

**Mental Aspects of Cultural Intelligence and Self-Creativity of Nascent Entrepreneurs:  
The Mediating Role of Emotionality**

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**Abstract**

This study investigates the effect of mental aspects of cultural intelligence through emotionality on creative behaviour in entrepreneurship. Using a sample of nascent entrepreneurs in a developing country (Kazakhstan), this study contributes to entrepreneurship literature by providing a fine-grained explanation about how emotionality serves as a mediating mechanism between cognitive and metacognitive cultural intelligence, and self-creativity. The findings of this study demonstrate that individuals who display higher levels of cognitive and metacognitive cultural intelligence tend to possess higher emotionality, which in turns has a positive influence on self-creativity. We discuss the practical and theoretical implications of the role of cultural intelligence in spurring emotionality and self-creativity.

Keywords: Cultural intelligence; emotional intelligence; creativity; nascent entrepreneurs

## **1. Introduction**

The concept of creativity has attracted considerable scholarly interest owing to its diverse application in numerous fields ranging from education to business. While creativity remains a complex measure due to its conceptualisation (Xu et al., 2019), business studies tend to focus on creative behaviour which is one of the key types of creativity along with divergent thinking, creative personality, and others. Creative behaviour is of utmost importance in entrepreneurial processes because it enables entrepreneurs to identify patterns and trends that help them to recognise opportunities, which ultimately determine entrepreneurial success (Fillis & Rentschler, 2010; Ko & Butler, 2007; Morris, & Kuratko, 2002). Among several domains of creativity such as artistic, scholarly and self-creativity (Kaufman, 2012), self-creativity emerges as very relevant for entrepreneurs who need to find solutions for challenges they face in their early stages of business formation.

Entrepreneurship is one of the critical engines that drives business growth across the world (McMullan & Long, 1987) and the act of entrepreneurship is even more important in developing economies whose institutional environments and entrepreneurial ecosystems may fall short of offering favourable conditions particularly to nascent entrepreneurs (Manolova et al., 2008). Entrepreneurship can be a critical development factor in transition economies including Kazakhstan (Bilan et al., 2019). Nevertheless, it may not be feasible to replicate models from developed countries because the post communism era in countries like Kazakhstan is often associated with new cultural formation, emancipation and transition processes (Kennedy, 2002). Moving away from an unwanted communist past towards a new society with some elements of heritage is desirable (Turşie, 2015). In this process, entrepreneurial activities in creative industries can play an essential role as shown by evidence from Romania (Becuţ, 2016) or

Poland (Pawlusiński & Kubal, 2018). What is unique about Kazakhstan is the contrast between the old yet ever-present nomad creative heritage, the mixed demography from various ex-Soviet republics, and a strategic vision to move away from extracting industries by creating opportunities for young people through creative entrepreneurship. Thus, it is important to uncover what the drivers of creative behaviour among nascent entrepreneurs are, particularly in transition economies.

Responding to calls to identify antecedents of creative behaviour, past studies tend to employ personality traits such as the Big Five Personality Traits as predictors of creativity (Furnham & Bachtiar, 2008). Yet, the complexity and diversity of the world requires the use of perceptual, self-evaluating characteristics that influence creative behaviour. For example, because entrepreneurs are exposed to a variety of cross-cultural situations both domestically (through various indigenous cultures and regional cultural differences) and internationally (e.g., different nationalities, ethnic backgrounds and religious beliefs), cultural intelligence (CQ) can play an important role in entrepreneurial processes and creativity. Among its four dimensions, the mental aspects of CQ (i.e. metacognitive CQ and cognitive CQ) are highly relevant in entrepreneurial creativity. This is because the former dimension of CQ encompasses the thought processes of acquiring knowledge and developing capabilities related to planning, monitoring and revising mental models of cultural norms (Ng et al., 2009; Tuleja, 2014), while the latter one focuses on the knowledge pertaining to economic, legal and social systems of different cultures (Triandis, 1994) and cultural value frameworks (Hofstede, 2001). Extant literature links cultural intelligence to entrepreneurial self-efficacy (Dheer & Lenartowicz, 2017) and quality of network ties (Charoensukmongkol, 2015). However, studies that delve into the influence of CQ on other outcomes such as creativity and innovation among entrepreneurs are limited, which reveals a gap

in the literature that needs addressing. Thus, the first objective of this study is to assess the relationship between two mental aspects of CQ (metacognitive CQ and cognitive CQ) on self-creativity.

Another important subject that deserves scholarly inquiry is whether the cultural intelligence influences creativity directly or whether it works through other mechanisms (i.e. mediators). One such potential mechanism is emotional intelligence (EI) that has been garnering the attention of scholars outside of business disciplines but has seen a limited application in management and more specifically in entrepreneurship. EI consists of four factors – well-being, self-control, emotionality, and sociability (Petrides & Furnham, 2000). Among these, emotionality is very applicable in entrepreneurship because it includes facets that are related to understanding self and one's relationships with others: namely, trait empathy, emotion perception, emotion expression, and relationships. Thus, entrepreneurs with high levels of emotionality should demonstrate higher levels of self-creativity. However, an individual with high emotionality may not be able to display his/her characteristics in different cultures, whereas dimensions of CQ are considered culture free (Ang et al., 2007).

A simple way of modelling would be based on the belief that mental aspects of CQ should lead to creativity. Some studies in psychology point out, however, that if one possesses high metacognitive and cognitive CQ, then he/she should also be able to understand his/her own emotions and the emotions of others in order to find creative solutions to everyday problems. As mental aspects of CQ are often called the 'mindfulness' of CQ (Crowne, 2009), scholars in psychology claim that mindfulness is positively related to one's awareness of his/her own emotions (Foster et al., 2018). Thus, this argument forms the second objective of the study which is to evaluate the mediating effect of emotionality on the relationship between mental aspects of

CQ and self-creativity. More specifically, this study seeks to ascertain whether the two mental aspects of CQ are positively related to emotionality, which in turn leads to an increase in self-creativity.

