



Entrepreneurs' improvisational behavior and new venture performance: Firm-level and institutional contingencies

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ABSTRACT

Despite the growing research on the influence of entrepreneurs' improvisational behavior on organizational outcomes, there is limited understanding of the specific firm-level and institutional conditions under which entrepreneurs' improvisational behavior can effectively drive the success of new ventures. This paper contributes to filling this gap by investigating the moderating effects of financial resource capability and institutional support on the relationship between entrepreneurs' improvisational behavior and new venture performance. The study's theoretical model is validated by employing confirmatory factor analysis and hierarchical regression on primary data obtained from 395 new ventures in Ghana. The results reveal a significant positive moderating effect of financial resource capability on the relationship between entrepreneurs' improvisational and new venture performance. In addition, the findings show that the effectiveness of improvisation behavior in driving a firm's success depends on the level of institutional support. Implications for research and practice are discussed.

1. Introduction

Scholarly evidence shows that knowledge accumulation around improvisational behavior and its organizational outcomes has been substantial (e.g., Baker & Nelson, 2005; Crossan & Sorrenti, 1997; Hmieleski & Corbett, 2006; Hmieleski, Corbett, & Baron, 2013; Mullins & Komisar, 2009; Vera & Crosson, 2005; Weick, 2001). Improvisational behavior is generally perceived as the ability of entrepreneurs to extemporaneously create and execute strategic new plans (i.e., improvise). Although this is considered a crucial entrepreneurial ability (e.g., Hmieleski & Corbett, 2008), improvisational behavior does not always result in positive organizational outcomes (Crossan, Cunha, Vera, & Da Cunha, 2005; Vera & Crosson, 2005). Instead, the influence of entrepreneurs' improvisational behavior is likely to be contingent on several conditional factors.

The entrepreneurship literature shows that the firm-level conditions and institutional frameworks under which entrepreneurs' improvisational behavior relates to performance of new ventures are under-explored. Consequently, this paper examines these two potential ways in which the potency of improvisation drives new venture success. First, despite growing interest in the role of resource availability in entrepreneurship (e.g., Barney, 1991; Makadok, 2001), the potential ways in which a firm's financial resource capability interrelates with other

salient predictors to improve firm performance have not been duly examined. This study contributes to closing this gap by exploring whether a firm's financial resource capability limits or enhances the performance benefits that accrue from entrepreneurs' improvisational behavior. The major rationale underlying this enquiry is that increases in individuals' perceptions of resource availability make them prone to improvise (Banin et al., 2016). According to the literature in organizational settings, resource constraints drive top managers to adhere to plans and only slightly deviate from them (Covin, Slevin, & Schultz, 1997). The general view in the literature suggests that resource availability is crucial for entrepreneurial behavior to flourish.

Second, to date, the literature has failed to shed light on the particular conditions in which varying levels of institutional support impact improvisational behavior to increase a firm's performance. Regrettably, this gap still remains despite the mounting research evidence, which suggests that there is a lack of theoretical clarity regarding the institutional contexts (e.g., Blau, 1964; Klapper, Laeven, & Rajan, 2006) under which improvisational behavior drives firm success. This paper draws insights from the central proposition of North's (1990) institutional theory, which contends that institutions determine the rules of the game. The essence of this theory is that the broader context of businesses – consisting of social, cultural, economic, political and technological factors – significantly influences entrepreneurial behavior.

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Therefore, the expectation is that entrepreneurial new ventures are likely to adapt their activities and strategies to fit the opportunities and limitations provided through formal and informal institutional frameworks.

Against the backdrop of the foregoing arguments, this paper examines the following research question: *How do financial resource capability and perceived institutional support influence the performance benefits of entrepreneurs' improvisational behavior?*

This paper contributes to the entrepreneurship literature in three main ways. First, it illustrates the specific ways in which different levels of institutional support combine with entrepreneurs' improvisational behavior to enhance firm success. This approach is considered a useful extension of the literature because it provides strategic insights into the appropriate institutional context, which enhances the potency of entrepreneurial behavior on firm success.

Second, by examining the conditional effect of institutional context on entrepreneurial behavior, this paper contributes to the upper echelons literature (Hambrick, 2007; Hambrick & Mason, 1984). Even though the upper echelons theory emphasizes the importance of top management's characteristics and how they impact strategic decision-making (e.g., Hambrick & Mason, 1984), it is silent on the potential effects on varying institutional conditions. However, top management strategic decisions are not taken in isolation, as the environment plays a significant role in the decision-making behavior of entrepreneurs. Thus, the outcome from this enquiry can help improve scholars' understanding of the appropriate institutional conditions under which entrepreneurs' improvisational behaviors are likely to drive new venture success.

Third, by proposing and verifying the moderating effect of a firm's resource availability on the link between improvisational behavior and new venture success, this paper extends the boundaries of existing entrepreneurship research regarding the role of improvisational behavior in driving firm success (Hmieleski et al., 2013; Hmieleski & Corbett, 2008).

The rest of the paper is organized as follows: First, the theoretical background and hypotheses are considered. Second, the study methods are described. Third, the findings from the analysis are presented. Finally, the theoretical and managerial implications for entrepreneurship are followed by the conclusion.

