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Contributions of Mindfulness to Improvisational Behavior and Consequences on Business Performance and Stress of Entrepreneurs during Economic Downturn

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ABSTRACT

This research investigates the role of mindfulness among Thai entrepreneurs that can be linked to their improvisational behavior that, in turn, explains business performance and stress during a period of economic contraction in Thailand. This research collected survey data from a sample of 186 owners of small retail shops in major marketplaces in Bangkok, Thailand. Results from partial least squares structural equation modeling show that mindfulness had a positive relationship with the degree of improvisational behavior exhibited by entrepreneurs. The findings also reveal that the entrepreneurs who exhibited a higher degree of improvisational behavior achieved higher business performance and had lower stress.

KEYWORDS

Mindfulness; entrepreneur; small business; stress; strategic decision making

Introduction

The recent economic contraction in Thailand has had detrimental effects on many business sectors (Reuters, 2015). Unlike larger corporations that have sufficient capital to support their operations during the economic downturn, small enterprises tend to have lower chances of survival than their larger counterparts, given a variety of financial constraints (Bàkiewicz, 2005). The negative effects of the economic contraction not only threaten business' survival but also make entrepreneurs susceptible to psychological distress (Buttner, 1992; Deaton, 2012). Considering the negative impacts that seem inevitable during an economic slowdown, identifying the personal characteristics that help entrepreneurs maintain strong business performance during a crisis can have crucial implications that can guide competency development required for entrepreneurs to address unfavorable business conditions effectively. Although prior research has identified some of the personal characteristics that enhance entrepreneurial effectiveness that involve education of entrepreneurs (Elmuti, Khoury, & Omran, 2012), self-efficacy of entrepreneurs (Pollack, Burnette, & Hoyt, 2012) and personalities of entrepreneurs (Zhao, Seibert, & Lumpkin, 2010), the present research focuses on the role of mindfulness.

Mindfulness is a promising concept proven to help individuals improve their decision-making skills and enhance their performance during difficult times (Gärtner, 2013; Zhang, Ding, Li, & Wu, 2013). The concept of mindfulness, derived from Buddhist spiritual practice (Hirst, 2003), has been applied extensively in the field of clinical studies (Baer, 2003; Grossman, Niemann, Schmidt, & Walach, 2004), psychology (Greenberg, Reiner, & Meiran, 2012; Hofmann, Sawyer, Witt, & Oh, 2010), and management (Gärtner, 2013; Glomb, Duffy, Bono, & Yang, 2011). While previous researchers have linked mindfulness to performance outcomes in various disciplines (Charoensukmongkol & Aumeboonsuke, 2017; Gärtner, 2013; Jha, Krompinger, & Baime, 2007; Zhang et al., 2013), the application of mindfulness in the field of entrepreneurship is still an area not yet widely explored in research.

In an attempt to generate evidence about the role of mindfulness in helping small-firm entrepreneurs during Thailand's economic contraction, this study investigates whether mindfulness exhibited by Thai entrepreneurs associates with their improvisational behavior, which is a characteristic that might influence business performance and stress perception during times of uncertainty (Hmieleski & Corbett, 2008). Improvisational behavior is the ability to execute novel decisions spontaneously, to explore unexpected opportunities, or deal with unforeseen threats (Nemkova, Souchon, Hughes, & Micevski, 2015). It also represents the ability of entrepreneurs to formulate and execute novel strategic decisions in the moment, rather than deliberately anticipating what might happen (Nemkova et al., 2015). Improvisational behavior is

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important to this research because previous scholars have shown that it is a strategic behavior that is particularly crucial for entrepreneurs in effectively managing their business in a dynamic environment (Hmieleski & Corbett, 2006, 2008; Hmieleski, Corbett, & Baron, 2013; Nemkova et al., 2015). Given the high level of uncertainty that is normally present during an economic downturn, improvisation can be a skill that allows entrepreneurs to adapt and maintain effective business performance despite the perceived difficulties they encounter.

This research offers several other contributions. First, although Hmieleski and Corbett (2008) proposed that entrepreneurs can be trained to become more effective improvisers, research investigating the characteristics of entrepreneurs that might associate with improvisation is still scant. To the best of the author's knowledge, to date, no study has linked the concept of mindfulness to the improvisational behavior of entrepreneurs. Second, given the prior argument regarding the benefits of mindfulness and improvisational behavior, which tend to be more crucial in unfavorable and stressful situations (Hmieleski et al., 2013; Zhang et al., 2013), the current economic slowdown in Thailand can serve as a suitable research context to provide evidence of the contributions of these two personal characteristics during unfavorable business conditions.