This study makes several contributions to the extant literature. First, the multicultural nature of countries such as Kazakhstan calls for the use of CQ measures that tap into the cognitive domain of understanding, relating to and embracing cultural differences that can be present not only across nations but also within regions of a given country. Therefore, this paper contributes to research pertaining to the critical importance of mental aspects of cultural intelligence in the context of entrepreneurship. Second, this paper focuses on the emotionality dimension of EI and self-creativity of nascent entrepreneurs. Thus, the present study delves into the *intrapersonal* and the *interpersonal* aspects of emotions, which can serve as mediating mechanisms to build a bridge between CQ and creative behaviour.

This paper is organized as follows. The next section covers key concepts and constructs research hypotheses. Then, the methodology section explains the sampling, measures, and data analysis. The findings, discussions, implications and limitations and directions for future studies conclude the study.

## **2. Theoretical Background**

This section provides an overview of the key constructs in this study. Next, it provides arguments to posit hypotheses that test the relationships among these constructs. Last, it employs emotionality dimension of emotional intelligence as a mechanism that mediates the relationship between cognitive aspects of cultural intelligence and self-creativity. Figure 1 depicts the conceptual model of this research project.

## 2.1. Cultural intelligence

Among various types of intelligence, cultural intelligence (CQ) is a relatively new concept compared to its predecessors such as social and emotional intelligence. Its relatively late discovery may stem from its assumed connection to a cultural context that considers working with individuals from diverse cultures, cultural systems, cultural differences and cultural values. CQ denotes the ability of an individual to thrive in a multicultural environment by demonstrating awareness of cultural differences and respecting and finding a common ground with those differences (Brislin et al., 2006). Rockstuhl (2011) reports that cultural intelligence is a very valuable leadership characteristic in the global world. Indeed, Westby (2007) argues that CQ extends well beyond multicultural contexts and is applicable to all individuals because of the interconnected world we live in. Brislin et al. (2006) contend that CQ can mean demonstrating an intelligent behaviour in one's own culture, while it can also comprise of adaptation and finding common ground with other cultures.

Theoretically, CQ consists of four dimensions: metacognition, cognition, motivation, and behaviour (Earley & Ang, 2003). Bückner et al. (2016) narrow down CQ as a construct that incorporates two key aspects: *mental or cognitive* (metacognitive and cognitive CQ) and *action-focused* (motivational and behavioural CQ). Schlägel and Sarstedt (2016) further contend that the four factors can be viewed as independent of each other because these underlying dimensions have distinct influences on outcomes of interest such as creativity or opportunity recognition (Lorenz et al., 2018).

Because of its focus on nascent entrepreneurs, this study investigates the mental aspects of CQ which comprise metacognitive CQ and cognitive CQ. Cognitive CQ encompasses one's knowledge about cultural systems, traditions, norms and practices (Ang & Dyne, 2008). The

reason why this dimension is essential is because a person's thoughts and behaviour are influenced by his/her knowledge of these cultural characteristics. Metacognitive CQ builds on the cultural knowledge and captures the cultural awareness of someone who is actively in close touch with individuals from different cultural backgrounds (Van Dyne et al., 2015). In other words, this dimension measures one's ability to stop and reflect on what is happening in his/her own mind and in the minds of others around him/her. This is achieved by developing solid thought processes to build upon the accumulated cultural knowledge in order to craft strategies that are employed in cross-cultural contexts (Van Dyne et al., 2010). These two mental aspects of CQ are also viewed as the mindfulness dimensions of CQ where an individual's ability extends beyond being able to collect and assign some meaning to various cues – and emotional ones in particular – by acting upon them (Crowne, 2009; Earley & Peterson, 2004).

Empirically, the use of CQ is more pronounced in international contexts with expatriate employees or managers (Ali et al., 2019; Elenkov & Manev, 2009; Lee & Sukoco, 2010). For example, Engle and Crowne (2014) assessed the influence of international experience on CQ. Some other studies employed CQ as a moderator between expatriate supporting practices and expatriate adjustment (Wu & Ang, 2011), while in some other studies CQ was the predictor of expatriate performance (Lee & Sukoco, 2010).

Even though most of the research on CQ is conducted with expatriate employees, it is plausible that CQ may be related to some key tenets of entrepreneurship. For example, Lorenz et al. (2018) report that the two mental aspects of CQ had a positive relationship with international opportunity recognition. In the realm of international entrepreneurship, Charoensukmongkol (2015) found that a higher CQ leads to a better relationship with foreign suppliers, foreign customers and foreign competitors. Hence, it is expected that CQ would have a pronounced

favourable effect on the creativity of individuals who intend to engage in entrepreneurship in a multicultural setting at home and abroad.

## 2.2. Emotional intelligence

Emotional intelligence (EI) can be defined in several ways ranging from problem solving, by virtue of thoughts, feelings and intuition (Geher et al., 2017), to the ability to identify and manage emotions to achieve self-motivation (Dulewicz et al., 2003). The key tenet of EI is understanding not only one's own emotions but also those of others (Brackett et al., 2011; Geher & Renstrom, 2004) in order to be able to develop a different perspective from which to view events (Harrod & Scheer, 2005). Therefore, one can forge ahead in spite of challenges that he/she encounters along the way by controlling impulses, regulating emotions, and demonstrating empathy for others (Goleman & Cherniss, 2001).

Extant literature contends that EI is different from personality traits and has two forms; these are *trait EI* (perceptions of emotions by oneself) and *ability EI* (information processing) (Petrides & Furnham, 2000). In a meta-analysis Xu et al. (2019) report that trait emotional intelligence (hereafter TEI) measures were utilised more commonly compared to ability EI perhaps due to the use of self-reports as ability EI requires objective measures. TEI has several different dimensions or abilities. One of the seminal studies by Mayer and Salovey (1997) lists them as: "(a) the ability to accurately perceive, appraise, and express emotion; (b) the ability to facilitate thought with feelings; (c) the ability to understand emotions and display emotional knowledge; and (d) the ability to regulate emotions to promote growth in both emotions and intellect (p.10). Meanwhile, Petrides and Furnham (2000; 2001) identify 15 facets of TEI (Adaptability, Emotion control, Low impulsiveness, Self-motivation, Trait empathy, Assertiveness, Emotion expression, Relationships, Social awareness, Trait happiness, Emotion



appraisal, Emotion management (of others), Self-esteem, Stress management, and Trait optimism). As noted before these facets are represented by four factors: emotionality, well-being, self-control, and sociability.