2. Theoretical background and hypotheses

2.1. Improvisational behavior

Scholarly enquiry into improvisational behavior in the entrepreneurship literature began over a decade ago (e.g., Baker, Miner, & Eesley, 2003; Baker & Nelson, 2005; Hmieleski et al., 2013; Hmieleski & Corbett, 2006; Hmieleski & Corbett, 2008). However, research in large organizations on improvisation is well-established (e.g., Akgun, Lynn, & Reily, 2002; Banin et al., 2016; Eisenhardt & Tabrizi, 1995). Improvisational behavior is defined as the inverse of foresight and planning, which involves impromptu action (Dickson, 1997; Weick, 1998). This suggests that improvisational behavior involves activities with a limited amount of advanced preparation. Improvisational behavior is an 'impromptu action' (Dickson, 1997) that is generally contrasted with rational models of organizational decision-making (Smith & Blundel, 2014). In management, improvisational behavior is considered a commonplace human capability that can be observed in many aspects of life (Kamoche, Cunha, & Cunha, 2002; Miner, Bassoff, & Moorman, 2001). For example, impromptu behavior is often connected with creative activities, such as music, theater, therapy or education (Miner et al., 2001). As the term has been utilized in different settings, it can be said that the concept of improvisation has subtle and different meanings depending upon the context.

In the management and entrepreneurship literature, improvisational behavior is generally perceived as the deliberate, spontaneous

execution of a novel activity (Hmieleski et al., 2013; Hmieleski & Corbett, 2008; Moorman & Miner, 1998). This paper adopts this definition. Arguably, an individual can improvise at any time. There may be many potential causes for such behavior, for example, the introduction of a problem, an opportunity for which the person has no satisfactory, pre-composed arrangement, or the desire for something new and impulsive.

2.2. Decision-making theory and improvisational behavior

Decision-making theory can be approached from two main perspectives: normative and descriptive (Grant, 2003). The normative approach sees top management or the upper echelon as using rational behavior to make optimal decisions in an organization. According to this view, decision-makers are able to use relevant information to make decisions that affect the organization. As with entrepreneurs, the generation and analysis of information in decision-making is crucial. The entrepreneurial process follows a rational planning progression, which manifests in the time and effort dedicated to gathering market intelligence as a precursor to effective strategy formulation, implementation, and control.

The second perspective, the descriptive school, holds that "actual decisions flow from cognitive limitations, political processes, routines and environmental constraints" (Haley & Stumpf, 1989, p. 477). Essentially, this view places much emphasis on what is happening today and is therefore limited regarding future predictions (Wiltbank, Dew, Read, & Sarasvathy, 2006). Moreover, this view contends that departing from a planned line of action, such as strategies, frequently goes unnoticed in reality (Tversky & Kahneman, 1986). As such, resulting actions derived from the descriptive view are considered heuristic-based (Slovic, Fischhoff, & Lichtenstein, 1977) and impulsive (Quinn, 1980). Based on these perspectives on decision-making, this study argues that entrepreneurial improvisation is a heuristic-based and satisficing form of behavior, set in bounded rationality.

In entrepreneurship, improvisational behavior can be utilized to assess how resources are connected to meet previous objectives in order to find what results are conceivable (Baker et al., 2003). In addition, improvisational behavior may be an effective behavior strategy for managing change, especially in conditions of underdeveloped institutional structures and resource constrained environments, such as those in emerging market settings.

In the following sections, this paper examines the potential moderating effects of financial resource capability and institutional support on the relationship between entrepreneurs' improvisational behavior and new venture performance. The study's conceptual model is presented in Fig. 1 below. The conceptual model shows that the link between improvisational behavior and new venture performance is moderated by levels of financial resource capability. In addition, the proposed model shows that entrepreneurs' perception of stronger

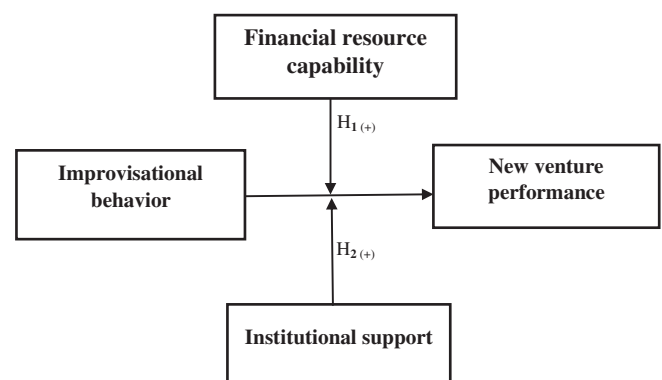


Fig. 1. Conceptual model of the study.

institutional support translates improvisational behavior into enhanced performance outcome. In the next section, the study's hypotheses are developed for each of these relationships.

