

Effect of entrepreneurial orientation on competency and micro-enterprise performance

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Abstract

Purpose – This study aims to examine the effect of creativity and innovativeness, risk taking propensity, proactiveness and autonomy on entrepreneurial competency and performance among micro-enterprises in Kelantan, Malaysia.

Design/methodology/approach – Adopting a cross-sectional design, the authors collected data from 403 micro-entrepreneurs who were registered under “Majlis Amanah Rakyat” and “Majlis Agama Islam dan Adat Istiadat”. Quantitative data were collected through structured interviews from September 2017 to December 2017.

Findings – The findings revealed that creativity and innovativeness, proactiveness and autonomy had a positive influence on entrepreneurial competencies. In addition, autonomy and entrepreneurial competencies had a positive effect on micro-enterprise performance. Then, entrepreneurial competencies showed a mediating effect on the relationships between creativity, innovativeness, autonomy and micro-enterprise performance.

Originality/value – The findings contributed to resource-based view and enriched the entrepreneurship literature, particularly in the context of small businesses in emerging economies. This study recommended underlying organizations to pay attention to the improvement of creativity and innovativeness, proactiveness, autonomy and entrepreneurial competencies among low-income entrepreneurs through useful policies and training programs, which were expected to improve micro-enterprise performance and encourage poor households to perform entrepreneurial activities for better socio-economic conditions.

Keywords Performance, Autonomy, Competency, Risk taking, Proactiveness, Creativity and innovativeness

Paper type Research paper

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Introduction

Small- and medium-sized enterprises (SMEs) play a crucial role in creating jobs and contributing to the socio-economic development (Bowen *et al.*, 2009; Wolcott *et al.*, 2008). Wolcott *et al.* (2008) noted that different types of micro-enterprises (full-time/part-time, home-based, street-front or farm-based) can facilitate enterprise formation process. All these micro-enterprises can contribute significantly to the socioeconomic development of low-income households that ensure a sustainable economic growth (Al-Mamun *et al.*, 2016). In Malaysia, micro-enterprises are categorized as businesses with an annual sales turnover of less than RM300,000 or fewer than five employees. The majority of these micro-enterprises are Malaysian SMEs that promote retailing activities within the country (Ahmad and Zabri, 2018).

Undeniably, entrepreneurial competencies can benefit small enterprises or organizations with insufficient financial resources and technological support (Perić *et al.*, 2017; Al Mamun, *et al.*, 2018). These competencies are considered as the abilities to complete a task by utilizing resources that improve micro-enterprise performance (Al-Mamun *et al.*, 2016). Mitchelmore and Rowley (2010) contended that entrepreneurial competencies are required to run small and new enterprises successfully. Man *et al.* (2002) also noted that individuals with competencies are able to carry out challenging tasks efficiently. Gerli *et al.* (2011) asserted that entrepreneurs have to develop their competencies and achieve excellent firm performance. Thus, the competencies entrepreneurs possess are expected to facilitate enterprise performance and economic growth (Mitchelmore and Rowley, 2013).

On top of that, it is crucial to identify other possible entrepreneurial competencies that can predict business success (Andrews *et al.*, 2011). Undoubtedly, entrepreneurial orientation is one of the critical factors that integrates, builds and reconfigures the external and internal competencies to cope with the fast-changing environments among SMEs (Darwis, 2017). This factor is commonly found to have a positive effect on performance (Caseiro and Coelho, 2018). Radulovich *et al.* (2018) revealed that entrepreneurial orientation together with relational and human capital directly influence the performance of SMEs. In addition, entrepreneurial orientation is the key determinant of growth and venture innovation (Hakala, 2013). It allows the top management to outline the vision that is likely to achieve competitive advantage (Rauch *et al.*, 2009). Furthermore, entrepreneurial orientation can assist in exploring innovative capabilities among organizations (Levinthal and March, 1993) and moderate the relationship between knowledge-based resources and firm performance (Dess and Lumpkin, 2005).

