

CO-CREATING CREATIVE SELF-EFFICACY TO BUILD CREATIVE PERFORMANCE AND INNOVATION CAPABILITY FOR BUSINESS SUCCESS: A META-ANALYSIS

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Abstract. Although creativity is considered a key driver of successful business, few studies examine it in a form of creative mindset. By means of a meta-analysis of 58 studies ($n = 22,427$), this study explores how creative mindsets and creative self-efficacy engage in affecting creative performance and innovation capability that result in business success. The results suggested that a growth mindset is positively related to creative self-efficacy, which can influence creative performance and innovation capability while a fixed mindset has negative effects. More importantly, creative performance contributes more to business success than innovation capability does. Thus, these results established the role of creative mindsets in enhancing business success. Therefore, this study provides scholars and practitioners the necessary evidence for making statistical inferences on creativity-based model and enhancing the business success.

Keywords: business success, creative mindsets, creativity performance, creative self-efficacy, innovation capability, meta-analysis.

Introduction

In today's economy, the creativity factor is considered an important skill in business operation and success (Nischang Cusanelli & Trevallion, 2020). Creativity contributes to entrepreneurial processes and creates new business opportunities (Castillo-Vergara et al., 2018). Furthermore, researchers have investigated creativity in the context of work production with diverse novel and useful perspectives, including how individuals' beliefs affect creativity (Puente-Díaz & Cavazos-Arroyo, 2017). Due to its growing importance, individual beliefs have long been observed to understand human behaviour (Burnette et al., 2020). According to Pretz and Nelson (2017), individual beliefs about the nature of creative ability, known as creative mindsets, are according to fixed and growth mindset.

Creative mindsets are the product of an individual's talent and ability, which are critical for business performance and achievements (Royston & Reiter-Palmon, 2019; Tang et al.,

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2016), as well as understanding how individuals perceive the roots and the nature of individual characteristics differently and influence individual creative achievement and creative effort (Hass et al., 2016; Karwowski, 2014). Consequently, the production of talent and ability is required to lead the process of learning new skills (Royston & Reiter-Palmon, 2019) and useful business ideas (Puente-Díaz & Cavazos-Arroyo, 2017).

Creative self-efficacy (CSE) is closely related to mindset, which implies is an essential predictor of creative achievement and performance. CSE explains how contextual and individual variables affect creativity and how they can significantly impact creative work (Steele et al., 2018). Although many studies focus on CSE as a powerful driver of workplace creative performance, less attention has been paid to a theory based on CSE and its role in creative performance (Walumbwa et al., 2018).

Creativity is an initial stage of an innovation process (Im et al., 2013) by forming an essential component of the innovation's first stage. Creativity enables managers to generate novel and useful tactics for developing culture (Tang et al., 2016), designing and innovating new products, which in turn creates new business opportunities (Castillo-Vergara et al., 2018). The creativity factor has long been recognised as a key strength in building competitive advantage through innovation (Bouty & Gomez, 2013; Ferreira et al., 2020). An increasing amount of industrial management and technology studies are paying attention to the creative opportunities to overcome a competitive advantage and benefit from changes in the global environment (Sleuwaegen & Boiardi, 2014). Specifically, the contribution of innovation can implement novel and useful ideas through new products and processes. Industries focus on the ability of organisations to develop their innovations (Saunila et al., 2014). The association between creativity activity and innovation is also recognised and has been extensively studied in recent years (Chaubey et al., 2019; Tai & Mai, 2016; Valaei et al., 2017).

Regarding business success, creativity creates new ideas and converts these ideas into new or successful innovative action or results by innovation (Ferreira et al., 2020). However, the relationship between creativity and innovation remains unclear (Stojcic et al., 2018). While creative mindsets can influence creative achievement and effort, this is rarely addressed in the literature (Hass et al., 2016; Karwowski, 2014; O'Connor et al., 2013). Specifically, limited research reports on the relationship between creativity, innovation, and business success (Bouty & Gomez, 2013). The association between creativity and innovation will generate a new idea for a competitive advantage that any business is striving to achieve. Therefore, based on the review and the above discussion, the main contribution of this study is the analysis and discussion of how creative mindsets relate to CSE, creativity performance, innovation, and business, particularly in business success.