Literature review

Stress perception during economic slowdown

According to the Asian Development Bank (2015), the Thai economy experienced sluggish growth in 2015 following a sharp economic slowdown in 2014. Private consumption declined due to declining farm incomes, slow wage growth, and high household debt. A decline in exports, soft consumer spending, and spare industrial capacity affected private investment. Consumer confidence also plummeted for eight successive months in August to a 15-month low following a deadly bomb blast in the capital of Bangkok (Reuters, 2015). Overall, these unfavorable economic conditions affected many businesses that suffered from weak consumer demands and sluggish sales.

Small firms are among those severely affected during an economic downturn because they tend to have limited financial resources to sustain their survival (Bàkiewicz, 2005). The impacts of an economic downturn hurt not only business' overall performance but also entrepreneurs' psychological well-being (Buttner, 1992). Generally, entrepreneurs belong to an occupational group known to be highly susceptible to high stress because of the tremendous amount of responsibilities and significant risks that they must undertake (Buttner, 1992; Vasumathi, Govindarajalu, Anuratha, & Amudha, 2003). Because their businesses are normally funded by a larger portion of their savings and assets, their concern about the high possibility of loss and business close down during economic slowdown can drive entrepreneurial stress to increase tremendously (Akande, 1992). Given the negative impacts caused by an economic downturn, we propose the following hypotheses:

Hypothesis 1: The perceived economic impact that entrepreneurs experience will relate to lower business performance.

Hypothesis 2: The perceived economic impact that entrepreneurs experience will relate to higher stress perception.

Hypothesis 3: Lower business performance will relate to higher stress perception.

Mindfulness

Gärtner (2013, p. 55) defined mindfulness as "a state of consciousness when people focus attention on what is happening here and now while adjusting the focus and content of awareness to accurately reflect on reality" (p. 55). Hofmann et al. (2010, p. 169) defined it as a process leading to "a mental state characterized by nonjudgmental awareness of the present moment experience, including one's sensations, thoughts, bodily states, consciousness, and the environment while encouraging openness, curiosity, and acceptance" (p. 169). Generally, these definitions suggest that mindfulness encompasses two key characteristics: moment-to-moment awareness and nonjudgmental evaluation of stimuli. Awareness is a core component of mindfulness that helps individuals to remain attentive to their thoughts, feelings, and sensations from moment to moment (Kabat-Zinn, 2003). However, simply being aware of one's sensations is not enough; individuals must acknowledge their experiences nonjudgmentally (Bishop et al., 2004). Nonjudgmental evaluation is also crucial because it helps individuals to process both internal and external information in an unbiased and undistorted manner without being affected by them (Brown & Ryan, 2003; Kabat-Zinn, 1990).

Mindfulness has been widely conceptualized as a trait and state construct. The trait of conceptualization views mindfulness as a characteristic that is stable over time (Brown & Ryan, 2003). Conversely, mindfulness is also a state-like phenomenon evoked and maintained by regulating attention (Bishop et al.,

2004). This conceptualization views mindfulness as a skill that one can develop with practice, such as meditation (Kabat-Zinn, 2003). Following these conceptualizations, the present study also regards mindfulness as a stable personality trait and psychological state that can be enhanced.

Initially, researchers used clinical studies to investigate mindfulness as an intervention to help individuals improve their mental clarity, enhance focus, and lower stress (Baer, 2003; Grossman et al., 2004; Hindman, Glass, Arnkoff, & Maron, 2014). Recently, scholars have applied mindfulness to management research to investigate its benefits in decision-making and work outcomes (Charoensukmongkol, 2017; Leroy, Anseel, Dimitrova, & Sels, 2013; Shonin & Van Gordon, 2014; Weber & Johnson, 2009). The aim of the present study is to link the role of mindfulness to the ability of entrepreneurs to demonstrate improvisational behavior in strategic decision-making.

