hypothesis 5. Gender moderates the relationship between interpersonal processes and performance, such that the relationship between EI and interpersonal processes is stronger for women than for men.*

## METHOD

### Sample and Procedure

We collected data over a one-year period via a snowball sampling technique (Heckathorn, 2011), utilizing undergraduate students enrolled in entrepreneurship and organizational behavior courses at a large university in the southwestern United States. We informed this diverse group of students about the research objectives, and instructed them to particularly target owners actively involved in the day-to-day operations of their businesses. Through student involvement, we were able to collect data representing a broader sample of entrepreneurs, exhibiting greater diversity than would have been possible otherwise. Due to the sampling technique, it is not possible to calculate a precise response rate, but 85% of the students completed the assignment as instructed, yielding a total of 943 usable surveys. We screened out responses to focus on entrepreneurs actively involved in the day-to-day operations of their firms, all of which had fewer than 500 employees, resulting in 595 complete observations for analysis. Additionally, to ensure that common method variance did not serve as a limitation to our analyses, we conducted a Harman one-factor test, which indicated that method variance was not present in the data.

### Measures

*Emotional Intelligence (EI).* We used the EI scale developed by Wong and Law (2002), which is composed of 16 items on a seven-point Likert scale addressing four individual components of EI: appraising one's own emotions, appraising the emotions of others, using one's own emotions, and regulating one's own emotions. We created a unitary measure for trait emotional intelligence (e.g., Ahmetoglu, et al., 2011; Zampetakis, et al., 2009) by summing the items ( $\alpha = 0.88$ ).

*Interpersonal Processes.* The interpersonal processes measure comprises 15 items developed by Watson, Ponthieu and Critelli (1995) that address interpersonal processes deemed critical for successful work environments, such as efficient problem-solving, continual improvements, focusing on common business goals, and showing enthusiasm for employee performance (Watson, et al., 2003). Using a seven-point Likert scale, respondents first rated their work on these 15 characteristics, and then rated their co-workers with whom they frequently interact on the same items. We created a unitary measure from the 30 items ( $\alpha = 0.95$ ).

*Performance.* Performance is a multi-dimensional construct (Cameron, 1978), so we asked respondents to evaluate their firm's performance relative to their key competitors over the past two years on a seven-point scale in seven areas of performance: sales growth, cash flows, market share growth, return on sales, return on investments, return on assets and profit growth. We then summed the scores ( $\alpha = 0.90$ ).

*Controls.* To account for characteristics that may reveal insights related to heterogeneity across entrepreneurs in the moderated mediation analyses, we control for several characteristics in our analyses at the individual (education, owner relatedness, experience and race), firm (age and number of full-time employees, planning) and industry (changes in industry profit) levels.

## RESULTS

We used multiple hierarchical regressions to test the hypothesized relationships. The proposed moderated mediation effects proposed were conducted in alignment with methods outlined by Baron and Kenny (1986), Preacher and Leonardelli (2001), and Muller, Judd and Yzerbyt (2005). The first analysis provides insight into the direct effects proposed in hypothesis 1 – that EI would have a positive association with venture performance. A positive main effect ( $\beta = 0.12$ ,  $p < 0.001$ ) supported this hypothesis. Hypothesis 2, which predicted a mediation effect of interpersonal processes on the relationship between EI and venture performance, was also supported (complete results for mediation tests are available from the authors).

Hypotheses 3 through 5 suggest that gender moderates the relationship between EI and venture performance (hypothesis 3), EI and interpersonal processes (hypothesis 4), and interpersonal processes and performance (hypothesis 5). To examine the moderating effect of gender, we created a gender/EI interaction term, and included it in the relevant analyses. There is both a direct effect for gender ( $\beta = 1.34$ ,  $p < 0.05$ ), and a moderating effect for the interaction term in this model ( $\beta = 0.12$ ,  $p < 0.05$ ), supporting hypothesis 3. Hypothesis 4 was not supported ( $\beta = -0.12$ , ns). Hypothesis 5 examines the moderated mediation effect, in which the magnitude of the mediation effect would differ based on the gender of the respondent, with the effect being stronger for women than for men. Muller et al. (2005) stipulate that for moderated mediation to be present, two criteria must be met. First, the independent variable, when the moderator and interaction are controlled for, should be significantly related to the dependent variable ( $\beta = 0.05$ , ns). Second, when the moderator and interaction are controlled for, the independent variable should be significantly associated with the mediator ( $\beta = 1.02$ ,  $p < 0.001$ ), and the change in the effect of the mediator and the dependent variable should be significant as the moderator changes ( $\beta = -0.06$ ,  $p < 0.10$ ). The analyses failed to meet these criteria, so hypothesis 5 was not supported.

## CONCLUSION

We sought to gain an initial understanding of the relationship between EI, interpersonal processes and venture performance, and whether gender played a role in the proposed relationships. As expected, EI had a positive direct influence on venture performance. This result extends the research on the positive effect of EI on job performance to the level of the firm. Entrepreneurs who more effectively appraise their own emotions, regulate them, leverage them for encouragement and motivation, and appraise others' emotions report higher performance for their ventures. Our findings also suggest that EI is indirectly associated with firm performance via interpersonal processes that address business effectiveness. The social and cognitive skills associated with EI are positively correlated with interpersonal processes that are important for successful work environments. In turn, these interpersonal processes are positively associated with reports of venture performance. Furthermore, in addition to highlighting the importance of EI and interpersonal processes, we find that gender moderates the relationship between EI and performance, and that women report higher levels of EI, while men report higher levels of performance.

**FIGURES, TABLES AND REFERENCES AVAILABLE FROM THE AUTHORS**