Entrepreneurship scholars have embraced this measure of TEI and used it as a predictor of several entrepreneurial outcomes such as intention to start a business, entrepreneurial attitudes, and personality (Ahmetoglu et al., 2011; Rodrigues et al., 2019; Zampetakis et al., 2009). While all factors of TEI are important, it is worth noting that emotionality is of particular value in entrepreneurship due to capturing one's ability to take the perspectives of others (empathy), clearly understanding his/her own feelings when taking someone else's perspective (emotional perception), ability to communicate his/her feelings to others (emotional expression), and ability to maintain and nurture rewarding personal relationships (relationships). Goleman (2004) claims that empathy is one of the most easily recognised facets of TEI as it pertains to understanding the emotional composition of others. This is also referred to as *empathic accuracy* (Ickes, 1993) which plays an important role in helping people to handle daily social encounters in an accurate and positive manner (Geher et al., 2017). The empathic accuracy is related to understanding one's own emotions and the emotions of others and is very relevant in business and entrepreneurship to grasp the situation of customers, employees and business partners. Humphrey (2013) contends that understanding the emotions of others helps entrepreneurs in the development of new products and business opportunities.

### 2.3. Creativity

Creativity is a complex concept that has been investigated in several disciplines ranging from psychology to education, and from the arts to the field of business. In its broadest sense, creativity can be defined as the originality of ideas, products, or procedures that are potentially

useful to an individual or organization (Amabile, 1983). The measurement of creativity falls into five categories: (1) creative behaviour, (2) creative personality, (3) divergent thinking test, (4) remote associate test; and (5) creative product test (Xu et al., 2019). In a meta-analysis conducted by Xu et al. (2019), creative behaviour was the most commonly used creativity measure followed by creative personality.

Literature on creativity points out that creativity is identical to amusement parks with different rides and thus there are several thematic areas of creativity (Tu et al., 2018). In a prominent scale of creative behaviour, Kaufman (2012) proposes five domains of creative behaviour; these are self-creativity, scholarly creativity, performance creativity, scientific/mechanistic creativity, and artistic creativity. In another measure of creative behaviour, Zhou and George (2001) focus on employee creativity.

To bring further clarity to the construct of creativity one needs to make a distinction between creative potential, creative activities and creative achievements (Sordia et al., 2019). For instance, creative potential generally includes divergent thinking and creative personality whereas creative behaviour tends to fall under creative activities. In the context of entrepreneurship, creative activities comprise various creative pursuits in everyday life that are not immediately recognised by the society (Carson et al., 2005). Some of these are categorised as everyday creative activities that do not necessarily lead to achievements and other tangible outcomes; for instance, jotting down some creative ideas or keeping a journal to organise one's thoughts are everyday creativity activities that are not shared with others and thus are not immediately evaluated (Ivcevic, 2007). As many acts such as using one's sense of humour can be viewed as self-creativity, it is worth explaining what the criteria for such classification are. Everyday activity (also called self-creativity) should possess two features: *originality* and

*meaningfulness* (Richards, 2010). Originality refers to the item being relatively rare in its reference group, while meaningfulness requires that the creation should be understood by others, be non-random, and possess a social meaning (Richards, 2010). Seeking an enrichment of daily lives and experiences, and solving their problems lies at the core of everyday creativity that can stem from the desire to instill a change in the present environment (Runco, 2004). In this spirit, everyday creativity emerges as a necessary condition for entrepreneurship because it can foster innovation, which in turn consists of seeking opportunities or generating ideas, or finding solutions to problems in an unorthodox manner (Fillis & Rentschler, 2010).

Creativity is also an antecedent of the intention to engage in entrepreneurship (Yar Hamidi et al., 2008) and the degree of novelty that entrepreneurs introduce (Koellinger, 2008). These claims are rooted in the long-standing tradition that views entrepreneurship and innovative business behaviour as acts of creativity (Amabile, 1996; Ward, 2004). While the application of creative behaviour among nascent entrepreneurs is limited, it is plausible that finding solutions to problems through acts of self-creativity serves as an important prerequisite for entrepreneurial success.

### **3. Hypotheses development**

#### *3.1. Mental aspects of cultural intelligence and self-creativity*

CQ is an important intrapersonal skill that can be applied both in domestic and global contexts to promote creative behaviour (Brislin et al., 2006). While the role of CQ in a multicultural context is easier to understand, the following example illustrates how CQ can be used in a specific country. For instance, numerous countries have regional cultural differences such as Northern and Southern Italy, and Basque Region vs. Catalunya vs. Andalucía in Spain, among others. In those cases, entrepreneurs who have business relationships in multiple regions

of a given country can come up with creative solutions for their businesses through understanding cultural norms and systems of these regions. Likewise, an experience with more than one culture can lead to creative ideas (Leung & Chiu, 2010). Such a situation would be very desirable for entrepreneurs because they interact with individuals who have diverse backgrounds at a local/domestic level. They can also maintain relationships with customers from other cultures. For example, a wood charcoal maker who distributes his/her products to different regions in his/her own country may generate creative ideas through an exposure to different regional cultures in the same country. Likewise, the same entrepreneur can display a creative behaviour by partnering with buyers in international markets.

While the importance of cognitive and metacognitive CQ in entrepreneurial settings is easy to understand, its effect on self-creativity is more challenging to disentangle. Generally, skills and capabilities pertaining to intelligence play critical roles in creative behaviour (Sternberg, 2006). On the basis of tenets of cognitive theories, individuals who demonstrate greater levels of mental aspects of CQ should be able to create more combinations or configurations to solve everyday problems due to their flexible cognitive structures (Yunlu et al., 2017). The preceding discussion leads to the hypotheses below:

**H1.** There is a positive relationship between cognitive CQ and self-creativity.

**H2.** There is a positive relationship between metacognitive CQ and self-creativity.

### *3.2. Mental aspects of cultural intelligence and emotionality*

There are several types of intelligence and the relationships among these are far from conclusive. This is because some researchers believe that different types of intelligence do not operate in isolation but rather affect each other (Moran et al., 2006). In the case of CQ and EI, one school of thought contends that these two constructs are distinct and thus some of the aspects

of CQ such as knowledge of cultural norms and gestures do not require high EI (Crowne, 2009). The opposing view argues that the two constructs share overlapping characteristics where understanding different cultures would enable one to perceive and empathise with others' emotions (Crowne, 2009). Earley et al. (2006) provide a stronger hint about how CQ is associated to EI, in that individuals who possess high CQ demonstrate "a strong mastery and sense of emotional display and physical presence". Ang et al. (2007) support this stand on the issue by claiming that cognitive CQ has an influence on the emotionality dimension of EI because gathering information about cultures encompasses customs, norms and behaviours of other cultures. Such cultural knowledge helps one develop a capability to better recognise others' emotions and, thus, decipher and assign labels to these emotions more accurately (Salovey & Pizarro, 2003).