Many studies included both risk taking and innovativeness as requirements for entrepreneurial orientation. However, limited of them focused on proactiveness or autonomy. This indicates the first gap this study needs to fill in. Although entrepreneurial competencies are potential determinants of business success and economic development, additional research is needed to look into their core concepts, antecedents and associations with entrepreneurial performance and success (Andrews *et al.*, 2011; Gerli *et al.*, 2011; Mitchelmore and Rowley, 2010). This reflects the second significant gap this study attempts to address. From a micro-enterprise perspective, three in every five micro-enterprises experience failure within the first few months during their business operation (Bowen *et al.*, 2009). To illustrate, Wahid *et al.* (2017) highlighted that inadequate human competency is one of the main challenges micro-enterprises need to overcome to survive in the market. Evidently, there is a lack of thorough understanding about the factors that influence micro-enterprise performance. In this regard, it is important to identify the key factors affecting entrepreneurial competencies and micro-enterprise performance among low-income households who depend heavily on their income and skills, as they have limited access to

working capital and training (Al-Mamun *et al.*, 2016). To enhance our understanding of the micro-enterprise paradigm, this study examined the effect of entrepreneurial orientation (creativity and innovativeness, risk taking propensity, proactiveness, and autonomy) on entrepreneurial competencies and micro-enterprise performance in Kelantan, Malaysia. Therefore, this study is crucial for identifying promising approaches that improve micro-enterprise performance and socio-economic conditions of low-income households.

Literature review

Theoretical foundation

With the application of resource-based view (RBV), this study examined the relationship between entrepreneurial orientation, entrepreneurial competencies, and enterprise performance. According to RBV, the four criteria for sustainable advantages of resources are valuable, rare, inimitable, and non-substitutability (Barney, 1991). Resources can be both tangible and intangible in nature (Wernerfelt, 1984). RBV considers intangible resources as human capital characteristics such as competencies (Barney *et al.*, 2001). Traits, capabilities, and skills can be translated to internal unique set of resources that small firms must rely on (Lerner and Almor, 2002).

Every individual has unique entrepreneurial orientation and competencies that are difficult to be imitated by rivals because of the ambiguity in his or her origin and embeddedness (Gerli *et al.*, 2011; Tehseen and Ramayah, 2015). To apply RBV in the context of micro-enterprises, entrepreneurial orientation and competencies are unique management skills that can be considered as resources for accomplishing excellent enterprise performance. However, the relationships between the dimensions of entrepreneurial orientation, entrepreneurial competencies and enterprise performance can be complex that need to be supported under the premise of RBV.

The dimensions of entrepreneurial orientation

Entrepreneurial orientation is defined as the process, practice and decision-making that lead to new business ventures (Lumpkin and Dess, 1996). It is a set of behaviors including willingness to take risks, innovativeness, proactiveness, autonomy and competitive aggressiveness (Bolton and Lane, 2012). Unarguably, entrepreneurial orientation is an inherent trait for entrepreneurs with five dimensions (Richard *et al.*, 2004; Beattie, 2016). According to Rauch *et al.* (2009), the dimensions of risk taking, innovativeness and proactiveness are widely cited by the researchers. In the present study, creativity and innovativeness, risk taking propensity, proactiveness and autonomy are the four dimensions of entrepreneurial orientation to associate with entrepreneurial competencies and enterprise performance. Besides that, it is also possible to fit other dimensions into the broad boundaries of entrepreneurial orientation.

Creativity, innovativeness and entrepreneurial competencies

Creativity refers to the inventive ability to create solutions to problems and challenges in uncertain situations (Dess and Lumpkin, 2005). Innovativeness is described as an organization's efforts to discover novel opportunities and solutions which involve experimentation and creativity. Subsequently, it creates new products and services and improves their technical aspects (Dess and Lumpkin, 2005). On the other hand, competency refers to a method of analyzing an individual's traits that leads to task achievement or organizational success (Man *et al.*, 2002). In particular, entrepreneurial competencies consist of a specific set of traits that ensure successful entrepreneurship (Mitchellmore and Rowley, 2013).

In this study, RBV is applied to explain creativity and innovativeness, which are considered as individual-specific capabilities that create competitive advantage from non-replicable and inimitable resources (Barney, 1991; Grant, 1991). Specifically, creativity refers to those low-income households who work without supportive large organizations with limited standard stock responses or operating routines. This situation is likely to influence their inventive competencies to create solutions to problems and challenges that require creativity to effect solutions. Sánchez (2013) noted that both creative problem solving and innovativeness should be related to entrepreneurial competencies. Based on the above discussion, the following hypothesis is proposed:

- H1. Creativity and innovativeness positively and significantly influence entrepreneurial competencies among micro-enterprises in Kelantan, Malaysia.