2.3. Moderating effects of financial resource capability

Financial resource capability refers to entrepreneurs' perception of availability of relevant financial capital (Cooper, Gimeno-Gascon, & Woo, 1994; Wiklund & Shepherd, 2005) for carrying out firm-related decisions. Clearly the pursuit of entrepreneurial success requires resources (Mousa, Marlin, & Ritchie, 2013). Unavailability of financial resources can be prohibitive to the strategic options open to entrepreneurs (Tushman & Anderson, 1986), and this can hamper the opportunity to leverage the performance benefits of improvisational behavior. More importantly, improvising with limited resources might lead to imperfect solutions, which may eventually fail to address strategic challenges.

Usually, entrepreneurs need to remain flexible in order to formulate and effectively execute novel strategic decisions in order to develop their businesses (Mullins & Komisar, 2009). Access to greater financial capital allows entrepreneurs to pursue new growth opportunities (Penrose, 1959), which in turn support resource-intensive growth strategies. Thus, access to more resources facilitates improvisational behavior because entrepreneurs are likely to take impromptu novel action (Dickson, 1997) that could result in improved performance. Conversely, improvising with constrained resources may be prohibitive to strategic options (Baker et al., 2003; Baker & Nelson, 2005). Thus, access to financial resources is considered crucial for entrepreneurs, as these can be relatively easy to convert into other types of resources (Dollinger, 1999). Moreover, slack financial resources are generally deemed to provide flexibility for entrepreneurs to enhance creativity and thus bolster performance.

This study uses insights from the financial slack perspective (Kraatz & Zajac, 2001) to argue that the level of liquid assets, such as cash on hand, available to an organization typically helps entrepreneurs improvise to pursue new growth opportunities. In other words, this study contends that the more entrepreneurs are capable of accessing financial resources, the greater is the benefit that a firm obtains from its founder's improvisational behavior. In contrast, when entrepreneurs have less access to financial resources, a firm accrues fewer benefits from its founder's improvisational behavior. The above arguments lead to the following hypothesis:

H1. A firm's financial resource capability will have a positive moderating effect on the relationship between entrepreneurs' improvisational behavior and new venture performance.

2.4. Moderating effects of perceived institutional support

Institutional support reflects the opportunities provided to entrepreneurs in terms of the ease of doing business (Saeed, Yousafzai, Yani-De-Soriano, & Muffatto, 2015; Turker & Selçuk, 2009). The context of entrepreneurship is mainly shaped by economic and political mechanisms, which are governed by the actors in the public, private, and non-governmental sectors. Moreover, institutions are important, as they represent the structures that provide the incentives for different types of economic activity. While public sector institutions make laws, regulations and policies related to government assistance for entrepreneurship, private sector establishments define the way of life, norms, convictions, and expectations of this activity (Ingram & Silverman, 2002; Saeed et al., 2015). Thus, support for entrepreneurs can enhance creativity and efficiency.

Conversely, where there is less support for entrepreneurs, there is the danger of chaos, and this can be prohibitive to the strategic options open to entrepreneurs. Thus, high (as opposed to low) levels of institutional support are ideal for converting improvisational behavior

into enhanced performance outcome. For instance, if there are some barriers to entering the market, people may exhibit lower entrepreneurial improvisational behavior. However, if entrepreneurs perceive the environment to be supportive, they will be more confident in deviating from their plans in order to adapt to the institutional conditions. Therefore, this study derives insights from institutional theory (North, 1990, 2005) to argue that when entrepreneurs perceive higher institutional support in the environment, the benefit that a firm obtains from entrepreneurs' improvisational behavior increases. Thus, the following hypothesis is presented:

H2. Entrepreneurs' perception of institutional support will have a positive moderating effect on the relationship between entrepreneurs' improvisational behavior and new venture performance.

3. Methods

3.1. Sample and data sources

The sample of entrepreneurs in the manufacturing sector was drawn from the Registrar General's Department. Ghana represents an important context to test the study's hypotheses for the following reasons. First, Ghana's open market economy provides a unique context to examine how Western industrialized theories perform in an emerging country setting (Banin et al., 2016). Second, the Ghanaian business environment remains the most conducive setting for conducting business in West Africa (World Bank, 2011). Therefore, investigating entrepreneurs' improvisational behavior in Ghana offers an important emerging economy perspective in understanding firm-level outcomes.

The respondents were entrepreneurs (i.e., founders or owners who have participated in the start-up process for their new ventures). In this study, a new venture is defined as a firm that is no > 10 years from its foundation. Ventures up to 10 years of age were selected, as this age helps capture firms at various stages of development, including those at the early, growing and stabilization stages of their development (Cardon & Kirk, 2015). The sample consisted of ventures founded in 2003 or later, privately-owned, and with fewer than 250 employees as of 2013. A sample of 1600 such firms was randomly selected from a database held by the Ghana Companies Register (available at the Registrar General's Department). This database contained a total of 10,500 manufacturing ventures.

Data were collected in two phases. This study followed previous studies in the research setting (e.g., Hinson & Sorensen, 2006) by employing data collectors. A team of field agents who were trained and led by the lead author of this paper administered the questionnaire. In the first phase of the study, all 1600 firms were contacted with a questionnaire. This study cross-checked the data collected from all of the respondents by telephone to ensure that they had been collected from the right firms. After several rounds of phone and personal follow-ups, 565 responses (35.3%) were obtained from the first study.