Improvisational behavior

Given that the entrepreneurial environment is complex and involves many risks and uncertainties, anticipating and planning successfully for every scenario that entrepreneurs encounter is quite difficult (Hmieleski & Corbett, 2008). For entrepreneurs' businesses to survive and thrive in a dynamic environment, it is crucial for them to be able to execute both planned and spontaneous actions face-to-face with unanticipated challenges (Weick, 1998). Effective entrepreneurs should be able to work efficiently with limited resources and under intense time pressure (Pollack et al., 2012; Zhao et al., 2010). Generally, the research addressing strategic decision making has emphasized the importance of improvisational behavior as a personal characteristic that can explain entrepreneurial effectiveness (Hmieleski & Corbett, 2006). Hmieleski et al. (2013, p. 139) define improvisational behavior as "the deliberate extemporaneous composition and execution of novel action" (p. 139). Improvisational behavior represents the ability of entrepreneurs to formulate and execute novel strategic decisions in the moment rather than by anticipating what might happen (Nemkova et al., 2015).

This research adopts the conceptualization of improvisational behavior introduced by Hmieleski and Corbett (2006) they posit that individuals who demonstrate improvisational behavior effectively must possess three characteristics. The first characteristic is creativity, which is "the extent to which individuals can produce novel solutions under constrained conditions by recombining available resources" (Hmieleski & Corbett, 2006, p. 51). The second characteristic is the ability to work well under pressure and stress, or "the ability to function and excel under pressure-filled and stressful environments" (Hmieleski & Corbett, 2006, p. 51). The final characteristic is persistence, which the authors define as "the action orientation and determination of individuals towards achieving goals and solving problems in the moment" (Hmieleski & Corbett, 2006, p. 51).

Although improvisational behavior is a characteristic that might promote entrepreneurial effectiveness, some research suggests that its benefits on performance outcomes are particularly significant in a dynamic environment rather than in a stable environment (Hmieleski et al., 2013; Hmieleski & Ensley, 2004; Miner, Bassof, & Moorman, 2001). Generally, an economic downturn is a challenging period for small-firm entrepreneurs (Chittithaworn, Islam, Keawchana, & Yusuf, 2011). Because adhering to entrepreneurs' long-term plans or acquiring new recomposed plans to guide their decisions during economic uncertainty is difficult, having greater flexibility in the decision-making process through improvisation is crucial for them to effectively adjust to changes in this business condition (Nemkova et al., 2015). Hence, this research suggests that the characteristics of improvisational behavior can strongly determine the effectiveness of entrepreneurs in maintaining a satisfactory performance during this period.

First, a significant decline in store sales during the economic downturn can be perceived as a pressure-filled and stressful situation for small-firm entrepreneurs. Given that the survival chance of small firms during the economic downturn tends to be lower than that of larger firms (Bàkiewicz, 2005), entrepreneurs with improvisational behavior can make decisions and perform well in stressful situations seems to be particularly important in making sound strategic decisions (Hmieleski & Corbett, 2008). Because entrepreneurs with this ability tend to be comfortable offering instantaneous responses to problems (Baker, Miner, & Eesley, 2003), they can make strategic decisions more effectively than those who easily feel threatened or overwhelmed by pressure (Weick, 1998). Moreover, because small firms tend to have limited resources to support their operations, the role of improvisational behavior that allows entrepreneurs to deal effectively with unplanned situations under limited resources seems to be necessary to help entrepreneurs allocate and combine their existing resources to achieve the most efficient use to overcome their resource constraints (Hmieleski & Corbett, 2006). This ability is particularly important during an economic contraction when existing resources must be allocated carefully to support a business' survival. This role of improvisational behavior is also crucial to helps entrepreneurs remain focused on imminent problems despite the difficulties that they

encounter during challenging times (Nemkova et al., 2015). Considering the importance of improvisational behavior, we propose the following hypothesis:

Hypothesis 4: Entrepreneurs who exhibit a higher degree of improvisational behavior will have better business performance.

The role of mindfulness in the development of improvisational behavior

Considering the benefits that mindfulness contributes to the promotion of information processing and decision-making capabilities (Karelaia & Reb, 2014), the present research hypothesizes that mindfulness can facilitate the development of improvisational behavior of entrepreneurs. First, because entrepreneurs with improvisational behavior generally possess the ability to make strategic decisions in stressful situations (Hmieleski & Corbett, 2008), mindfulness enables individuals to manage their emotions effectively, which is particularly important (Charoensukmongkol, 2016). Research has shown that mindfulness helps individuals to perform effectively, even when facing unfavorable work or life events (Bishop et al., 2004; Gärtner, 2013; Zhang et al., 2013). The mental clarity and emotional stability that individuals cultivate through mindfulness tend to help them remain calm even when facing stressful circumstances (Charoensukmongkol & Suthatorn, 2018; Hofmann et al., 2010; Witek-Janusek et al., 2008).