Creativity, innovativeness and enterprise performance

Firm performance is a multidimensional construct that encompasses a firm's operational and financial outcomes (Venkatraman and Ramanujam, 1986). In line with RBV, the valuable creative and innovative capabilities of an entrepreneur can facilitate firm performance (Barney, 1991; Grant, 1991). In a recent study, Liu and Atuahene-Gima (2018) demonstrated that creativity in terms of marketing can predict product innovation performance better. Gong *et al.* (2013) also showed that core creativity of employees is positively associated with firm performance when absorptive capacity is high. Besides, Stopford and Baden-Fuller (1994) revealed that organizational innovation and creativity are influential factors of entrepreneurship. In actual fact, innovativeness is a main factor typifying entrepreneurship (Lumpkin and Dess, 1996). It encourages organizations to look for new opportunities and solutions that require experimentation and creativity in the invention of new products and services or improvement in technical aspects of existing products and services (Dess and Lumpkin, 2005). Based on the above discussion, the following hypothesis is proposed:

- H2. Creativity and innovativeness positively and significantly influence firm performance of micro-enterprises in Kelantan, Malaysia.

Risk taking propensity and entrepreneurial competencies

Risk taking propensity refers to "the degree to which managers are willing to make large and risky resource commitments, those which have a reasonable chance of costly failures" (Miller and Friesen, 1982). Organizations with entrepreneurial orientation are often exemplified by their risk taking behavior, such as making a large resource commitment or incurring a huge debt, in the interest of acquiring high returns by exploiting available opportunities within a marketplace (Lumpkin and Dess, 1996). Risk taking is a prominent scale used for predicting entrepreneurial orientation (Miller, 1983). It can be measured using managerial competence in projecting the firms' inclination toward risky projects and their preferable actions to achieve organizational objectives (Lumpkin and Dess, 1996; Miller, 1983). Reverting to RBV, entrepreneurial competency is greatly influenced by risk taking propensity as an individual-specific capability (Barney, 1991; Grant, 1991). According to Slovic *et al.* (1982), risk taking is associated with a firm's competency to perform in a critical environment. Sánchez (2013) pointed out that risk taking is an essential predictor of entrepreneurial intention and behavior. Based on the above discussion, the following hypothesis is proposed:

- H3. Risk taking propensity positively and significantly influences entrepreneurial competencies among micro-enterprises in Kelantan, Malaysia.

Risk taking propensity and enterprise performance

Risk taking is a commonly used concept to explain entrepreneurship (Lumpkin and Dess, 1996). Drawing on RBV, risk taking propensity is an individual-specific capability. It can be considered as a firm's rare and valuable resource which is inimitable in nature, thereby leading to outstanding firm performance (Barney, 1991; Grant, 1991). For instance, Zhang *et al.* (2018) found that risk taking propensity positively influences firm innovation performance. However, study conducted by Cho and Lee (2018) reported that risk taking propensity did not influence financial business performance. Furthermore, Li and Tang (2010) contended that risk taking can influence decision-making, which is likely to have an impact on firm performance and long-term development. Based on the above justifications, the following hypothesis is proposed:

- H4. Risk taking propensity positively and significantly influences firm performance among micro-enterprises in Kelantan, Malaysia.

Proactiveness and entrepreneurial competencies

Proactiveness is defined as acting in anticipation of future needs, problems or changes that fulfill market opportunities and initiatives (Lumpkin and Dess, 1996, 2001). RBV propounds that proactive behavior is a form of non-replicable and inimitable resources to instigate specific capabilities (entrepreneurial competencies) that generate competitive advantage (Barney, 1991; Grant, 1991). In fact, proactiveness promotes forward-looking competencies with innovative activities (Lumpkin and Dess, 1996). Sánchez (2013) posited that proactive individuals with initiatives are able to identify opportunities and show competencies to make a significant change. Undeniably, Priyanto and Sandjojo (2005) noted that proactiveness is one of the mental factors influencing learning competencies, which is likely to guarantee venture growth and success. Based on the above discussion, the following hypothesis is proposed:

- H5. Proactiveness positively and significantly influences entrepreneurial competencies among micro-enterprises in Kelantan, Malaysia.

Proactiveness and enterprise performance

From an opportunity-seeking and forward-looking perspective, proactiveness is characterized as heavy dependence on structural resource capital development and introduction of innovative services and products ahead of the competitors in anticipation of potential demands (Rauch *et al.*, 2009; Lumpkin and Dess, 2001). RBV categorizes proactive behavior as a firm's rare and valuable capability, which is known as individual-specific and inimitable in nature, leading to performance (Barney, 1991). To penetrate a new market, the second firm can be a pioneer as what the first entrant achieves to pinpoint the significance of proactiveness (Miller, 1983). Proactiveness should be initiated to shape the environment to one's own advantage. Thus, entrepreneurial orientation requires proactiveness to explore opportunities and respond to competition aggressively (Lumpkin and Dess, 1996). Lee *et al.* (2017) highlighted that directors with proactive behavior have the ability to improve the

financial performance of their firms. Considering the above theories and existing literature, the following hypothesis is proposed:

- H6. Proactiveness positively and significantly influences firm performance among micro-enterprises in Kelantan, Malaysia.