Three years later, the entrepreneurs of the 565 firms that took part in the first study were contacted to capture data on the dependent variable (new venture performance). This was done to mitigate potential common method bias issues associated with single-informant, self-reported data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Accordingly, using the same interviewers, a second hand-delivered questionnaire (three years after the first survey had been completed) was administered. This study received 395 responses from the second survey, representing 69.9%. Thus, this study relied on the 395 matched questionnaires across Time 1 and Time 2 for the analyses presented herein. To assess non-response bias, this study compared data obtained from the early and late respondents. The results showed no significant difference in the constructs used in the study (Armstrong & Overton, 1977).

Table 1
Constructs, measurement items and reliability and validity tests.

Item description	Loadings (t-values)
<i>Improvisational behavior</i> (Hmieleski & Corbett, 2006): $\alpha = 0.85$; CR = 0.86; AVE = 0.75	
-I demonstrate originality in my work	0.77 (fixed)
-I am creative when asked to work with limited resources	0.93 (17.80)
-I identify ways in which resources can be recombined to produce novel products	0.84 (15.10)
-I take risks in terms of producing new ideas in completing projects	0.83 (12.47)
-I need pressure in order to focus	0.79 (15.87)
-I seek out pressure-filled environments	0.92 (16.99)
-I wait until the last moment to complete projects	0.97 (18.81)
-I “think on my feet” when carrying out actions	0.85 (16.73)
-I respond to problems in a “spur of the moment” way	0.88 (16.34)
-I am not easily distracted	0.83 (12.78)
-Nothing is more important than the achievement of my goals	0.74 (11.12)
-During a catastrophe, I am likely to adopt a leadership role	0.69 (10.71)
<i>Financial resource capability</i> (Cooper et al., 1994; Wiklund & Shepherd, 2005): $\alpha = 0.89$; CR = 0.88; AVE = 0.59	
-We are satisfied with the financial capital available for the business operations	0.72 (fixed)
-Our company has easy access to financial capital to support its business operations	85 (15.70)
-Our business operations are better financed than our key competitors' operations	88 (17.62)
-If we need more financial assistance for our business operations, we can easily obtain it	0.91 (19.45)
-We are able to obtain financial resources at short notice to support business operations	73 (12.19)
<i>Institutional support</i> (Turker & Selçuk, 2009): $\alpha = 0.85$; CR = 0.87; AVE = 0.54	
-In Ghana, entrepreneurs are encouraged by an institutional structure	0.64 (fixed)
-The Ghanaian economy provides many opportunities for entrepreneurs	0.81 (23.33)
-Taking out bank loans is quite difficult for entrepreneurs in Ghana (r)	0.75 (17.22)
-Ghanaian state laws are averse to running a business (r)	0.90 (29.44)
<i>New venture performance</i> (Luk et al., 2008; Sheng, Zhou, & Li, 2011): $\alpha = 0.92$; CR = 0.94; AVE = 0.65	
-Profitability	0.85 (fixed)
-Profit margins	0.91 (17.23)
-Return on investment	0.83 (13.20)
-Market share	0.88 (19.60)
-Return on asset	0.75 (9.23)
-Profitability growth	0.91 (16.45)
-Sales growth	0.85 (17.12)

Note: r = reverse coded.

3.2. Measures

In this study, established measures were used from the existing literature. All measures were assessed with a seven-point Likert scale. Details of specific items measuring the constructs, including their respective factor loadings and t-values, are presented in Table 1.

3.2.1. Improvisational behavior

The improvisational behavior ($\alpha = 0.85$) scale was adapted from Hmieleski and Corbett (2006) to measure the degree to which entrepreneurs display improvisational behavior in their work role. This scale contains 12 items, and respondents were asked to rate the extent to which each item was related to their behaviors while in their roles as entrepreneurs. The combined mean of the items constituted the respondents' tendency to improvise (Hmieleski et al., 2013).

3.2.2. Financial resource capability

A firm's financial resource capability ($\alpha = 0.89$) is operationalized in terms of availability of financial capital or ease of accessing financial capital. To measure financial resource capability, items from previous studies (e.g., Cooper et al., 1994; Wiklund & Shepherd, 2005) were used. To capture the financial resource capability construct, a 7-point Likert scale with anchors ‘strongly disagree’ and ‘strongly agree’ was used.

3.2.3. Institutional support

To measure institutional support, a four-item scale developed by Turker and Selçuk (2009) ($\alpha = 0.85$) on a 7-point Likert scale with anchors ‘strongly disagree’ and ‘strongly agree’ was used.

3.2.4. New venture performance

New venture performance was measured using seven subjective

items taken from previous studies (e.g., Luk et al., 2008; Sheng et al., 2011). Entrepreneurs compared their firms with their main industry competitors in the last three years on a seven-point Likert scale with anchors ranging from 1 = much worse than competitors to 7 = much better than competitors ($\alpha = 0.88$).