According to Zhang et al. (2013), the contributions of mindfulness, including sustained attention, cognitive flexibility, situational awareness, and metacognitive skills, tend to help individuals perform well in high-pressure jobs that involve complex processes and high risks. As suggested by Karelaia and Reb (2014), mindful awareness, which allows individuals to observe a feeling with a sense of detachment, can lower the anxiety caused by perceived uncertainty associated with the decisions they make. The ability to make spontaneous strategic decisions during times of uncertainty typically requires a high degree of cognitive complexity (Butler, Doktor, & Lins, 2010; Keh, Foo, & Lim, 2002). However, mindfulness can enhance metacognitive skills required for profound information processing (Garofalo & Lester, 1985; Mevarech, 1999), which is particularly necessary for entrepreneurs to make effective judgments under pressure.

Second, given the evidence that shows the role of mindfulness in promoting creative thinking (Greenberg et al., 2012; Hirst, 2003; Langer, 2005), mindfulness is essential for improvisational behavior, which requires entrepreneurs to make unplanned strategic decisions under limited time and resources (Hmieleski & Corbett, 2008). Moreover, mindfulness enhances creativity because it reduces the influence of habitual verbal-conceptual processes on the analysis of ongoing experience, thereby allowing individuals to detach from their habitual way of thinking (Capurso, Fabbro, & Crescentini, 2013; Colzato, Ozturk, & Hommel, 2012). Greenberg et al. (2012) also support the role of mindfulness in helping lower cognitive rigidity. In an experiment conducted by Colzato et al. (2012), subjects who had attended mindfulness trainings demonstrated a higher degree of divergent thinking (a style of thinking that allows many new ideas to be generated) and a lower degree of convergence thinking (the process of generating one possible solution to a particular problem) than their untrained counterparts. Similarly, Ren et al. (2011) found that participants who had attended mindfulness practices demonstrated a statistically significant improvement in insightful problem-solving.

Finally, mindfulness also facilitates the development of improvisational behavior, which requires entrepreneurs to remain focused on the problem at hand and to develop novel solutions under pressure (Hmieleski & Corbett, 2008). The quality of sustained attention that mindful individuals exhibit tends to be a characteristic that greatly serves this goal (Bishop et al., 2004). Because this skill represents the ability to maintain a prolonged state of vigilance (Brown & Ryan, 2003; Kabat-Zinn, 2003), it helps entrepreneurs remain focused on the problem at hand and develop novel business solutions. Moreover, mindful individuals tend to exhibit self-regulation, which is a characteristic that allows individuals to be persistent and not be easily set back when experiencing difficulties (Baer & Lykins, 2011; Brown & Ryan, 2003). According to Gärtner (2013), mindful regulation of behaviors can lead to effective goal achievement because mindful attention to one's day-to-day actions facilitates goal attainment in general. These benefits of mindfulness seem to be important for entrepreneurs in developing improvisational behavior, which requires determination and persistence (Hmieleski & Corbett, 2006). Therefore, we propose the following hypothesis:

Hypothesis 5: The level of mindfulness that entrepreneurs exhibit will positively relate to the degree of improvisational behavior that entrepreneurs show.

Methods

Sample and data collection

This research focuses on a sample of small firms that includes small retail shops in major marketplaces in Bangkok, Thailand. Data collection took place in October 2015, two months after a deadly bomb blast

in the capital of Bangkok. A self-administered questionnaire survey facilitated the data collection. The research assistant personally approached the owners of the shops at the marketplaces during their off-peak hours. The owners learned about the purpose and expected benefits of the study. After they agreed to participate, the researcher distributed questionnaires, along with a cover letter, to them in person. The owners had several hours to complete the survey; then the research assistant collected back the questionnaires. A total of 202 shop owners agreed to participate of the approximately 300 who were approached. Sixteen questionnaires were not properly answered, so they were removed from the analysis. Overall, 186 completed surveys were available for data analysis for a final response rate of 62%. Table 1 summarizes the sample characteristics.

Measures

Business performance was measured in terms of subjective evaluation. This method has been widely adopted in previous research studies because of the difficulty in obtaining actual financial performance from small-firm entrepreneurs (Calantone, Kim, Schmidt, & Cavusgil, 2006; Hashai, 2011). This study adopted the business performance scale previously used in literature (Nes, Solberg, & Silkoset, 2007; Tanchaitranon & Charoensukmongkol, 2016). The respondents evaluated the extent to which they were satisfied with their firm's performance across the following six dimensions: (1) sales, (2) sales growth, (3) profit, (4) profit growth, (5) return on investment, and (6) overall performance satisfaction. The items were rated using a Likert scale ranging from 1 (*very dissatisfied*) to 5 (*very satisfied*).