Autonomy and entrepreneurial competencies

Autonomy is defined as individuals' independent action of conveying a vision or an idea, which allows them to demonstrate their competencies required for smoothing the path to a successful entrepreneurship (Lumpkin and Dess, 1996). As suggested by RBV, resources with rare, valuable or inimitable features can facilitate the development of specific capabilities that potentially lead to excellent performance (Barney, 1991; Grant, 1991). Therefore, autonomy is an individual-specific and valuable resource required for running successful business. Dimitratos *et al.* (2014) found that autonomy can capture distinct entrepreneurial competencies among subsidiaries of multinational companies. Rugman and Verbeke (2001) also asserted that the advantages of competency can be generated from autonomous activities. Based on the theories and existing literature, the following hypothesis is proposed:

- H7. Autonomy positively and significantly influences entrepreneurial competencies among micro-enterprises in Kelantan, Malaysia.

Autonomy and enterprise performance

Autonomy refers to the ability and willingness to take self-directed actions in the pursuit of market opportunities that allow firms to make quick and self-reliant decisions and establish new markets with products or services (Li *et al.*, 2009). RBV agrees that firms from the same industry may perform differently as their resources and capabilities vary (Barney, 1991). In other words, autonomy is a specific capability, which determines firm performance. Dimitratos *et al.* (2014) noted that autonomy is a prerequisite of firm development used to capture firm-level entrepreneurship and relevant activities. According to Birkinshaw and Pedersen (2001), autonomy is considered an input derived from organizational development. Empirically, autonomy is found to have a positive effect on performance (Badjuri, 2017). Considering the above theories and previous studies, the following hypothesis is proposed:

- H8. Autonomy positively and significantly influences firm performance among micro-enterprises in Kelantan, Malaysia.

Entrepreneurial competencies and enterprise performance

In general, competencies are associated with the start-up, growth and sustainability of ongoing entities (Bird, 1995; Baum and Locke, 2004; Colombo and Grilli, 2005; Mitchelmore and Rowley, 2010). According to RBV, entrepreneurial competencies can be characterized as valuable knowledge, skills and abilities. They are considered valuable and intangible capabilities that can generate sustainable competitive advantage of the firms (Barney, 1991; Grant, 1991; Tehseen and Ramayah, 2015). Perić *et al.* (2017) confirmed that entrepreneurial competencies can foster business success. Moreover, entrepreneurial competency portfolio is expected to impact organizational performance positively (Gerli *et al.*, 2011). Personal relationships, business management and entrepreneurial and human relations are critical

competencies in ensuring successful entrepreneurship (Mitchelmore and Rowley, 2013). Besides that, entrepreneurial competencies are strong determinants of business success within SMEs (Ahmad *et al.*, 2010). Specifically, risk taking propensity and self-efficacy are entrepreneurial competencies that have a positive effect on micro-enterprise performance (Al-Mamun *et al.*, 2016). Based on the theories and existing studies, the following hypothesis is proposed:

- H9. Entrepreneurial competencies positively and significantly influence firm performance among micro-enterprises in Kelantan, Malaysia.

The mediating effect of entrepreneurial competencies

This study incorporated creativity and innovativeness, risk taking propensity, proactiveness and autonomy to predict entrepreneurial competencies, and in turn enterprise performance. In details, entrepreneurial competencies are expected to have a mediating effect on the relationship between creativity and innovativeness, risk taking propensity, proactiveness, autonomy, and micro-enterprise performance. In line with RBV, these dimensions of entrepreneurial orientation are considered rare, valuable and inimitable resources that give rise to specific capabilities (entrepreneurial competency), subsequently driving to excellent performance (Barney, 1991; Grant, 1991). As suggested by Baron and Kenny (1986), this study included creativity and innovativeness, risk taking propensity, proactiveness and autonomy as mediators on the relationship between entrepreneurial orientation and micro-enterprise performance:

- HM1. Entrepreneurial competencies significantly mediate the relationship between creativity, innovativeness and enterprise performance among micro-enterprises in Kelantan, Malaysia.
- HM2. Entrepreneurial competencies significantly mediate the relationship between risk taking propensity and enterprise performance among micro-enterprises in Kelantan, Malaysia.
- HM3. Entrepreneurial competencies significantly mediate the relationship between proactiveness and enterprise performance among micro-enterprises in Kelantan, Malaysia.
- HM4. Entrepreneurial competencies significantly mediate the relationship between autonomy and enterprise performance among micro-enterprises in Kelantan, Malaysia.