1. Literature review and hypothesis: implicit theory of creativity

The research on creativity has and continues to burden individuals with implicit theories that cover a long period (Steele et al., 2018). Implicit theory is defined as a personal construction about the system or conceptual framework in an individual's mind, which consists of an entity mindset or incremental mindset (Pretz & Nelson, 2017). The entity mindset could be defined as creative ability that is fixed and unchangeable, while an incremental mindset

pertains to the dynamics and malleability of an individual and benefits creative activities and future creative achievements (Karwowski & Brzeski, 2017). In conceptualizing creativity, the implicit theory emphasizes the concept of creativity that is utilized by the individual's judgement, which may result in cultural values and shared ideas (Delany et al., 2019). Moreover, Hass et al. (2016) emphasize that implicit theory explains individual differences such as ability, intelligence, and academic performance, which indicates the influence of business acumen and influence on goals and technology and thus has implications for innovation capability.

2. The relationship between creative mindsets, creative self-efficacy, creative performance, innovation capability, and business success

2.1. Growth mindset and creative self-efficacy

The concept of creative mindsets refers to “a set of beliefs associated with the nature of creativity, particularly beliefs about the stable-*versus*-malleable character of creativity” (Karwowski, 2014, p. 62). Creative mindsets consist of fixed and growth, depending on attributes, intelligence, and ability, which can translate into effective functioning and response to success and failure (Dweck, 2016). A growth mindset is distinguished by the belief that creativity and creative skills can improve with time and practice (Karwowski, 2014). The individual with a growth mindset is more likely to engage in creative tasks and find creative solutions (O'Connor et al., 2013), for example, a growth mindset enhances creative performance in students (Choi, 2020). Creative mindsets tend to focus on the perception of creative ability in the general population and are associated with the creative self-concept. The ability of this mindset explains how individuals analyse and interpret their actions and the actions of others (Hyeon Paek & Sumners, 2019). Additionally, previous studies demonstrate a positive correlation between a growth mindset and CSE (Hass et al., 2016; Royston & Reiter-Palmon, 2019). Therefore:

H1a: A growth mindset is positively related to creative self-efficacy.

2.2. Fixed mindset and creative self-efficacy

Creative mindsets influence how individuals attempt to learn new skills and develop their abilities (Royston & Reiter-Palmon, 2019). A fixed mindset refers to beliefs that creativity, creative skill, and creative ability are fixed and thus cannot be further developed (O'Connor et al., 2013). Individuals with a fixed mindset may encounter problems in creative thinking activities (Karwowski, 2014). The fixed mindset may potentially be creative and may play a critical role in CSE. However, previous studies (Royston & Reiter-Palmon, 2019; Steele et al., 2018) have shown that a fixed mindset non-significantly correlates with self-efficacy. Additionally, Hyeon Paek and Sumners (2019) also supported that a fixed creative mindset and self-efficacy are not empirically supported in the context of teachers. Hence:

H1b: A fixed mindset is negatively related to creative self-efficacy.

2.3. Creative self-efficacy and creative performance

CSE is the belief in an individual's ability to produce creative products or outcomes, and it also reflects in an individual's overall capability, task, and social context (Christensen-Salem et al., 2020; Tierney & Farmer, 2002). Bandura (1997) cited that CSE is important for creating and predicting creative productivity and performance. CSE continues to garner increasing attention and is perceived as the most salient antecedents for creativity, for example, CSE and creativity in supervisors and employees (Christensen-Salem et al., Forthcoming). Importantly, CSE was supported in a variety of research fields, for example, education (Puente-Díaz & Cavazos-Arroyo, 2017), restaurant (Hallak et al., 2018), and hospitality (Teng et al., 2020). Thus, CSE influences creative performance by stimulating an individual's drive, or energy, and cognitive capacity to participate in creative work (Walumbwa et al., 2018). Therefore:

H2a: Creative self-efficacy is positively related to creative performance.