3.2.5. Control variables

Controls included six variables that have been shown to influence the outcome variable. These include firm size, firm age, prior growth, founder age, education and entrepreneurial experience. Firm age was measured as the number of years a firm has been operating since its formation. To prevent skewness, firm size was measured as the natural logarithm of the number of employees of the firm (Sheng et al., 2011). To create the prior growth variable, average revenue and employment growth rates for three years prior to the survey data collection were constructed, and these were standardized and summed. Founder's age was measured as the number of years of age of the entrepreneur, and the entrepreneur's educational attainment was coded as 1 = “high school,” 2 = “Higher National Diploma,” 3 = “bachelor's degree,” 4 = “master's degree,” or 5 = “doctoral degree.” To measure entrepreneurial experience, the respondents were asked to state the number of previous firms they had founded (Hmieleski et al., 2013).

3.3. Validity and reliability tests

This study statistically tested for potential common method bias in the data by following the procedures recommended by Cote and Buckley (1987). Accordingly, three competing method models (Table 2) were estimated. First, a trait-only model in which all indicators loaded on a single latent factor was estimated. Second, a method-only model in which each indicator is allowed to load on its respective latent factor was introduced.

Table 2
Common method bias nested models: goodness-of-fit statistics.

Model	χ^2	df	χ^2/df	RMSEA	CFI	NNFI	GFI
M1: trait	9855.22***	1807	5.45	0.182	0.48	0.29	0.79
M2: method	1822.24***	1023	1.78	0.044	0.89	0.90	0.61
M3: trait-method	1219.43***	1002	1.22	0.02	0.97	0.96	0.95

df, degrees of freedom; RMSEA = root mean square error of approximation; CFI = comparative fit index; NNFI = non-normed fit index; GFI = goodness of fit index.

*** $p < 0.001$.

Third, this study examined a method and trait model involving a common factor linking all of the indicators in Model 2. To test for potential common method bias, this study compared all three models. The results show that Model 2 and Model 3 are better than Model 1. Additionally, the results reveal that Model 3 is not significantly superior to Model 2. The results provide support to argue that common method bias did not influence the study's data.

Subsequently, the maximum likelihood estimation method and covariance matrix are used to examine the psychometric properties of all the multi-item scales in confirmatory factor analysis (CFA) using the LISREL 8.5 software package for the analyses. CFA was used to detect any problematic indicators of the study's constructs. The results of the CFA reveal that item loadings were in their hypothesized direction and are positive and significant, confirming the convergent validity of the measures. In addition, the Cronbach's Alpha reliability, composite reliability and discriminant validity of the measures are deemed acceptable (Bagozzi & Yi, 2012). Moreover, each factor loading exceeds the suggested cut-off value of 0.40 and is significant at $p < 0.001$, indicating convergent validity of the scales (e.g., Anderson & Gerbing, 1988). In addition, average variance extracted (AVE) was inspected, and the results show that each AVE is higher than 0.50 and larger than the squared correlation between each pair of constructs (Bagozzi & Yi, 2012).

Following the assessment of the psychometric properties of all the multi-item scales, the fit of the measurement model using a number of fit heuristics is assessed. The overall fit of the CFA measurement model is considered acceptable given the following output: $\chi^2/df = 1902.50/1585$; $\Delta\chi^2/\Delta df = 1.20$; RMSEA = 0.05; NNFI = 0.94; CFI = 0.93; and SRMSR = 0.05. Thus, the model provides support for the robustness of the measurement items used (Ping, 2004).

4. Results

To test the hypotheses of the study, a moderated hierarchical regression was used. Under the hierarchical regression procedure, all of the variables were entered sequentially in order to investigate whether the next higher-order interaction(s) account for a statistically significant difference in the total explained variance (Wiklund & Shepherd, 2005). To attenuate potential multicollinearity concerns, all of the variables involved in interaction analysis were mean-centered prior to model estimation. The variance inflation factors (VIF) for all the regression models were then calculated. The highest VIF value of 3.08 was lower than the recommended threshold value of 10. Thus, the results suggest that multicollinearity problems did not affect the study's data (Aiken & West, 1991).

Table 3 presents the correlations and descriptive statistics. New venture performance correlates significantly and positively with entrepreneurs' improvisational behavior, as well as with financial resource capability and perceived institutional support. This suggests that the true values of these variables are not concealed by other variables in the study (Warner, 2013). As indicated by the findings of the study, the independent variables relate significantly to the dependent variable (new venture performance) in the regression analysis in Table 4 (Model 3).

Table 4 reports the regression results. Model 1 includes the control variables. Model 2 adds improvisational behavior. Model 3 also adds financial resource capability, perceived institutional support and the interaction between financial resource capability and institutional support. Model 4 includes the interaction of improvisational behavior and financial resource capability, while Model 5 adds the interaction between improvisational behavior and perceived institutional support. Lastly, Model 6 includes a three-way interaction between improvisational behavior, financial resource capability and perceived institutional support. The results are discussed in terms of specific hypotheses.

Although this study did not specify any direct relationship between entrepreneurs' improvisational behavior and new venture performance, the findings show a positive and significant relationship ($\beta = 0.18$, $p < 0.01$). Hypothesis 1 proposes that a high degree of financial resource capability positively moderates the relationship between an entrepreneur's improvisational behavior and new venture performance. Model 4 tests this hypothesis by adding the interaction terms between financial resource capability and new venture performance, calculated by multiplying the mean-centered financial resource capability and new venture performance scores for each firm. The results show that a high degree of financial resource capability positively moderates the improvisational behavior and new venture performance relationship ($\beta = 0.49$, $p < 0.01$). Based on the results of Model 4, Hypothesis 1 is confirmed.