Research methodology

This study adopted a cross-sectional design and collected quantitative data through structured interviews to measure the effect of creativity and innovativeness, risk taking propensity, proactiveness and autonomy on entrepreneurial competency and micro-enterprises performance among low-income households in Kelantan, Malaysia. All associations hypothesized and tested are presented in Figure 1. The sample was micro-entrepreneurs and the list of these entrepreneurs was collected from two governmental organizations. Specifically, *Majlis Amanah Rakyat* provided a list of 2,690 micro-

entrepreneurs, whereas *Majlis Agama Islam dan Adat Istiadat* provided a list of 105 micro-entrepreneurs. With a total of 2,795 low-income micro-entrepreneurs, 425 of them were randomly selected from nine districts in Kelantan, namely, Tumpat, Bachok, Jeli, Machang, Gua Musang, Kuala Krai, Pasir Puteh, Pasir Mas and Tanah Merah. Prior to data collection, potential respondents were selected and informed about the purpose of doing the survey and make an interview appointment with them. Data collection was carried out from September 2017 to November 2017. As a result, a total of 403 respondents allowed the researchers to visit their enterprises and collect data from them through interviews.

Sample size

The sample size was determined using G-Power version 3.1. Based on the power of 0.95 (should be more than 0.80 in social and behavioral science research) with an effect size of 0.15, a sample size of 138 were needed to test the model with five predictors. To apply partial least squares-structural equation modeling (PLS-SEM), the minimum sample size is 100 (Reinartz *et al.*, 2009). As mentioned earlier, this study collected 403 samples from nine districts in Kelantan, Malaysia.

Research instrument

The questionnaire was designed using simple words to enable the respondents to understand the questions easily. Questionnaire items were adapted from the literature with minor revisions (see Appendix). First, items that measured creativity and innovativeness were adopted from several groups of researchers (Keh *et al.*, 2007; Wang, 2008; Bolton and Lane, 2012). Next, items that measured risk taking propensity were obtained from Keh *et al.* (2007) and Bolton and Lane (2012). To measure proactiveness, items were obtained from the combination of Lumpkin and Dess (2001), Wang (2008) and Bolton and Lane (2012). Besides that, items that measured autonomy were adopted from two groups of prominent scholars (Li *et al.*, 2009; Lumpkin *et al.*, 2009). Moreover, items that measured entrepreneurial competency were adopted from Man *et al.* (2008). Last but not least, items that were used to measure enterprise performance derived from Morgan and Strong (2003). A seven-point Likert scale (from “1-strongly disagree” to “7-strongly agree”) was used to respond to entrepreneurial competency. Likewise, a seven-point Likert scale (from “1-very poor” to “7-very good”) was used to respond to micro-enterprise performance. On the other hand, a five-point Likert scale (from “1-strongly disagree” to “5-strongly agree”) was used respond to all independent variables.

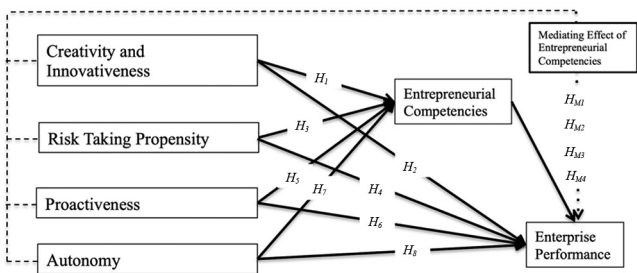


Figure 1.
Research model

Common method variance

To minimize common method variance (CMV), the respondents were “informed that the responses will be evaluated anonymously and there are no right or wrong answers” (Podsakoff *et al.*, 2003). As recommended by Podsakoff *et al.* (2003), this study adopted a five-point Likert scale for all independent variables and a seven-point Likert scale for dependent variables. To identify CMV, this study adopted Harman’s (1976) one-factor test, in which one fixed factor extracted from all constructs explains less than 50 per cent of the variance. The finding shows that one component explains 29.25 per cent of the variance, which is less than the maximum threshold of 50 per cent. When the correlation between the constructs is more than 0.9, it is considered CMV (Bagozzi *et al.*, 1991). In this study, the highest correlation between the constructs is 0.71 (between creativity and innovativeness, and risk taking), which indicates minimum CMV.

Multivariate normality

This study used the Web Power online tool to test multivariate normality. Web Power calculated the Mardia’s multivariate skewness and kurtosis coefficients. As a result, the *p*-value showed lower than 0.05 and confirmed the existence of multivariate non-normality.