2.4. Creative self-efficacy and innovation capability

Self-efficacy, which refers to a person's ability to employ target behaviour and achieve performance goals by increasing optimism, perseverance, and resilience (Khedhaouria et al., 2015). Individuals with CSE are more confident to use knowledge and skills to create ideas because CSE is curious, often takes risks, and can create (Hu & Zhao, 2016; Jiang & Gu, 2017). Interestingly, these qualities motivate individuals to engage in innovation. Furthermore, since self-efficacy influences an individual's perceptions of their abilities, the association between CSE and innovative behaviour can also enhance innovation in organizations (Teng et al., 2020). Increasing evidence suggests that CSE has a positive effect on innovation capability (Hallak et al., 2018). Thus, individuals with high CSE will be motivated to adopt a satisfactory innovation activity. Therefore:

H2b: Creative self-efficacy is positively related to innovation capability.

2.5. Creative performance and innovation capability

Creative performance is the ideation process that generates appropriate new ideas (Carmeli et al., 2013). Creativity may result from an individual or team outcome regardless of their role and position in the organization hierarchy (Chaubey et al., 2019). This culture is an important aspect of a firm's (informal) structure (Ferreira et al., 2020). Moreover, because creativity enables the creation of novel and useful ideas, it is an important basis for innovative thinking, which leads to innovative behaviour (Slåtten et al., 2011). Many studies have explored the relationship between individual creativity and innovation. For example, Stojcic et al. (2018) and Valaei et al. (2017), as a result:

H3a: Creative performance is positively related to innovation capability.

2.6. Creative performance and business success

Creative ability enables individuals and firms to translate resources and advantages into market opportunities, such as establishing a new company and creating economic value

(Sleuwaegen & Boiardi, 2014). Therefore, creativity is often mentioned as a consequence of the concept of innovation, especially in the context of an organization (Ferreira et al., 2020). Business leaders also believe that a crucial determinant in competitive environments includes the company having creative employees that can transform creative ideas into innovation (for its product and services) (Puente-Díaz & Cavazos-Arroyo, 2017). Previous studies demonstrate that creative performances deliver higher levels of business performance. For example, the career success of creative entrepreneurs in creative industries (Chen et al., 2018). Therefore:

H3b: Creative performance is positively related to business success.

2.7. Innovation capability and business success

Innovation capability refers to the ability of firms to perform innovation activities (Ngo & O’Cass, 2013). Innovation capability indicates the ability to develop innovations continuously in response to a changing environment (Olsson et al., 2010). Many firms (e.g., *Apple Inc.*, *Amazon*) focus on developing or improving their innovation capabilities, and they have realised the importance of innovation capability as a key resource that drives a firm’s success in the marketplace (Wang & Dass, 2017). According to Ferreira et al. (2020), firms should focus on the importance of innovation to maintain pace with the rapid growth of firm performance. Recent literature uses empirical evidence to assert a positive significant relationship between innovation capabilities and business performance (Agyapong et al., 2018; Maldonado-Guzmán et al., 2020). Hence:

H4: Innovation capability is positively related to business success.

3. Research design

3.1. Research framework

In this study, the following research framework explains the relationship between creative mindsets, which are required for CSE. Then, CSE is an essential predictor of creative performance and innovation capability outcome, thus demonstrating an impact on business success, as illustrated by Figure 1.