Going back to the facets of emotionality dimension of EI, understanding others' emotions and emotional expressions may require some cognitive CQ skills because these expressions differ across cultures (Crowne, 2009). Similarly, metacognitive CQ also has an association with emotionality. This is because the ability to understand the emotions of others depends on how well someone is armed with knowledge about other's background (including culture) which leads to accurate interpretations of emotional cues and follows through those cues (Crowne, 2009; Earley & Peterson, 2004). In the context of entrepreneurship, the consideration of cultural differences and making necessary adjustments to embrace those differences would help achieve empathic accuracy and maintain healthy relationships with others. These arguments lead to the following hypotheses:

**H3.** There is a positive relationship between cognitive CQ and emotionality.

**H4.** There is a positive relationship between metacognitive CQ and emotionality.

### *3.3 The relationship between emotionality and self-creativity*

In the past three decades, EI has emerged as a viable antecedent of creativity among employees, managers, students and entrepreneurs because creativity is prone to the influence of emotions (Zampetakis et al., 2009). The outcome of interest in the present study is creative behaviour, which is typically measured by subjective self-reports. Extant research shows that the association of TEI with self-report measures of creativity (such as creative behaviour and creative personality) was four times stronger than the relationship of ability EI with the same two creativity measures ( $r=0.39$  vs.  $r=0.09$ , respectively). Furthermore, some studies even failed to detect any significant relationships between ability EI and creativity. Hence, the relationship between EI and creativity may be more complex than it may appear, and thus one needs to consider which type of EI should be adapted and which of the five categories of creativity measures would be employed.

To bring some clarity to the relationship between the two concepts in the entrepreneurship context, this study delves into the relationship between TEI and creative behaviour due to its relevance to entrepreneurial processes and outcomes. For example, Ngah and Salleh (2015) note that high EI promotes the spawning of generative ideas that eventually result in entrepreneurial behaviour. For the entrepreneur, awareness of his/her emotions can help one channel his/her energy to solve everyday problems of a business venture in a creative manner (Zampetakis et al., 2009). Even though the overall importance of TEI in entrepreneurship is evident, it is surprising that little scholarly attention has been devoted to the effect of TEI on creative behaviour. Less than a handful of studies investigated and found a positive relationship between TEI and creativity (Rodrigues et al., 2019; Zampetakis et al., 2009).

Zampetakis et al. (2009) suggest that further research is needed to look at the relationship between the underlying dimensions of TEI and creative behaviour. Among the numerous dimensions of TEI, *emotionality* comes to the forefront because it embodies awareness and expression of one's emotions, possession of empathy, and relationships with others. For nascent entrepreneurs, among the five domains in the Kaufman Domains of Creativity Scale (K-DOCS) (Kaufman, 2012), everyday/self-creativity emerges as an appropriate measure of creativity (Xu et al., 2019). This is because people with high EI do a better job in overcoming challenges in the everyday environment and demonstrate creative behaviour (Sternberg, 1985). In a study of the subdimensions of TEI and K-DOCS with gifted students, results revealed that emotionality has a positive relationship only with self-creativity among the five creativity domains (Şahin et al., 2016). Heretofore, to provide a fine-grained explanation of the effect of EI and creative behaviour among prospective entrepreneurs, the next hypothesis builds the relationship between emotionality and self-creativity.

**H5:** Emotionality has a positive relationship with self-creativity.

#### *3.4. The mediating effect of emotionality*

The discussion thus far hinged on the argument that both cognitive and metacognitive CQ help spur self-creativity among entrepreneurs. The next issue that needs to be resolved is whether EI mediates the relationship between these two mental aspects of CQ and creativity. More specifically, does cognitive and metacognitive CQ work through emotionality dimension of EI to increase self-creativity?

In entrepreneurship, accumulating an arsenal of knowledge about intranational and international cultures and acting upon such an understanding of cultural differences help

entrepreneurs demonstrate higher levels of empathy and emotional expression, and maintain more productive relationships with others (Humphrey, 2013). In turn, building up on such an array of emotional characteristics enables individuals to achieve positive personal and professional outcomes in life whether they are leaders, employees, students or entrepreneurs. In the case of this research, we argue that there is a causal sequence in how entrepreneurs with high cognitive and metacognitive CQ can demonstrate high levels of emotionality, which in turn leads to higher self-creativity. This mediating mechanism can be depicted based on the concept of mindfulness which has to do with self-awareness. The two mental aspects of CQ are referred to as “mindfulness dimensions of CQ” (Crowne, 2009) which constitute knowledge and strategy (Tuleja, 2014) that help individuals show empathy for others, perceive their emotions, and maintain relationships with others. In the field of psychology, mindfulness as a state of self-awareness boosts emotional self-control (Vago & Silbersweig, 2012), which in turn opens the doors to greater well-being and less anxiety and depression. In the context of entrepreneurship, the high level of mindfulness of CQ leads to an increase in emotionality (i.e. empathy, emotion perception etc.). More specifically, these two dimensions of CQ capture the knowledge and strategy (i.e. ‘thinking about thinking’) of cultures and help hone one’s ability to “perceive and understand emotions because the recognition of emotions involves accurately reading emotional cues” (Crowne, 2009, p. 157). Subsequently, higher levels of emotionality help present and potential entrepreneurs navigate obstacles and find innovative solutions to demonstrate greater self-creativity (Zampetakis et al., 2009). Hence, the preceding claims form the foundation of the two mediation hypotheses posited below:

**H6.** Emotionality positively mediates the relationship between cognitive CQ and self-creativity.



**H7.** Emotionality positively mediates the relationship between metacognitive CQ and self-creativity.

## **4. Methodology**

### *4.1. Sampling and Data Collection*

Nascent entrepreneurs are hard to identify. It is difficult to procure them from conventional sources such as business directories because they are not yet registered (Honig & Samuelsson, 2012). Events such as entrepreneurship training courses and competitions are beginning to emerge as platforms to nurture nascent entrepreneurs. Such events are therefore valuable sources of data on nascent entrepreneurs (Stroe et al., 2018). In light of the suggestions of Stroe et al. (2018), we have built a sample exclusively comprising nascent entrepreneurs who took part in the British Council Creative Spark annual start-up competition in Kazakhstan. This organisation admits only first-time entrepreneurs who are active in early-stage ventures. Using this source helped us avoid survival bias and capture ‘early nascent’ entrepreneurs, regardless of whether they failed or whether the entrepreneurs abandoned the venture later. A questionnaire was administered in person to nascent entrepreneurs who are registered in a business development centre in Kazakhstan preparing them for the British Council Creative Spark business start-up competition.

Nascent entrepreneurs in this study range from individuals who are in ideation stage of setting a startup to others who began committing effort and resources to start up a business. The sample selection process consists of purposive, convenience sampling to identify individuals who are still committed to continue their engagement in entrepreneurship. To obtain a clear-cut picture of nascent entrepreneurs, only participants who answered “Yes” to the question “*After this course/consultation, do you have any intention or plan to start your own business?*” were included in this study. Of the 224 respondents, 194 indicated that they plan to pursue their startup

idea or advance the early stages of their venture founding. These 194 individuals constitute the final sample of the study.

#### *4.2. Sample Characteristics*

This section provides a brief overview of the sample characteristics of the study. Because we study young, early nascent entrepreneurs, the average age of respondents was approximately 20, and ranged between 16 and 33 (Table 1). Due to the prevalence of craft industries in Kazakhstan such as carpet weaving and handcrafts, almost two-thirds of participants were female (63.92%). More than half of the nascent entrepreneurs (54.64%) had older siblings. Findings indicate that approximately 55% of these potential entrepreneurs have taken an entrepreneurship course or training. In addition, more than one-third of participants' families were business owners. The prevalence of business ownership among their relatives was even higher, at approximately 70%.

**Place Table 1 here.**

#### *4.3. Measures*

The survey instrument consists of well-established scales that come from previous research. All scales were first translated into the Kazakh language and then back translated into English by two separate experts to ensure that these measures could be understood and correctly interpreted by nascent entrepreneurs in Kazakhstan. The outcome variable in this study is *self-creativity*, which is one of the five dimensions of K-DOCS (Kaufman, 2012) along with scholarly creativity, performance creativity, mechanical/scientific creativity, and artistic creativity. The K-DOCSs captures creative behaviour which is very relevant among early-stage entrepreneurs. In that scale, self-creativity emerges as a very appropriate dimension for early-stage entrepreneurs because it shows their ability to find extraordinary solutions to daily

problems and challenges. Self-creativity is measured by 11 statements where individuals assess their creative potential based on the following scale: 1= much less creative; 5= much more creative.

There are two exogenous variables in this study, cognitive CQ and metacognitive CQ. These are adapted from the four-factor cultural intelligence scale (CQS) (Ang et al., 2007) that includes two other dimensions: *motivational* and *behavioural* cultural intelligence. The present study employs cognitive and metacognitive CQ since they emerged as antecedents of international opportunity recognition which can be considered a critical entrepreneurial outcome (Lorenz et al., 2018). Metacognitive CQ is represented by four manifest variables, while cognitive CQ encompasses six items. The statements are measured on a 7-point Likert-type scale ranging from 1 (strongly agree) to 7 (strongly disagree).

The mediating variable in this study is TEI. As noted above there are several measures of TEI in the literature. This study employs the short-form Trait Emotional Intelligence (TEIQue-SF) scale of Petrides and Furnham (2006) that consists of 30 items. The scale encompasses 15 facets of EI: Adaptability, Emotion control, Low impulsiveness, Self-motivation, Trait empathy, Assertiveness, Emotion expression, Relationships, Social awareness, Trait happiness, Emotion appraisal, Emotion management (of others), Self-esteem, Stress management, and Trait optimism. These facets are represented by five dimensions; namely emotionality, self-control, sociability, well-being, and global EI. Global EI is unrelated to other dimensions and operates independently. The dimension of interest in this project is emotionality, which consists of eight statements and covers facets of Trait empathy, Emotion perception, Emotion expression, and Relationships. Just like cultural intelligence, the statements of emotionality also use a 7-point Likert-type scale. The main reason for focusing on the emotionality dimension of TEI is because

it measures how individuals express their emotions and use these to nourish relationships with other important individuals (Petrides, 2009) because entrepreneurs need to show empathy and maintain relationships with others such as business partners, customers, suppliers and employees (Pomeranke, 2014).

Extant literature shows that some demographic variables such as gender may affect the level of creativity (Yunlu et al., 2017). Therefore, the project employs gender as a control variable, where females are coded as 1 and males are coded as 0.

#### *4.4. Data analysis*

This paper employs a path analysis model with STATA 16.0. The software was chosen for two reasons. First, it has a routine to assess the mediating effect called *sgmediation* which uses the Sobell-Goodman procedure (Preacher & Hayes, 2004). The mediation analysis uses the bootstrapping method with case resampling and confidence intervals with percentile estimates (Preacher & Hayes, 2004). The second benefit of this software is that it allows for conducting robustness checks by running a structural equation model that adjusts for sample size and handles data that are not normally distributed. More specifically, we use the Satorra-Bentler adjustment (Satorra & Bentler, 2010) for situations when multivariate normal distribution assumption is violated. The two tests for multivariate normality in Stata (namely, Henze-Zirkler and Doornik-Hansen) showed that data are not normally distributed ( $\chi^2=47,950$ ,  $\text{prob}>\chi^2=0.00$ ;  $\chi^2=38,084$ ,  $\text{prob}>\chi^2=0.00$ ), which required the use of the Satorra-Bentler adjustment.