Data analysis method

PLS-SEM is a causal modeling approach which maximizes the explained variance of the latent constructs (Hair *et al.*, 2011). As this study is exploratory nature with non-normality issue, PLS-SEM was used. The analysis was reported based on the approaches suggested by Hair *et al.* (2013). The approaches include the indicator reliability, internal consistency reliability, convergent validity, discriminant validity, average variance extracted (AVE), effect size, path coefficient estimates and predictive relevance.

Summary of findings

Demographic characteristics

Of 403 micro-entrepreneur respondents, 44.9 per cent of them employed one full-time employee. In addition, 29.5 per cent of them employed two full-time employees. Around 19.1 per cent of the respondents employed more than four full-time employees, while 6.5 per cent of them employed three full-time employees. Moreover, 51.6 per cent were male and the remaining were female entrepreneurs. In terms of education, 58.1 per cent of the respondents completed their secondary school, 19.9 per cent of them obtained their STPM or Diploma, 10.2 per cent of them were degree holders and 5.5 per cent of them received their primary school. Only 1.2 per cent of the respondents never received any level of education (Table I).

Reliability and validity

Table II presents the descriptive statistics and the reliability of the items. It also presents the mean and standard deviation of the variables (creativity and innovativeness, risk taking propensity, proactiveness, autonomy, entrepreneurial competency and micro-enterprise performance). Cronbach’s alpha is used as a conservative measure of internal consistency reliability. The analysis shows that the Cronbach’s alpha values for all variables are greater than 0.75. This proves that all the items are reliable. According to Hair *et al.* (2013), it is also appropriate to apply “composite reliability.” The minimum value for achieving composite reliability is 0.7 (Hair *et al.*, 2011). As shown in Table II, the composite reliability values for all variables are greater than 0.85. Besides, the Dillon–Goldstein *rho* values for all variables are greater than 0.75. To achieve convergent validity, the AVE value should be higher than

Table I.
Profile of the
respondent

Demographic characteristics	<i>n</i>	(%)
<i>Gender</i>		
Male	208	51.6
Female	195	48.4
Total	403	100.0
<i>Age</i>		
20 years old-30 years old	68	16.9
31 years old-40 years old	119	29.5
41 years old-50 years old	118	29.3
51 years old-60 years old	78	19.4
61 years old and above	20	4.9
Total	403	100.0
<i>Education</i>		
Never attended school	5	1.2
Primary School	22	5.5
Secondary School	234	58.1
STPM/Diploma	80	19.9
Undergraduate Degree	41	10.2
Master's Degree	3	0.7
Others	18	4.5
Total	403	100.0
<i>Number of full-time employees</i>		
One Employee	181	44.9
Two Employees	119	29.5
Three Employees	26	6.5
Four and Above	77	19.1
Total	403	100.0
Source: Author(s) own compilation		

Table II.
Reliability and
validity

Variables	Items	Mean	SD	CA	DG <i>rho</i>	CR	AVE	VIF
Creativity and Innovativeness	7	4.028	0.540	0.843	0.849	0.882	0.516	1.976
Risk Taking Propensity	5	3.841	0.710	0.845	0.868	0.888	0.614	1.726
Proactiveness	6	3.956	0.600	0.845	0.859	0.880	0.552	1.586
Autonomy	5	4.124	0.533	0.824	0.839	0.876	0.587	1.258
Entrepreneurial Competency	5	5.803	0.665	0.785	0.794	0.853	0.538	1.384
Micro-Enterprise Performance	5	5.857	0.739	0.868	0.874	0.904	0.654	–
Notes: Standard deviation (SD); Cronbach's alpha (CA); Dillon-Goldstein's <i>rho</i> (DG <i>rho</i>); composite reliability (CR); average variance extracted (AVE); variance inflation factors (VIFs)								
Source: Author(s) own compilation								

0.50. The analysis shows that the AVE values for all variables are higher than 0.50, indicating acceptable convergent validity. Finally, this study also tested the variance inflation factors (VIFs) to identify multicollinearity. The VIF values for all the variables are below 3.3. In short, there is no serious multicollinearity issue (Diamantopoulos and Siguaw, 2006).

The loading and cross-loading values show that almost all the indicator loadings are higher than 0.7. According to Chin (1998), all the items with standardized loadings less than 0.7 are kept for further analysis, and items with loading higher than 0.5 should be retained. In Table III, the loadings of all indicators are higher than the total cross-loadings. This confirms the existence of discriminant validity. Based on the Fornell–Larcker criterion, the AVE for each indicator should be greater than the variables' highest squared correlation with another. As a result, all the variables fulfilled this criterion. Besides that, the Heterotrait–Monotrait (HTMT) ratio looks into the correlation between variables, paralleling the disattenuated variable score. Referring to the threshold value of 0.9, it was concluded that there was no evidence of inadequate discriminant validity.