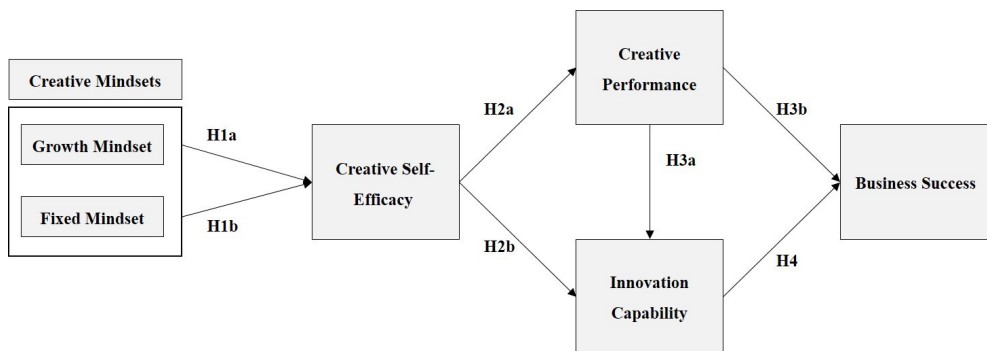


Figure 1. Research framework (source: created by authors)

3.2. Meta-analysis procedure

A meta-analysis refers to the analysis of several independent studies, which then describe quantitative methods to combine evidence across studies (Sun, 2009). Additionally, a meta-analysis can provide quantitative performance expression and aggregation from empirical findings through different empirical approaches and research designs (Sarooghi et al., 2015). Hence, a meta-analysis can combine different quantitative studies in a mathematically appropriate manner, provide accurate and effective summary estimates, and be useful for resolving the sources of bias. Interestingly, a meta-analysis is a useful research technique to advance theory and enhance knowledge development in marketing, management, and international business (Kirca & Yaprak, 2010).

This meta-analysis used two inclusion criteria: (1) correlation studies had to present the correlation coefficient (r) or the standardised regression coefficient or (2) studies had to present the related statistic (t-test, F-ratio with one df in the numerator) for the relationship between related variables (Pham et al., 2019). The correlation coefficient (r) was easier to interpret and most meta-analytical reviews use it as a criterion (O'Connor, 2002). Furthermore, based on the study of Lipsey and Wilson (2001), the magnitude of effect size (r) can be described as small ($r < 0.10$), medium ($r = 0.25$), and high ($r > 0.40$).

After integrating the correlation coefficient of each study, a confidence interval is presented for each effect size and its significance. The confidence intervals were then also analysed. The authors included the number of studies, total sample size, and the weighted mean correlation and accompanying effect size and 95% confidence interval to prove whether the hypothesis is accepted (Pham et al., 2019). Additionally, homogeneity of the effect size distribution was tested by the Q-statistic (Lipsey & Wilson, 2001). The criterion of Q-statistic is q-value that should be higher than chi-square, distributed as a chi-square with the degree of freedom calculated by $n-1$, where n is a number of studies. Therefore, a meta-analysis is adopted to test each of the hypotheses.

3.3. Sample selection

In this study, the meta-analysis was adopted based on the literature review, and empirical studies from various scientific databases were searched, including *SAGE*, *Emerald*, *Wiley InterScience*, *ScienceDirect*, *APA PsycNET*, *ResearchGate* and *Google Scholar*. The authors selected relevant studies that specified growth and fixed mindset, creative self-efficacy, creative performance, innovation capability, and business success while the data were collected from outstanding academic journals (see Table 1) in the fields of management, psychology, social sciences, business, and marketing in the period of 2002–2020. The data analysis was performed on the basis of the comprehensive meta-analysis (CMA) software to enhance the efficiency of the research.

3.4. Analytical techniques

All of the correlations and related statistics were converted to r coefficients using CMA software. While many types of programming can perform a meta-analysis, the use of spreadsheets and statistical packages is limited or does not offer inherent support for meta-analyses

(Borenstein et al., 2009). Therefore, the authors used CMA in this study. Moreover, CMA can be used in a different research design (e.g., single group, independent groups), while the general statistical software (e.g., spreadsheets, statistical package) should not be used for meta-analysis.