As our sample size was relatively small (<200), we elected to use Swain correction to adjust the fit indices for sample size. Swain correction was originally derived by Swain (1975) and the respective Stata module was developed by Antonakis and Bastardoz (2013). The joint

model is called Swain-Satorra-Bentler-corrected estimation and has been recently introduced by Langer (2019) as a `swain_gof.ado` file in Stata. This module addresses both the issues of non-normality and small sample size. The results of these additional analyses using the joint model are reported immediately after the main findings of this project.

## 5. Findings and discussion

Descriptive statistics show that the mean value of emotionality scale was 4.66, while cognitive CQ and metacognitive CQ were 4.18 and 4.88, respectively (see Table 2). Inter-correlations and variance inflation factors indicate that multicollinearity is not a concern. That is, the pair of variables with highest correlation (0.48) was metacognitive CQ and self-creativity. The variance inflation factors ranged between 1.02 and 1.46 which is well below the common threshold of 5. Thus, multicollinearity concerns are overruled.

### Place Table 2 here.

Findings indicate that, among nascent entrepreneurs, *cognitive CQ* is positively related to self-creativity ( $0.181, p \leq 0.001$ ) which is consistent with the predictions of H1 (Table 3). Likewise, individuals with high metacognitive CQ demonstrate higher levels of self-creativity ( $0.141, p \leq 0.001$ ). This result offers support for H2. Analysis reveals that cognitive CQ has a significant positive relationship with emotionality ( $0.114, p \leq 0.05$ ) which lends support to H3. Likewise, metacognitive CQ (MCQ) is significantly and positively related to emotionality ( $0.278, p \leq 0.001$ ). This finding is consistent with the predictions of H4 that individuals with higher metacognitive CQ would display higher levels of emotionality. Hypothesis 5 predicted that emotionality has a positive relationship with self-creativity of nascent entrepreneurs. Results

reveal that individuals with high emotionality display higher levels of self-creativity (0.155,  $p \leq 0.01$ ) which offers support for H5.

**Place Table 3 here.**

The first step in mediation analysis is to observe that the paths from the exogenous variable to the mediator, and from the mediator to the outcome variable are significant. As discussed above, cognitive and metacognitive CQ both have a significant, direct effect on emotionality. In turn, emotionality is positively related to self-creativity. As can be seen in Table 4, results indicate that cognitive CQ has a significant indirect effect on self-creativity via emotionality (0.065,  $p \leq 0.01$ ). These coefficients are obtained with 5,000 bootstrapping replications whose confidence intervals do not contain the value of zero. Thus, H6 receives empirical support as possessing cultural knowledge leads to an increase emotionality, which in turn contributes to higher levels of self-creativity of nascent entrepreneurs.

The last hypothesis in this study (H7) investigates the mediating effect of emotionality on the relationship between metacognitive CQ and self-creativity. Findings reveal that metacognitive CQ has a positive indirect effect on self-creativity (0.047,  $p \leq 0.01$ ), which confirms the predictions of H7. That is, thinking about cultures has a positive influence on emotionality, which serves as a booster to self-creativity. The findings of H6 and H7 shed some light into the inner workings of mental aspects of CQ which need high levels of empathy, understanding of emotions and relationships with others in order to build up an array of activities that encompass self-creativity of nascent entrepreneurs.

**Place Table 4 here.**

As a robustness check, this study employs a structural equation model with Swain-Satorra-Bentler-correction in lieu of path analysis. Results show that the model has a root means

error of approximation (RMSEA) of 0.06 which is below the cut-off value of 0.08 (Hu & Bentler, 1999). The Swain-Satorra-Bentler-corrected Tucker-Lewis-Index was 0.87, while the Swain-Satorra-Bentler-corrected Comparative-Fit-Index was 0.88. The two goodness-of-fit indices have a reasonable fit given the small sample size of 194.

The multicultural nature of the business development and growth activities requires nascent entrepreneurs to possess and develop different forms of intelligence (Lorenz et al., 2018). Among the various types of intelligence, cultural and emotional intelligence appear to be the most important (Charoensukmongkol, 2015; Ngah & Salleh, 2015). To our surprise, even though cultural and emotional intelligence were used in studies that focus on employee creativity in organisations, the effect of cultural and emotional intelligence on the self-creativity of nascent entrepreneurs has not been investigated. Delving into the interface between cultural and emotional intelligence and creativity is particularly important in contexts such as Kazakhstan where there is cultural diversity in the country; yet creativity of individuals has been suppressed by the Communist Regime for many years (Seilov, 2015).

This study's findings demonstrated that there is a significant relationship between cognition-based cultural intelligence and self-creativity of early-stage entrepreneurs. This finding is in line with Yunlu et al.'s (2017) arguments that individuals with high cultural intelligence are more creative in finding solutions to problems. In the case of this study, the significant relationship between cultural intelligence and self-creativity of nascent entrepreneurs can be explained by the cultural diversity of the population in the country as well as Kazakhstan's ambitious plans to develop cross-border business relationships and trade with other countries. There are many ethnic consumer groups in Kazakhstan with diverse expectations. Entrepreneurs need to have cultural awareness and acknowledge regarding this diversity as they try to be

creative in their attempts to engage with entrepreneurial activities. In addition, those entrepreneurs who have plans to go beyond national borders and develop their export capacity and capability would need to possess cultural intelligence in order to be creative in their attempts to develop new products and services according to the requirements of global markets. It is also important to understand cultural differences and demonstrate an awareness of the cultural differences between different markets to develop creative and adaptive marketing strategies.

This study's findings also demonstrated a significant relationship between emotional intelligence and self-creativity of early stage entrepreneurs. This finding is in line with the arguments of Ngah and Saleh (2015) who advocate that emotional intelligence stimulates the generation of creative ideas that result in entrepreneurial behaviour. In particular, our findings provide support to the claims of Zampetakis et al. (2009) who state that entrepreneurs can be successful with their business ventures through an awareness of their own emotions and utilising these emotions for the generation of creative ideas. In the case of early-stage entrepreneurs in Kazakhstan, in a country where there is high power distance (Muratbekova-Touron, 2002) and the act of turning emotions to creative thinking has been suppressed for many years due to Communist regime (Seilov, 2015), utilising emotions, feelings and intuition for creative thinking and development of creative ideas appears to be essential for the new era of global economic activity and competition.