Table 1. Descriptive characteristics of the sample.

Variables	Descriptive Statistics
Firm size (measured by several full-time employees)	M = 3.172; SD = 2.106
Firm age (measured in years)	M = 5.962 SD = 7.88
Source of funding	Only from their own money: 84 (45%) Mostly from their own money: 83 (45%) From their own money and a loan equally: 18 (9%) Mostly from a loan: 1 (1%)
Ownership type	Sole proprietorship: 68 (37%) Partnership: 118 (63%)
Age of entrepreneurs (measured in years)	M = 33.037 SD = 10.543
Gender of entrepreneurs	Male: 75 (40%) Female: 111 (60%)
Education of entrepreneurs	Lower than Bachelor's degree: 68 (37%) Bachelor's degree: 105 (56%) Master's degree: 13 (7%)

Perceived economic impact was measured using a scale developed by the author. The respondents were asked to evaluate the extent to which they perceived that their business and their competitors' business had been affected by the current economic slowdown. The scale consists of six items. Three items relate to the evaluation of their own business; "*Your business has experienced problems because of the economic slowdown*," "*Your business has been affected by the economic slowdown*," and "*Your business has suffered from the economic slowdown*." Three items relating to the evaluation of their direct competitors' business. These statements included, "*Your direct competitors have also experienced problems because of the economic slowdown*," "*Other firms in your line of business have also been affected by the economic slowdown*," and "*Other firms in your line of business have also suffered from the economic slowdown*." The items utilized a Likert scale ranging from 1 (*a little*) to 5 (*a lot*).

Stress perception was measured using the 10-item Perceived Stress Scale (PSS-10) developed by Cohen, Kamarck, and Mermelstein (1984). This scale consists of six negatively worded and four positively worded items. All questions used a Likert scale ranging from 1 (*never*) to 5 (*very often*).

Mindfulness was measured using the Mindfulness Attention and Awareness Scale (MAAS) developed by Brown and Ryan (2003), which contains fifteen questions. All questions in the original scale were scored using a Likert scale ranging from 1 (*almost always*) to 5 (*almost never*). A low score represents a low level of mindfulness, while a high score represents a high level of mindfulness.

The measure of *improvisational behavior* was adopted from the scale originally developed by Hmieleski and Corbett (2006). The scale consists of 25 items that represent three dimensions of improvisational behavior. The items were rated using a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Exploratory factor analysis using the varimax orthogonal method showed that all 25 items were correctly classified into three dimensions of improvisational behavior. Factor scores of the three dimensions of improvisational behavior were then used as the indicators to construct the second-order-latent-variable of improvisational behavior.

In addition to the main variables proposed in the hypotheses, some firm characteristics and entrepreneur characteristics that can explain business performance and stress perception were also included in the analysis as control variables. Firm characteristics

include firm age (how many years the business has operated); firm size (number of full-time employees); major source of funding (ordinal measure for which 1 = from their own money, 2 = mostly from their own money, 3 = from their own money and a loan equally, 4 = mostly from a loan, and 5 = only from a loan), and type of business ownership (a dummy variable whereby partnership = 1, and sole proprietorship = 0). Entrepreneur characteristics include age of the entrepreneur (measured in years), gender of the entrepreneur (measured as a dummy variable whereby male is coded 1 and female is coded 0), and education of the entrepreneur (ordinal measures whereby 1 represents lower than a bachelor's degree, 2 represents a bachelor's degree, and 3 represents a master's degree).

Data analysis

The study used partial least squares (PLS) structural equation modeling to analyze the data. PLS combines principal component analysis, path analysis, and a set of regressions to generate estimates of standardized regression coefficients for the model's paths and factor loadings for the measurement items (Chin, 1998). PLS was selected for this research for two reasons. First, PLS does not require data to be normally distributed. Before the PLS estimation, the test of normality was conducted, and the results indicated that the majority of the variables included in the analysis were not normally distributed. Second, PLS allows for a smaller sample size (Kline, 2005). Scholars also supported that PLS tends to work well when analyzing complex models with a high number of indicators and constructs, even when the sample size is small (Chin, 2010; Hair, Matthews, Matthews, & Sarstedt, 2017). PLS is especially suitable for this study due to the small sample size (n = 186) and the high number of indicators that measure the key latent variables in the model. PLS estimation was performed using WarpPLS version 6.0.