4. Results

The authors obtained 58 studies that were usable for this meta-analysis. The total sample size in this study is 22,427 with different sample sizes for each hypothesis, ranging from 1,915 to 6,840. The meta-analysis evaluated all the previous studies that measure the relationship between creative mindsets, CSE, creative performance, innovation capability, and business success (see Table 1).

Table 1. Studies used in meta-analysis (source: created by authors)

Studies alphabetically by source and codes for hypotheses tests ^{a, b}	
Abdullah et al., 40, CSE-CP, 2017	Malik et al., 26, CSE-CP, 2015
Akman and Yilmaz, 22, IC-BS, 2008	Mathisen and Bronnick, 14, CSE-CP, 2009
Benedek et al., 24, CSE-CP, 2020	Michael et al., 24, CSE-IC, 2011
Calantone et al., 12, IC-BS, 2002	Mielniczuk and Laguna, 24, CSE-IC, 2020
Chang et al., 45, CSE-CP, 2019	Newman et al., 23, CSE-IC, 2018
Chaubey and Sahoo, 15, CP-IC, 2019	O'Cass and Sok, 21, IC-BS, 2014
Chaubey et al., 30, CSE-CP, CSE-IC, CP-IC, 2019	Odoom and Mensah, 33, IC-BS, 2018
Chen and Zhang, 8, CSE-CP, 2019	Oura et al., 13, IC-BS, 2016
Chen et al., 25, CP-BS, 2018	Pretz, Nelson 42, GM-CSE, FM-CSE, 2017
Chuang et al., 48, CSE-CP, 2010	Puente-Díaz, 44, CSE-CP, 2016
Dadfar et al., 46, IC-BS, 2013	Puente-Díaz and Cavazos-Arroyo, 45, GM-CSE, FM-CSE, 2017
Dayan et al., 6, CSE-CP, 2013	Ramanathan et al., 34, IC-BS, 2018
Ferreira et al., 41, CP-IC, CP-BS, IC-BS, 2020	Rego et al., 10, CSE-CP, 2012
Ghafoor et al., 2, CSE-CP, 2011	Royston and Reiter-Palmon, 24, GM-CSE, FM-CSE, 2017
Gong et al., 1, CSE-CP, 2009	Schoen, 26, CSE-CP, 2015
Grawe et al., 17, IC-BS, 2009	Shin et al., 4, CP-BS, 2015
Hallak et al., 28, CSE-IC, IC-BS, 2018	Slåtten, 20, CSE-IC, 2011
Hass et al., 36, GM-CSE, FM-CSE, CSE-CP, 2016	Slåtten et al., 20, CP-IC, 2011
Hu and Zhao, 39, CSE-IC, 2016	Steele et al., 35, FM-CSE, 2018
Hur et al., 29, CP-BS, 2016	Strickland and Towler, 3, CSE-CP, 2011
Imran et al., 27, CP-BS, 2018	Tai and Mai, 16, CP-IC, 2016
Ismail et al., 19, CP-BS, 2019	Teng et al., 24, CSE-IC, 2019
Jaiswal and Dhar, 32, CSE-CP, 2015	Thundiyil et al., 5, CSE-CP, 2016
Jaussi et al., 7, CSE-CP, 2007	Wang and Dass, 23, IC-BS, 2017

End of Table 1

Studies alphabetically by source and codes for hypotheses tests ^{a, b}	
Karwowski, 36, GM-CSE, FM-CSE, CSE-CP, 2014	Wang and Tsai, 37, CP-IC, 2014
Keskin, 9, IC-BS, 2006	Wang et al., 47, CSE-CP, 2016
Khedhaouria et al., 38, CSE-CP, CP-BS, 2015	Wang et al., 11, CSE-CP, 2020
Kim, 43, CSE-CP, 2019	Weber and Heidenreich, 31, IC-BS, 2018
Ma et al., 39, CSE-CP, 2013	Yang et al., 18, IC-BS, 2009

Notes: ^aCodes in parentheses: BS = business success; CP = creative performance; CSE = creative self-efficacy; FM = fixed mindset; GM = growth mindset; IC = innovation capability.