The most notable outcome of this study is the mediating mechanism of emotional intelligence on the relationship between cognitive and metacognitive CQ and self-creativity. This finding suggests that entrepreneurs need to have high cognitive and metacognitive cultural intelligence in order to be able to utilise their emotional intelligence for creative idea generation and solutions. This result offers support to Humphrey (2013) who advocates that accumulated



knowledge of national and international cultures helps entrepreneurs to demonstrate higher levels of empathy and expression of emotions leading to more creative business relationships with others. Indeed, an understanding of cultural differences between individuals, markets and countries and a demonstration of an awareness of these differences could help nascent entrepreneurs reflect on their feelings and intuition and, more importantly, have empathy for the other cultures that could help them with the creativity in their entrepreneurial endeavours.

The mediating role of emotionality is consistent with previous studies that report that mindfulness influences several outcomes such as self-efficacy (Charoensukmongkol, 2014) and subjective well-being (Schutte & Malouff, 2011) through EI. The present study found similar evidence among nascent entrepreneurs in a transition economy. The mediating mechanism of emotionality can be explained as a sequential process where having high levels of cultural knowledge and strategic thinking of other cultures would lead to a high level of awareness of emotions, empathic accuracy and relationships with others. Because entrepreneurship requires the understanding of the emotions of self and others, emotionality serves as a conduit to self-creativity in multicultural settings. While there are several types of creativity, this study reports that self-creativity is influenced by the mental aspects of cultural intelligence both directly and indirectly.

## **6. Theoretical Contributions**

A major theoretical contribution of the paper is that it investigates the drivers of creativity among nascent entrepreneurs. This is an important area of inquiry because studies on creativity in management tend to focus on employees (Antwi et al., 2019; Karatepe et al., 2019; Olugbade & Karatepe, 2019). In particular, this research project demonstrates the importance of cultural

and emotional intelligence for self-creativity. Cultural intelligence has been the focus of many studies in the area of international business (Elenkov & Manev, 2009; Lee & Sukoco, 2010; Lorenz et al., 2018; Wu & Ang, 2011) but was largely overlooked by the entrepreneurship researchers. Our study demonstrated that both cognitive CQ and metacognitive CQ contribute to the self-creativity of nascent entrepreneurs.

The link between EI and creativity tends to focus on employees but rarely considers the importance of this type of intelligence for entrepreneurs. Our study demonstrated that emotionality is important for self-creativity among early-stage nascent entrepreneurs. More importantly, nascent entrepreneurs need to have cognitive CQ and metacognitive CQ in order to utilise their emotional intelligence effectively for self-creativity.

This study also made a distinct contribution through investigating the interface between cultural and emotional intelligence and self-creativity in a developing country context – Kazakhstan. A study of this kind is particularly timely because these ex-Soviet republic countries lived under closed economies for many years to the extent that it might take many more years for ‘creativity’ and a ‘creative culture’ to transform and thrive in a global, competitive world. This study has uncovered two important factors for the development of creative entrepreneurial culture in Kazakhstan.

## **7. Conclusions**

Given scholars' and practitioners' widespread interest in creativity in entrepreneurship and how cultural and emotional intelligence work on and influence creativity, this study set itself two objectives. The first objective was to assess the relationship between two mental aspects of CQ (metacognitive and cognitive CQ) on self-creativity. The second objective was to evaluate

the mediating effect of emotionality on the relationship between mental aspects of CQ and self-creativity.

This research builds on creativity and entrepreneurship literature showing that creative behaviour is essential for entrepreneurial activities (Fillis & Rentschler, 2010; Ko & Butler, 2007). The study also draws upon cultural intelligence and emotionality literature in psychology/management research and demonstrates that both cultural intelligence and emotionality influence the self-creativity of the individuals (Ang et al., 2007; Foster et al., 2018). By doing so, the study illustrates the potential of configurational perspectives to enhance our understanding of the antecedents of the self-creativity of nascent entrepreneurs.

Our results suggest that, given the complexity of creativity for nascent entrepreneurs in transition economies with diverse cultural environments, management scholars gain better understanding of self-creativity by paying particular attention to how relevant constructs (such as cultural intelligence and emotionality) are conceptualised, measured and analysed in psychology or in other relevant disciplines. This study shows that, to achieve a better understanding of the factors that affect self-creativity in entrepreneurship, scholars need to conduct more multi- and inter-disciplinary studies drawing upon the disciplines of psychology and cultural studies and conceptualise, operationalise and measure alternative theories.

## **8. Managerial Implications**

These findings offer value and relevance for the nascent entrepreneurs, policy makers and also for entrepreneurship educators. Creativity is essential for the entrepreneurial engagements of nascent entrepreneurs. Nascent entrepreneurs need to be aware of both their cultural and emotional intelligence in order to utilise their creativity to the best of their abilities. Given that

the creativity of an individual can be accumulated over years, nascent entrepreneurs need to invest in the development of their cultural and emotional intelligence through their own education, training and self-reflection and development. In particular, in an environment where entrepreneurs strive to compete internationally, cultural awareness and responsiveness as well as the utilisation of emotions need to be developed throughout early childhood to university education and beyond.

Policy makers also need to develop policies and create an infrastructure where creativity is nourished through the development of cultural and emotional intelligence. Entrepreneurship courses and business start-up training could be tailored according to the needs of nascent entrepreneurs. In particular, course content should encourage creativity through the use of cultural and emotional intelligence. Governments could also offer financial incentives to those nascent entrepreneurs who develop creative ideas through capitalising on their cultural intelligence and emotional intelligence.