Path analysis

As depicted in Table IV, the coefficient value for creativity and innovativeness on entrepreneurial competencies (*H1*) is 0.323 with a *p*-value of 0.000. This indicates a positive effect (*p*-value < 0.05 at 5 per cent significance level) of creativity and innovativeness on entrepreneurial competencies. The f^2 value of 0.079 indicates a small effect of creativity and innovativeness on entrepreneurial competencies. Besides, the coefficient value for creativity and innovativeness on enterprise performance (*H2*) is 0.152 with a *p*-value of 0.06. This implies a positive but statistically not significant effect of creativity and innovativeness on micro-enterprise performance. In fact, the f^2 value of 0.018 indicates a very low effect of creativity and innovativeness on enterprise performance.

In addition, the coefficient value for risk taking propensity shows a positive ($\beta = 0.102$) but statistically not significant (*p*-value = 0.07) effect on entrepreneurial competencies (*H3*). The f^2 value of 0.008 indicates a low effect of risk taking propensity on entrepreneurial competencies. Unexpectedly, the path coefficient value for the effect of risk taking propensity on enterprise performance (*H4*) is negative ($\beta = 0.057$) with a statistically not significant effect (*p*-value = 0.37). The f^2 value of 0.003 indicates a near to zero effect of risk taking propensity on enterprise performance.

Furthermore, the coefficient value for proactiveness shows a positive ($\beta = 0.109$) and statistically significant (*p*-value = 0.04) effect on entrepreneurial competencies (*H5*). The f^2 value of 0.010 indicates a low effect of proactiveness on entrepreneurial competencies. The path coefficient value for proactiveness on enterprise performance (*H6*) portrays a positive ($\beta = 0.046$) but statistically insignificant effect (*p*-value = 0.46). The f^2 value of 0.002 indicates a nearly zero effect of proactiveness on micro-enterprise performance.

The coefficient value for autonomy shows a positive ($\beta = 0.120$) and significant (*p*-value of 0.03 < 0.05) effect on entrepreneurial competencies (*H7*). The f^2 value of 0.016 indicates a minimal effect of autonomy on entrepreneurial competencies. The path coefficient value for the effect of autonomy on enterprise performance is 0.135 with a *p*-value of 0.01 (*H8*). This indicates a positive and statistically significant effect of autonomy on enterprise performance. Moreover, the f^2 value of 0.022 indicates a small to medium effect of autonomy on micro-enterprise performance. Finally, the path coefficient values for entrepreneurial competencies shows a positive ($\beta = 0.423$) and significant (*p*-value of 0.000 < 0.05) effect on enterprise performance (*H9*). The f^2 value of 0.193 indicates a moderate to high effect size of entrepreneurial competencies on micro-enterprise performance.

The r^2 value for entrepreneurial competencies is 0.277, indicating that 27.7 per cent of the variation in entrepreneurial competencies can be explained by creativity and innovativeness, risk taking propensity, proactiveness and autonomy. Besides, the r^2 value for enterprise performance is 0.332, showing that 33.2 per cent of the variation in micro-enterprise performance can be explained by creativity and innovativeness, risk taking