^bJournals are footnoted in order: 1) *Academy of Management Journal*; 2) *African Journal of Business Management*; 3) *Canadian Journal of Administrative Sciences*; 4) *Career Development International*; 5) *Chinese Management Studies*; 6) *Creativity and Innovation Management*; 7) *Creativity Research Journal*; 8) *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*; 9) *European Journal of Innovation Management*; 10) *European Journal of Work and Organizational Psychology*; 11) *The International Journal of Human Resource Management*; 12) *Industrial Marketing Management*; 13) *International Business Review*; 14) *International Journal of Educational Research*; 15) *International Journal of Innovation Science*; 16) *International Journal of Organizational Analysis*; 17) *International Journal of Physical Distribution and Logistics Management*; 18) *International Journal of Production Economics*; 19) *International Journal of Productivity and Performance Management*; 20) *International Journal of Quality and Service Sciences*; 21) *International Small Business Journal*; 22) *International Journal of Innovation Management*; 23) *Journal of Business Research*; 24) *Journal of Creative Behavior*; 25) *Journal of Enterprising Communities: People and Places in the Global Economy*; 26) *Journal of Organizational Behavior*; 27) *Journal of Organizational Change Management*; 28) *Journal of Retailing and Consumer Services*; 29) *Journal of Services Marketing*; 30) *Journal of Strategy and Management*; 31) *Long Range Planning*; 32) *International Journal of Hospitality Management*; 33) *Management Research Review*; 34) *Omega*; 35) *Personality and Individual Differences*; 36) *Psychology of Aesthetics, Creativity, and the Arts*; 37) *The International Journal of Business and Finance Research*; 38) *Small Business Economics*; 39) *Social Behavior and Personality: An International Journal*; 40) *Sustainability*; 41) *Technovation*; 42) *The Creative Self: Effect of Beliefs, Self-Efficacy, Mindset, and Identity*; 43) *The Journal of Asian Finance, Economics and Business*; 44) *The Journal of Psychology*; 45) *Thinking Skills and Creativity*; 46) *Total Quality Management & Business Excellence*; 47) *Tourism Management*; 48) *World Academy of Science, Engineering and Technology*.

Table 2 shows the results of the meta-analysis and the correlations between the dependent and independent variables to test the study hypotheses presented above. As stated in Lipsey and Wilson (2001), the magnitude of effect size (r) is small ($r < 0.10$), medium ($r = 0.25$), and large ($r > 0.40$). The mean value of correlation coefficients was used in previous studies, and the results of creative mindsets show that growth mindset has a positive influence on CSE ($r = 0.400$) with high effect size. Q-value (34.463) is higher than the chi-square value (22.458), so the effect is significantly heterogeneous. The result is supported by a 95% confidence interval with non-zero values. Then, H1a is supported. Moreover, a fixed mindset has a negative influence on CSE ($r = -0.032$) with a medium effect size. Additionally, the q-value (15.919) is higher than the chi-square value (14.067), thus the effect is significantly heterogeneous. This result is supported by a 95% confidence interval with non-zero values. Therefore, H1b is supported.

In terms of CSE, the results show that CSE has a positive influence on creative performance ($r = 0.442$) and innovation capability ($r = 0.451$), respectively. Therefore, both relations have high effect sizes. Moreover, the q-values of CSE and creative performance (646.879), and innovation capability (119.674) are higher than the chi-square value (51.179 and 26.125). Therefore, the effects are significantly heterogeneous. These results are supported by a 95% confidence interval with non-zero values. Hence, H2a and H2b are supported.