## **8. Limitations and Future Studies**

The findings of this study come with some limitations which are acknowledged. Due to its focus on nascent entrepreneurs, the research is not able to assess the influence of CQ and TEI on other common consequences such as venture innovation and performance. Therefore, future studies should employ TEI and CQ as antecedents of other entrepreneurial outcomes in business ventures that are in operation for several years. Another drawback of the study is that it captures the cultural intelligence among young, nascent entrepreneurs. It is likely that these individuals have limited personal and professional experience. It is recommended that future research looks into cultural intelligence and creativity with more diverse samples with a wide range of

professional and life experiences. Past studies have documented that scales of CQ and TEI may be challenging to implement in international contexts such as China. It is plausible that the concept of CQ and self-creativity may have a different connotation in the case of Kazakhstan. Thus, future studies should investigate the relationship between CQ and entrepreneurial creativity in comparative studies with multiple countries and cultures. Last, the present study viewed CQ as an exogenous variable, which may be considered a limitation as there could be several other variables that act as antecedents of CQ such as cultural values (Caputo et al., 2019). Hence, it is recommended that future research should consider employing CQ and TEI as mechanisms that operate the relationship between predictors of entrepreneurship and its outcomes. Hopefully, business and entrepreneurship researchers will pursue these intriguing avenues of scholarly inquiry.

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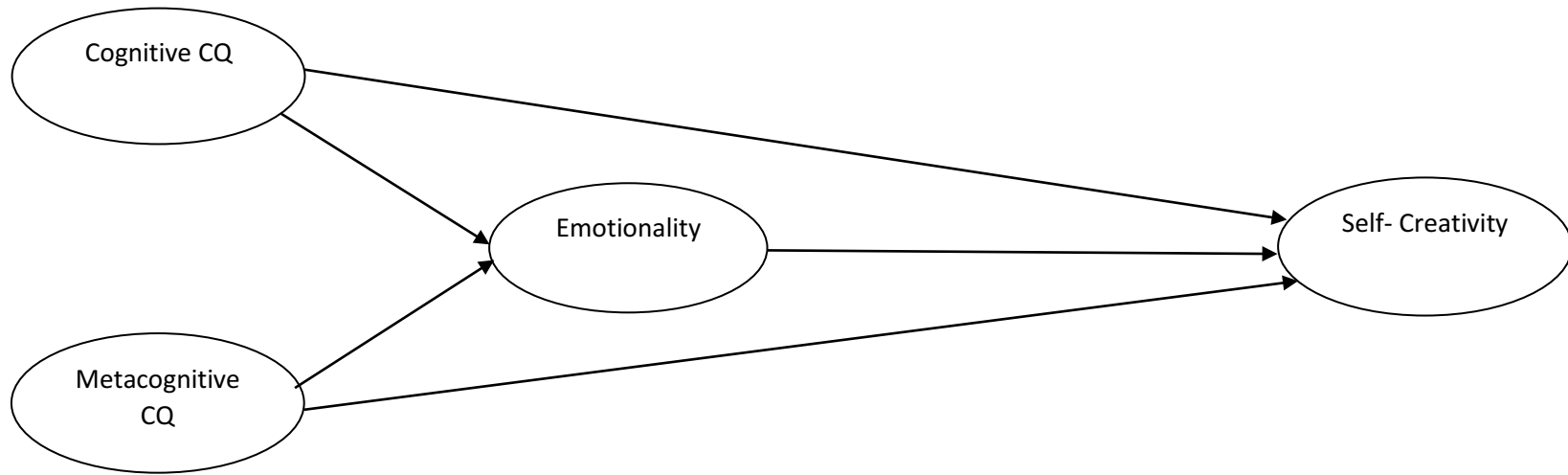


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**Figure 1. Conceptual Model**



**Table 1. Sample Characteristics (N=194)**

Variable	Frequency	%
<i>Age</i>		
<i>Mean</i>	19.65	
<i>S.D.</i>	2.47	
<i>Range</i>	16 -33	
<i>Gender</i>		
<i>Female</i>	124	63.92
<i>Male</i>	70	36.08
<i>First born child</i>		
<i>Yes</i>	88	45.36
<i>No</i>	106	54.64
<i>Entrepreneurship Course/Training</i>		
<i>Yes</i>	110	56.7
<i>No</i>	84	43.3
<i>Family Owns a Business</i>		
<i>Yes</i>	71	36.60
<i>No</i>	123	63.40
<i>Relative Owns a Business</i>		
<i>Yes</i>	135	69.59
<i>No</i>	59	30.41

**Table 2. Descriptive Statistics, Reliability and Correlations**

Variables	Mean	SD	Alpha	1	2	3	4	5
1. Emotionality	4.66	0.75	0.71	1				
2. Cognitive CQ	4.14	1.25	0.87	0.06	1			
3. Meta Cognitive CQ	4.82	1.40	0.91	0.32*	0.47*	1		
4. Self-Creativity	3.45	0.83	0.91	0.13	0.45*	0.48*	1	
5. Gender	0.64	0.37	-	0.01	-0.05	0.08	0.08	1

Notes: SD= Standard Deviation, \*  $p < 0.05$ .

**Table 3. Predictors of Self-Creativity and Emotionality**

<i>Variable</i>	<i>Self Creativity</i>	<i>Emotionality</i>
Gender	.060(.100)	
Emotionality	.161(.054)***	
Cognitive CQ	.131(.046)**	.279(.059)***
Metacognitive CQ	.176(.039)**	.114(.052)*
Constant	1.379(.222)***	1.905(.263)***
R <sup>2</sup>	.330	.199
F	2104.02***	1483.63***

*Notes:* <sup>a</sup>“Yes” denotes that dummy variables were included in the model estimation.  
\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; Standard errors are shown in parentheses.

**Table 4. Summary of Hypotheses**

Direct effect	Path analysis		Supported
	$\beta$	P value	
H1. Cognitive CQ → Self-Creativity	.131***	.003	YES
H2. Metacognitive CQ → Self-Creativity	.176***	.000	YES
H1. Cognitive CQ → Emotionality	.279***	.005	YES
H2. Metacognitive CQ → Emotionality	.114***	.031	YES
H5. Emotionality → Self-Creativity	.161***	.000	YES
<b>Mediating effect of Emotionality</b>			YES
H6. Cognitive CQ → Emotionality → Self-Creativity	.068***	.002	YES
H7. Metacognitive CQ → Emotionality → Self-Creativity	.048***	.002	YES