Hypothesis 2 states that perceived institutional support moderates the relation between improvisational behavior and new venture performance. As shown in Model 5 of Table 4, perceived institutional support moderates the relationship between entrepreneurs' improvisational behavior and new venture firm performance ($\beta = 0.44$, $p < 0.01$). Thus, the results provide support for Hypothesis 2.

Following the procedure recommended by Cohen, Cohen, West, and Aiken (2003), the interactions are plotted at ± 1 s.d. to facilitate interpretation. As shown in Fig. 2, a high degree of improvisational behavior and greater levels of financial resource capability generate higher performance relative to counterparts with low improvisational behavior and low financial resource capability. The implication of these results is that new ventures, which tend to have a strong financial resource, are more likely to increase performance in association with entrepreneurs who tend to highly improvise, whereas this relationship is less pronounced for firms that tend to have a lower degree of financial resource capability. In addition, Fig. 3 shows that a high degree of improvisational behavior and greater levels of institutional support generate higher performance relative to counterparts with low improvisational behavior and less institutional support.

In a post hoc test, the effect of a three-way interaction between improvisational behavior, financial resource capability and institutional support on new venture performance is investigated in Model 6. The coefficient of the three-way interaction term is significant ($\beta = 0.63$, <0.01), and the significant change in R^2 demonstrates a significant improvement in model fit from Model 5 to Model 6, suggesting that the three-way interaction term provides an additional explanation of the variation in new venture performance. Because of the difficulty in interpreting a three-way interaction solely from the coefficient value, Fig. 4 plots the three-way interaction, again following the procedure outlined by Cohen et al. (2003). The results indicate that new venture performance increases significantly at increasing levels of improvisational behavior, financial resource capability and institutional support. On the contrary, under conditions of low improvisational behavior, low financial resources and low institutional support, new venture performance is significantly reduced.

5. Discussion and implications

This study sought to answer one primary research question: How do financial resource capability and perceived institutional support influence the performance benefits of entrepreneurs' improvisational

Table 3
Descriptive statistics and correlations (square roots of AVE in diagonal).

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Firm size	15.62	3.89										
2. Firm age	7.22	1.21	−0.05*									
3. Prior growth	11.23	2.18	0.16**	−0.12*								
4. Founder's age	50.21	14.20	−0.01	−0.02	−0.15**							
5. Education	2.96	1.18	0.11*	0.15**	0.11*	0.00						
6. Entrepreneurial experience	0.95	1.2	0.20**		0.23**	0.25**	0.33**					
7. Financial resource capability	5.70	2.41	0.14*	0.24**	0.20**	0.14*	−0.06*	0.04	(0.76)			
8. Institutional support	3.68	1.34	−0.07*	−0.12**	0.15**	0.11*	0.01	0.00	0.04	(0.73)		
9. Improvisational behavior	5.42	1.08	0.09*	0.00	0.22**	0.33**	0.18**	0.19**	0.37**	0.31**	(0.86)	
10. New venture performance	4.96	1.35	−0.04	−0.05	−0.14*	0.04	0.36**	0.25**	0.28**	0.29**	0.35**	(0.80)

N = 395; S.D. = standard deviation.

* $p < 0.05$ (2-tailed test).

** $p < 0.01$ (2-tailed test).

behavior? Specifically, using arguments from the institutional theory (North, 1990, 2005) and financial slack perspectives (Kraatz & Zajac, 2001), this study argues that firms led by highly improvised entrepreneurs are more likely to achieve success when financial resources are readily available. In addition, this paper contends that highly improvised entrepreneurs are likely to achieve success when they perceive the environment to be institutionally supportive. The results of the empirical analysis provide support for the argument that the relationship between entrepreneurs' improvisational behavior and new venture performance is moderated by financial resource capability and institutional support.

The results contribute to the entrepreneurship literature in several ways. First, this study shows that the potency of entrepreneurs' improvisational behavior in driving performance is contingent on a firm's financial resource capability and institutional support. Specifically, this finding sheds light on the question of when entrepreneurs' improvisational behavior actually relates to new venture performance. The outcomes reported above show that entrepreneurial improvisation significantly and positively affects new venture performance when there is greater availability of financial resources as well as institutional

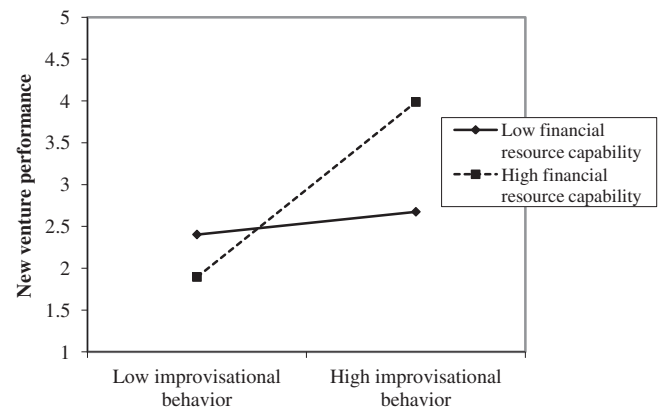


Fig. 2. Interaction effect of improvisational behavior with financial resource capability on new venture performance.