Table 2. Meta-analysis results (source: created by authors)

Hypothesis	Variables		k	Total n	Effect size and 95% confidence interval			Heterogeneity			
	Independent	Dependent			Studies	r	Lower confidence interval	Upper confidence interval	p-value	Chi-square	q-value
H1a	GM	CSE	7	1915	0.400	0.361	0.437	0.000	22.458	34.463	82.590
H1b	FM	CSE	8	2212	-0.032	-0.074	0.010	0.026	14.067	15.919	56.029
H2a	CSE	CP	25	6840	0.442	0.422	0.461	0.000	51.179	646.879	96.290
H2b	CSE	IC	9	2320	0.451	0.418	0.483	0.000	26.125	119.674	93.315
H3a	CP	IC	6	1859	0.671	0.645	0.695	0.003	16.750	17.646	71.666
H3b	CP	BS	11	2490	0.470	0.438	0.500	0.000	29.588	223.853	95.533
H4	IC	BS	14	4791	0.278	0.252	0.304	0.000	34.528	228.695	94.316

Note: BS = business success; CP = creative performance; CSE = creative self-efficacy; FM = fixed mindset; GM = growth mindset; IC = innovation capability.

According to creative performance, the results show that creative performance has a positive influence on innovation capability ($r = 0.671$) and business success ($r = 0.470$) respectively, which contributes to the significant effect size. The q -value of creative performance and innovation capability is 17.646 and the q -value of creative performance and business success is 223.853, which is higher than the chi-square value (16.750 and 29.588). Therefore, the effect is significantly heterogeneous, and all hypotheses are supported by a 95% confidence interval with non-zero values. Then, H3a and H3b are supported.

Finally, the variable of innovation capability also has a positive influence on business success ($r = 0.278$), and the relationship has a medium effect size. Additionally, the q -value (228.695) is higher than the chi-square value (34.528), which indicates that the effect is significantly heterogeneous. Furthermore, all hypotheses are supported by a 95% confidence interval with non-zero values. Therefore, H4 is supported.

Discussion and conclusions

Theoretical implications

The study aimed to conceptualize a model of the relationship between creative mindsets and its application to business success, where few reported from previous studies (Bouty & Gomez, 2013; Hass et al., 2016; Karwowski, 2014). The results offer a number of important contributions. First, this study applies and provides an understanding of the implicit theory of creativity grounds the creative and innovation framework, and then applies them into a business context. Implicit theory gives a central role to personals to understand their beliefs, and beliefs underpin behaviour, which will shape individual beliefs in motivational and performance implications (Puente-Díaz & Cavazos-Arroyo, 2017).

Second, considering the analytical technique, meta-analysis is a statistical technique that considers statistical analyses that synthesize quantitative performance from different empirical research studies (Saroghi et al., 2015). The results from this study reveal that all the hypotheses developed in this study are supported by the meta-analysis. Therefore, it can be expected that the meta-analysis in this creative and innovation framework can prove beneficial to business contexts.

Third, the growth mindset is positively related to CSE, which can affect creative performance and innovation capability. As mentioned, a growth mindset can develop through effort and practice (O'Connor et al., 2013). Therefore, researchers can use this advantage by creating an ideal environment to encourage creative mindsets. Particularly, knowledge about the growth mindset will help related persons (*e.g.*, leader, manager) to encourage creative thinking activities (*e.g.*, creative tasks and creative solutions), which will lead to creative ability. Additionally, the context of the growth mindset should be embedded in the company, and a further study should be conducted in the future. Conversely, current findings indicate that a fixed mindset appears to be negatively related to CSE. This is consistent with the study of Royston and Reiter-Palmon (2019) and Karwowski (2014). Therefore, individuals with a high fixed mindset will be associated with lower performances on CSE and have less impact on creativity and innovation capability.