Results

Measurement model

The measurement model was assessed before hypotheses testing. First, we assessed convergence validity by using factor loadings, which must be higher than .5 (Hair, Black, Babin, & Anderson, 2009). The analysis indicated that two items of mindfulness and four items of stress perception were below the minimum requirement, so they were removed from the analysis. The factor loadings of other reflective constructs were above .5. Discriminant validity was assessed by comparing the average variance extracted (AVE) with the squared correlation coefficient. Fornell and Larcker (1981), proposed that the square root of the AVE must be higher than the correlation between the constructs to confirm a satisfactory level of discriminant validity. Table 2 shows that all AVEs passed this requirement. Next, we tested construct reliability using two indicators, including Cronbach's alpha coefficient and composite reliability coefficient. These two indicators must be higher than .7 to support a satisfactory level (Nunnally, 1978). Results in Table 2 indicate that all reflective constructs had coefficients that passed the requirement. Although the Cronbach's alpha coefficient of the second-order latent variable of improvisational behavior was below .7, it was still above .6, which the acceptable level (Nunnally, 1978).

We also checked for the degree of multicollinearity by using full variance inflation factor (VIF) statistics. Petter, Straub, and Rai (2007) suggested that full VIF should be less than 3.3. The result showed that the highest full VIF was 2.516, indicating that multicollinearity is not a significant issue. In addition to the multicollinearity problem, Kock and Lynn (2012) proposed that full collinearity VIF statistics is the indicator that can capture common method bias (CMB). They recommended that full VIF must be lower than 3.3 to support that CMB is not a major threat. Because the highest full VIF did not exceed 3.3, it implied that CMB was not a serious problem. The study also conducted Harman's one-factor test recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) as an additional indicator to confirm about CBM problem. The findings indicate that the one-factor confirmatory factor analysis model did not fit the data well (χ^2 = 8333.115; df = 984; $p < .001$), which lessened the concern about the CMB problem.

Hypotheses testing

The results of the PLS estimation are reported in Figure 1. All model fit indices including the average path coefficient (APC = .145; p = .011), average r-squared (ARS = .182; p = .003), average full collinearity ($AFVIF$ = 1.506), Simpson's paradox ratio (SPR = .76), r-square contribution ratio ($RSCR$ = .979), and statistical suppression ratio (SSR = .72), are satisfactory.

Regarding the Hypotheses 1 and 2 about the role of the perceived economic impact on business performance and stress perception, the results indicate that perceived economic impact negatively associates with business performance (β = - .552; $p < .001$) and positively associates with stress perception (β = .126; p = .04). For the Hypothesis 3

Table 2. Construct reliability indicators, correlation among variables, and square roots of average variance extracted.

Variables	Cronbach's Alpha coefficient	Composite Reliability coefficient	MFN	PEI	BP	IB	STSS	FSIZE	FXP	CAP	PTNR	EAGE	EEDU	EGEN
MFN	.902	.918	(.681)	−.033	.027	.165*	−.419**	.015	−.066	.011	−.013	.15*	.017	.099
PEI	.909	.93		(.830)	−.532**	.038	.178*	.013	.284**	−.114	.178*	.192**	−.196**	−.042
BP	.926	.942			(.856)	.218**	−.194**	.096	−.112	.094	−.077	−.095	.188*	.06
IB	.643	.808				(.764)	.009	.166*	−.111	.118	−.035	.005	.127	.102
STRSS	.846	.887					(.753)	−.075	.054	.044	−.071	−.121	−.13	.026
FSIZE	n/a	n/a						(1)	.21**	.16*	−.011	.166*	.123	.204**
FXP	n/a	n/a							(1)	.004	.302**	.589**	−.308**	.068
CAP	n/a	n/a								(1)	−.086	.041	.029	.131
PTNR	n/a	n/a									(1)	.155	−.136*	.007
EAGE	n/a	n/a										(1)	−.204**	.089
EEDU	n/a	n/a											(1)	.036
EGEN	n/a	n/a												(1)

Notes: * $p < .05$; ** $p < .01$;
Square roots of average variance extracted of latent variables appear in parentheses.
MFN = mindfulness, PEI = perceived economic impact, BP = business performance, IB = improvisational behavior, STRSS = Stress perception, FSIZE = firm size, FXP = firm experience, CAP = source of capital, PTNR = type of ownership (partnership = 1), EAGE = entrepreneur's age, EEDU = entrepreneur's education, EGEN = entrepreneur's gender (male = 1).