Table 4
Results of standardized moderated hierarchical regression analyses.

Independent variables	Dependent variable: New venture performance (N = 395)					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control variables						
Firm age (years)	−0.09*	−0.08*	−0.06*	−0.05	−0.04	−0.08*
Firm size (employees)	−0.05*	−0.02	−0.09*	−0.04	−0.03	−0.07*
Prior growth	−0.06*	−0.08*	−0.11*	−0.09*	−0.11*	−0.14**
Founder's age	0.04	0.12*	0.11*	0.09*	0.06*	0.14**
Education	0.06*	0.05	0.03	0.09*	0.02	0.07*
Entrepreneurial experience	0.21***	0.13**	0.08*	0.12*	0.17***	0.19***
Direct effects						
Improvisational behavior (IB)		0.18***	0.16***	0.19***	0.22***	0.26***
Financial resource capability (FRC)			0.19***	0.20***	0.16***	0.22***
Institutional support (IS)			0.17***	0.19***	0.15***	0.19***
FRC × IS			0.25***	0.27***	0.22***	0.29***
Moderating effects						
H ₁ : IB × FRC				0.49***	0.47***	0.51***
H ₂ : IB × IS					0.44***	0.46***
IB × FRC × IS						0.63***
Model fit statistics						
F-value	3.0***	3.5***	3.7***	6.9***	7.04***	7.55***
R ²	0.11	0.14	0.24	0.38	0.42	0.47
ΔR ²	–	0.05*	0.06*	0.09***	0.11***	0.15***
Largest VIF	1.35	1.27	1.25	3.08	1.33	2.05

Critical t-values are 2.325, 1.645 and 1.282, respectively (one-tailed test, as all hypotheses are one-directional).

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.10$.

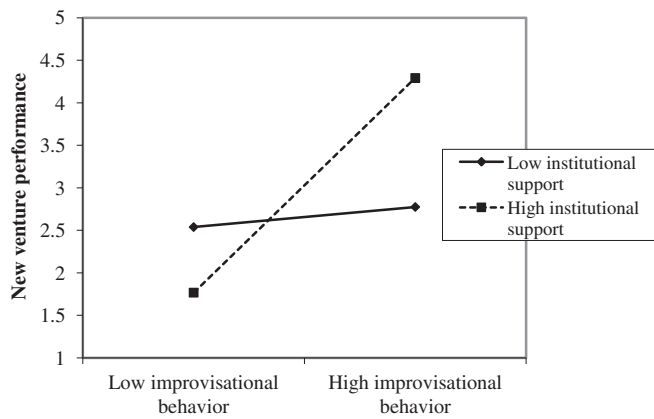


Fig. 3. Interaction effect of improvisational behavior with institutional support on new venture performance.

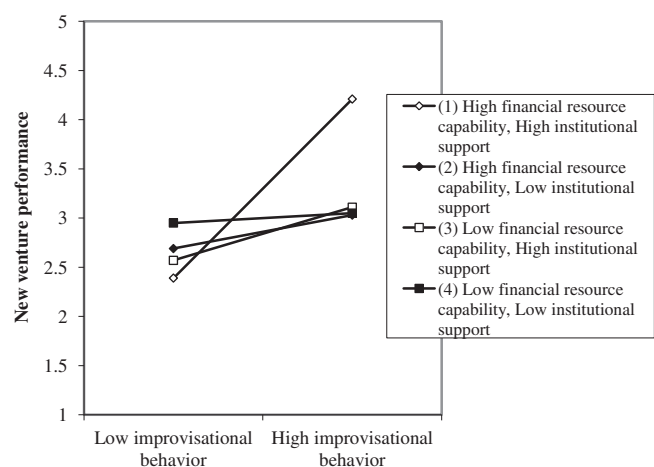


Fig. 4. Interaction effect of improvisational behavior, financial resource capability and institutional support on new venture performance.

support, at least in a developing economy situation. By this verification, this study helps to extend the frontiers of the extant entrepreneurship literature, which considers improvisational behavior as a crucial element in entrepreneurial decision-making (e.g., Crossan & Sorrenti, 1997; Hmieleski et al., 2013; Miner et al., 2001; Vera & Crosson, 2005).

Second, the results broaden the scholarly understanding of the complex processes through which individual-level variables (improvisational behavior), environmental context (institutional support) and firm-level variables (financial resources capability) interactively influence firm-level outcomes such as venture performance. Understanding these processes has been recognized as a crucial task in entrepreneurship research (e.g., Baron & Tang, 2011). Thus, this study contributes to the progress of this task by illuminating a scholarly understanding of the mechanisms through which entrepreneurs' improvisational behavior, institutional support and financial resource capability interact to enhance performance in new ventures.