Fourth, CSE has received increased attention as it plays an important role in creativity outcomes (McKay et al., 2018; Royston & Reiter-Palmon, 2019; Tierney & Farmer, 2002). This study finds that CSE is related to a positive relationship between creative performance and innovation capability, such that the performance of both creative performance and innovation capability become stronger when CSE is higher. Thus, researchers should regard CSE or the consequence of creativity and innovation as among the essential qualities rather than desired results (Puente-Díaz & Cavazos-Arroyo, 2017).

Finally, while creativity and innovation capability both have a positive influence on business success, creativity performance is more significant than innovation capability, which is in line with Sleuwaegen and Boiardi (2014) who argue that creativity is the first step to any innovation and is a crucial factor that makes people and firms unique. Therefore, creativity can be a key ingredient of innovative processes that later translates into business opportunities.

Managerial implications

Based on the results of each variable and relationship, managers can create the ideal environment to encourage creative mindsets in their organization that will result in creative ability. The results show that a growth mindset will advance our understanding of an intrinsically creative mindset, which will lead to desirable outcomes. Furthermore, the growth mindset benefits creative activities and future creative achievements thus influences technology. Therefore, the developing view about creative mindset may consider how to use strategies to develop CSE in parallel with creativity and innovation capability.

Tai and Mai (2016) mentioned the importance of a leader's CSE to employee creativity. Therefore, it would be beneficial to managers to incorporate a general CSE test (e.g., Hass et al., 2016) in the recruitment process that identifies candidates at management level to encourage and drive creativity motivation in employees. Employees with high CSE will be more motivated and impacted workplace creative performance. However, these factors can develop through experience, training, and individual effort. Thus, the authors strongly recommend that managers build these issues (mindset and self-efficacy) into human resource systems (e.g., systematic training programs, professional development programs) for all employees to engage them in creative activity.

Moreover, this study demonstrates how creativity and innovation influence business. Creativity creates and generates new ideas, while innovation capability transforms creativity into action or results-related business processes. It means that the impact of potential creativity will be expressed through successful innovation. Therefore, managers should promote the success of their business by encouraging creativity and innovation through appropriate programs (e.g., creative thinking and motivation programs) to facilitate the exploration and exploitation of creative ideas. More importantly, the managers should stimulate its creativity and innovation (e.g., company culture and policies) to sustain and renew the firm's performance. As innovation is increasingly dispersed globally, managers should believe in the ability of innovation to reach designated performance targets. Specifically, the managers should balance creativity and innovation capability as its foremost competence if they want to become a successful business.

Limitations and future study

First, this study comprehensively surveyed the literature that analyses relevant studies based on correlational studies. Therefore, future research should consider the difference between correlation and causal relationships. Second, the meta-analysis synthesizes quantitative performance from different empirical settings and research designs, but the results may be difficult to interpret or report inconsistent empirical findings. Thus, future empirical studies are needed. Third, innovation capability has several descriptions and types, which may complicate its overall identification. As so, future research should consider using the creativity-based model to explain the causality between innovation capability and organizational performance. Fourth, as suggested in the literature, mindsets provide social validity and involve the cultural setting (Delany et al., 2019). Therefore, to strengthen this model, related factors (e.g. culture and social) require further synthesis to deliver meaningful results in the future. Finally, while a fixed mindset is negatively associated with CSE and cannot significantly advance our understanding of desirable outcomes, the authors still believe in the necessity of a fixed mindset, and future research demands a more granular understanding of the effects of a fixed mindset in different contexts.

Conclusions

The results of this meta-analysis confirm the importance of creative mindsets and thus extend our understanding of the role of CSE, creative performance, and innovation capability in enhancing business success. The growth mindset has a positive influence on CSE whereas a fixed mindset is negatively related. However, the results indicate that all the hypotheses developed in this study are supported by the meta-analysis, and these results enable one to generalize the effect of a creative mindset and its application in business success. It is also expected that these results can help professionals identify and implement strategies to enhance their firm's performance and profitability.

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