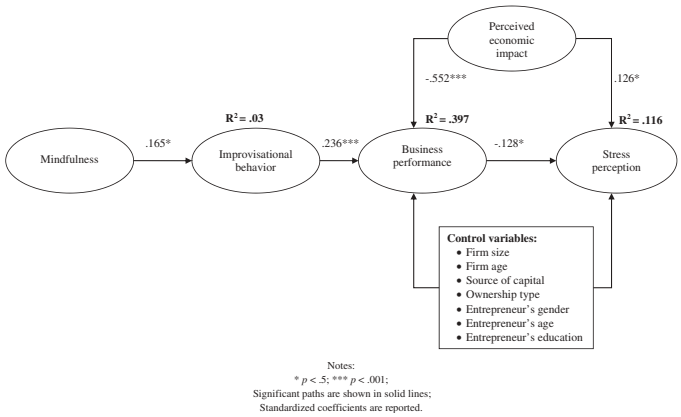

Figure 1. PLS results.

about the link between business performance and stress perception, the result also shows that they are negatively and significantly associated ($\beta = -.128$; $p = .037$). Therefore, Hypotheses 1, 2, and 3 are supported. Regarding the Hypothesis 4 about the link between improvisational behavior and business performance, the result supports their positive and significant association ($\beta = .236$; $p < .001$). This finding supports Hypothesis 4. Regarding the Hypothesis 5 about the link between mindfulness and improvisational behavior, the results show that mindfulness and improvisational behavior are positively associated ($\beta = .165$; $p = .01$). Therefore, Hypothesis 5 is supported.

Lastly, for the effects that the control variables have on business performance and stress perception, the analysis found that stress perception positively and significantly associates with firm age ($\beta = .176$; $p = .007$), and negatively and significantly associates with age of entrepreneur ($\beta = -257$; $p < .001$) and the partnership dummy variable ($\beta = -.124$; $p = .042$). The effects of other control variables are not statistically supported.

Discussion and conclusion

The objective of this research was to explore the role of mindfulness as a personal characteristic of Thai entrepreneurs that could be linked to improvisational behavior, which could potentially explain business performance and stress perception during the period of economic contraction in Thailand. First, regarding the hypotheses that predicted the influence of the unfavorable economy on business performance and stress of entrepreneurs, the data analysis revealed that entrepreneurs who strongly believed that their business was affected by the current economic slowdown tended to report lower business performance and a higher level of stress perception. In particular, these findings are consistent with prior research that found evidence of the impacts of unfavorable financial and economic situations on the business performance and psychological well-being of entrepreneurs (Buttner, 1992; Deaton, 2012). Second, regarding the hypotheses that predicted the contribution of improvisational

behavior to business performance, the findings showed that entrepreneurs who demonstrated a higher level of improvisational behavior also reported a higher degree of business performance. Given that small-firm entrepreneurs tend to face greater pressures during an economic contraction, it is not surprising that improvisational behavior could explain their ability to maintain strong business performance when facing tremendous pressure. Overall, the positive links between improvisational behavior and business performance were consistent with the argument that improvisational behavior is particularly crucial in dynamic environments (Hmieleski et al., 2013; Hmieleski & Ensley, 2004; Miner et al., 2001). Given the economic contraction that affected the overall business sector in Thailand, this research provides additional evidence about the importance of improvisational behavior that can explain the ability of small-firm entrepreneurs to maintain strong business performance during this period of economic uncertainty. Regarding the hypothesis that predicted the contribution of mindfulness to improvisational behavior, the analysis supported that the quality of mindfulness that entrepreneurs exhibited had a direct and significant relationship with improvisational behavior. This finding is consistent with prior research that supports the benefit of mindfulness, which helps individuals perform effectively in uncertain situations (Bishop et al., 2004; Gärtner, 2013; Zhang et al., 2013).