Third, this study contributes to building the upper echelons theory. Specifically, it extends previous literature with respect to individual entrepreneurs' efforts in enhancing venture performance (e.g., Baron, Tang, & Hmieleski, 2011; Hambrick, 2007) and responds to recent calls to interactively examine individual, firm-level and environmental factors underlying venture performance (e.g., Baron, Hmieleski, & Henry, 2012). Earlier entrepreneurship work suggests that the entrepreneurial processes occur because people act to pursue opportunities (e.g., Shane, Locke, & Collins, 2003). This indicates that entrepreneurship is a deliberate and intentional process (Bird, 1992; Krueger, Reilly, & Carsrud, 2000). However, conditional factors such as the nature of the macro

environment and resource constraints can also hamper entrepreneurs from executing their plans as initially intended (Baker et al., 2003; Baron, 2008). This makes entrepreneurs deviate from their original plans in order to adapt to these conditions (Hmieleski & Ensley, 2004).

This study suggests that the ability to extemporaneously create and execute new plans to enhance venture performance is contingent on institutional support and financial resource capability. By showing the positive moderating effects of institutional support and financial resource capability on the relationship between entrepreneurs' improvisational behavior and new venture performance, this study helps to incrementally extend the literature on upper echelons by empirically testing the effect of important environmental and firm-level variables on new venture performance.

Beyond its theoretical implications, this study has strong practical implications. First, it can guide new Ghanaian ventures to improve performance through the use of improvisational behavior, when the institutions are supportive to entrepreneurship development as well as when entrepreneurs have access to financial resources. The findings from the study indicate that high levels of institutional support and financial resource capability enhance the potency of entrepreneurs' improvisational behavior in driving new venture performance. The implication is that policy makers should design strategies to offer more support and provide financial access to entrepreneurs to encourage efforts to develop new ventures.

Second, this study shows that institutional context and access to financial resources increase entrepreneurs' potency to improvise in order to drive performance in new firms. Thus, it is crucial to observe that higher levels of financial resource availability and institutional support are advantageous when entrepreneurs need to alter their original plans in order to remain flexible. For example, when the environment is supportive and financial resources are available, entrepreneurs are motivated to take on bigger challenges in order to be creative. Thus, financial resource availability and institutional support can help entrepreneurs in developing greater entrepreneurial opportunities. These observations are particularly relevant for the survival and growth of new ventures in developing and emerging countries, given the traditionally poor institutional support (especially from governmental bodies) and more pronounced resource constraints in these markets compared to conditions in developed markets.

Third, this study has implications for angel investors and venture capitalists. That is, it may be crucial to understand when entrepreneurs are likely to be successful when they improvise. For example, investors are incentivised to invest in entrepreneurs whose strategic decisions will create growth companies that can generate greater income through trade sales (Gompers, 1996). Overall, the importance of the research topic examined and the contexts of the study clearly underline the contribution of the study. In particular, they offer new theoretical and practical insights that help extend our current understanding of the relation between entrepreneurial improvisation behavior and new venture performance, especially in developing economies.

6. Limitations and further research directions

In spite of its contributions, this study has some limitations that can offer opportunities for future research. First, this study did not control for certain individual-level variables that may influence the research model. For example, other individual characteristics, such as ambiguity tolerance (e.g., Begley & Boyd, 1988) or internal locus of control (Judge & Bono, 2001), personal initiative (Bledow & Frese, 2009) and energy (Atwater & Carmeli, 2009), may provide alternative explanations for the hypothesized relationships. As a result, this study recommends future research on improvisational behavior to include these variables as controls.

Second, this study was conducted in the empirical context of new manufacturing ventures in Ghana, so the findings must be evaluated in the context of an emerging society. Although Ghana shares many

characteristics with other emerging economies and thus offers a rich context in which to test the impact of entrepreneurial behavior theories from a developing economy perspective, other developing countries may possess some unique and varied contextual elements that may reveal additional insights for theory development and practice.

Third, self-reported and perceptual measures are used for new venture performance. This has the potential to introduce respondent bias into the sample. Therefore, future research may make use of secondary sources of financial information. Fourth, the specific nature of this study's sample (entrepreneurs leading new ventures) limits the extent to which our findings can be generalized to other individuals and organizations. Therefore, the study's results are not informative regarding populations with large, old firms. Although there is no strong reason to assume that similar findings would not occur for entrepreneurs in other types of firms, entrepreneurs in old and large firms may not typically need to change course from their original plans, and these entrepreneurs may be inflexible in terms of their strategic plans for growth. In this light, this study encourages additional research that makes use of small and medium-sized enterprises (SMEs). Finally, the items measuring institutional support are insufficient, as issues such as rule of law, property rights, etc., were not captured in the questionnaire.¹ Future studies should include these items in measuring institutional support.

7. Conclusion

This study proposed that the link between entrepreneurs' improvisational behavior and new venture performance would be moderated by financial resource capability. Furthermore, this study argued that when an institutional environment is perceived to be supportive, the potency of improvisational behavior in driving a firm's success would be stronger. The results show that both financial resource capability and institutional support positively moderate the link between improvisational behavior and new venture performance. Overall, the findings of this study provide a more nuanced explanation of the conditions under which improvisational behavior drives firm success.

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