The present study further contributes to research focusing on factors that explain why some entrepreneurs are more effective in improvisation than others are. In addition to the findings that support the benefits of improvisational behavior found in previous research (Baker et al., 2003; Miner et al., 2001; Nemkova et al., 2015; Weick, 1998), this study is a pioneering work that provides evidence of the role of mindfulness as a characteristic of entrepreneurs and links it to improvisational behavior. Given that knowledge of the role of mindfulness in entrepreneurship research has not been previously explored, this research opens the avenue for future studies to offer more evidence about the benefits that mindfulness can provide to entrepreneurs in aspects beyond improvisational behavior. Future research may replicate this research to confirm the generalizability of the findings by using the entrepreneur sample in other contexts, such as those who compete in highly competitive industries.

Despite the present study's contributions, research limitations must be considered. First, the entrepreneur sample was obtained from marketplaces in Bangkok using convenience sampling. Additionally, the sample only covered a small portion of small-firms in Thailand. Although the marketplaces where the sample was selected were prescreened before data collection, the small sample size and the use of nonprobability sampling might limit the validity and generalizability of the findings to a larger population of entrepreneurs. This limitation may mean the research implications apply only to the entrepreneurs in the capital city where the data was collected. Therefore, future research should extend the scope of sample selection by focusing on entrepreneurs outside the major economic areas of the capital city so that the findings can be more generalizable. Second, Buddhism in Thailand is the dominant religion, and the concept of mindfulness has its roots in Buddhism; thus, it is possible that the respondents, who are Thai, are more comfortable with the idea of mindfulness than are those with a more Western perspective. Thus, future research should explore the contribution of mindfulness using a sample from Western cultures to determine its effect from a different cultural perspective. Third, the data used in the analysis are cross-sectional, thereby preventing the interpretation of reports as causality. When using cross-sectional data, one should interpret the results only as correlations. Future studies will need to use longitudinal data to test for the cause-and-effect relationship between constructs to confirm causal evidence. Moreover, this research only provided evidence regarding the roles of mindfulness of entrepreneurs during the economic downturn. Future research should investigate the contributions of mindfulness to entrepreneurs during an economic upturn to compare whether significant differences exist in outcomes under different economic conditions. Fourth, the measure of firm performance used in this research came from a subjective evaluation, which can be prone to measurement bias. Therefore, future research will need to incorporate objective measures of firm performance, when information is available, to ensure measurement accuracy. Finally, it is important to acknowledge that the data collection was conducted two months after the bombing incident in Bangkok; thus, it could be possible that the stress perception of the respondent might be affected by fear of future bombing rather than the economic slowdown.

The main findings obtained from this study provide recommendations for entrepreneurs that can guide the development of skills and competencies that allow them to perform effectively during unfavorable economic conditions. Given the difficulties that businesses inevitably face during the economic slowdown, it is crucial for entrepreneurs to exhibit the characteristics that can enhance their ability to make strategic executions quickly in response to unforeseen opportunities and threats that (a) increase their firms' chances of survival and (b) maintain satisfactory performance in the pressure-filled business environment. This findings of this study showed that entrepreneurs who exhibit a higher level of mindfulness demonstrate a higher degree of

improvisational behavior, represented by their ability to perform well under pressure, develop creative resource deployment, and demonstrate perseverance despite the perceived difficulties they encounter. Given that improvisational behavior is important for maintaining strong business performance, the author proposes that it be regarded as a crucial competency for entrepreneurs to develop to improve their effectiveness during times of economic uncertainty.

Hmieleski and Corbett (2008) propose that entrepreneurs can be trained to become improvisers that are more effective. As the research found that mindfulness associates positively with improvisational behavior, which subsequently explained higher business performance, the author suggests that mindfulness can be an essential characteristic for entrepreneurs to cultivate. More importantly, the ability to manage stress is a major aspect of improvisational behavior, and being mindful may promote the psychological health of entrepreneurs during stressful business conditions. As prior evidence has shown that entrepreneurs tend to belong to a career group that is more susceptible to stress, given the considerable responsibilities and risks they endure (Buttner, 1992), being mindful might also be a characteristic that lessens the propensity of entrepreneurs to suffer from occupational stress.

Findings from the literature support that one can develop and enhance mindfulness through proper training, such as meditation and other mindfulness-based training techniques (Hindman et al., 2014). Several experiments have also confirmed that improvements in mindfulness quality after undergoing training (Grossman et al., 2004; Teasdale et al., 2000). Given the scientific evidence supporting the benefits of mindfulness, entrepreneurs should consider mindfulness training as part of their development to enhance their entrepreneurial skills, strengthen their competencies, and enhance their firms' competitiveness to perform well in dynamic business environments.

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No potential conflict of interest was reported by the author.

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