Items	CI	RT	AU	NE	EC	EP
Creativity and Innovativeness – Item 1	<i>0.674</i>	0.401	0.319	0.181	0.311	0.273
Creativity and Innovativeness – Item 2	<i>0.740</i>	0.464	0.420	0.220	0.392	0.337
Creativity and Innovativeness – Item 3	<i>0.729</i>	0.383	0.372	0.241	0.332	0.229
Creativity and Innovativeness – Item 4	<i>0.721</i>	0.442	0.327	0.264	0.318	0.293
Creativity and Innovativeness – Item 5	<i>0.786</i>	0.459	0.398	0.369	0.379	0.311
Creativity and Innovativeness – Item 6	<i>0.658</i>	0.445	0.429	0.328	0.278	0.246
Creativity and Innovativeness – Item 7	<i>0.713</i>	0.425	0.409	0.379	0.419	0.317
Risk Taking Propensity – Item 1	0.427	<i>0.714</i>	0.405	0.216	0.177	0.101
Risk Taking Propensity – Item 2	0.458	<i>0.787</i>	0.433	0.205	0.282	0.207
Risk Taking Propensity – Item 3	0.476	<i>0.744</i>	0.413	0.238	0.312	0.166
Risk Taking Propensity – Item 4	0.478	<i>0.800</i>	0.363	0.274	0.319	0.249
Risk Taking Propensity – Item 5	0.511	<i>0.864</i>	0.428	0.292	0.377	0.264
Proactiveness – Item 1	0.260	0.310	<i>0.652</i>	0.118	0.109	0.081
Proactiveness – Item 2	0.425	0.369	<i>0.745</i>	0.205	0.323	0.149
Proactiveness – Item 3	0.434	0.427	<i>0.741</i>	0.253	0.186	0.157
Proactiveness – Item 4	0.421	0.472	<i>0.827</i>	0.310	0.335	0.261
Proactiveness – Item 5	0.385	0.361	<i>0.814</i>	0.277	0.247	0.209
Proactiveness – Item 6	0.388	0.336	<i>0.663</i>	0.335	0.326	0.351
Autonomy – Item 1	0.211	0.133	0.205	<i>0.739</i>	0.219	0.232
Autonomy – Item 2	0.203	0.145	0.233	<i>0.671</i>	0.209	0.193
Autonomy – Item 3	0.343	0.287	0.316	<i>0.765</i>	0.212	0.265
Autonomy – Item 4	0.345	0.265	0.343	<i>0.839</i>	0.266	0.246
Autonomy – Item 5	0.383	0.339	0.286	<i>0.808</i>	0.303	0.310
Entrepreneurial Competencies – Item 1	0.336	0.244	0.205	0.236	<i>0.714</i>	0.408
Entrepreneurial Competencies – Item 2	0.338	0.303	0.269	0.259	<i>0.715</i>	0.343
Entrepreneurial Competencies – Item 3	0.340	0.280	0.261	0.236	<i>0.702</i>	0.328
Entrepreneurial Competencies – Item 4	0.371	0.302	0.324	0.200	<i>0.722</i>	0.360
Entrepreneurial Competencies – Item 5	0.405	0.303	0.319	0.247	<i>0.810</i>	0.503
Enterprise Performance – Item 1	0.366	0.189	0.249	0.299	0.434	<i>0.819</i>
Enterprise Performance – Item 2	0.343	0.217	0.262	0.254	0.494	<i>0.804</i>
Enterprise Performance – Item 3	0.270	0.112	0.151	0.253	0.339	<i>0.789</i>
Enterprise Performance – Item 4	0.278	0.222	0.265	0.206	0.418	<i>0.803</i>
Enterprise Performance – Item 5	0.357	0.314	0.293	0.313	0.459	<i>0.828</i>
<i>Fornell-Larcker Criterion</i>						
Creativity and Innovativeness (CI)	0.718					
Risk Taking Propensity (RT)	0.601	0.783				
Proactiveness (PR)	0.533	0.515	0.743			
Autonomy (AU)	0.397	0.316	0.363	0.766		
Entrepreneurial Competencies (EC)	0.490	0.390	0.377	0.320	0.734	
Enterprise Performance (EP)	0.404	0.266	0.307	0.330	0.536	0.809
<i>HTMT ratio</i>						
Creativity and Innovativeness (CI)	–					
Risk Taking Propensity (RT)	0.710	–				
Proactiveness (PR)	0.608	0.604	–			
Autonomy (AU)	0.462	0.360	0.397	–		
Entrepreneurial Competencies (EC)	0.593	0.460	0.415	0.394	–	
Enterprise Performance (EP)	0.461	0.287	0.308	0.382	0.633	–

Table III.

Loadings and Cross-Loadings

Note: The italic values in the matrix above are the item loadings and others are cross-loadings
Source: Author's data analysis

propensity, proactiveness, autonomy and entrepreneurial competencies. Moreover, the Q^2 value of 0.136 indicates that creativity and innovativeness, risk taking propensity, proactiveness and autonomy have a low to moderate predictive relevance for entrepreneurial competencies. Similarly, the Q^2 value of 0.194 indicates that creativity and innovativeness, risk taking propensity, proactiveness, autonomy and entrepreneurial competencies have a moderate to high predictive relevance for micro-enterprise performance.

Mediating effects

Regarding the mediating effects of entrepreneurial competencies, Table V presents the indirect effect coefficients, confidence intervals and p -values. The result reveals that creativity and innovativeness have a positive indirect effect (p -values < 0.05) on micro-enterprise performance (5 per cent level of significance). This confirms a mediating effect of entrepreneurial competencies on the relationship between creativity and innovativeness and micro-enterprise performance (HM1). Table V also shows that risk taking propensity does not have a significant indirect effect on micro-enterprise performance. Therefore, entrepreneurial competencies do not mediate the relationship between risk taking propensity and micro-enterprise performance (HM2). Moreover, proactiveness has a statistically nonsignificant (p -values = 0.102) indirect effect on micro-enterprise performance. In other words, entrepreneurial competencies do not mediate the relationship between proactiveness and micro-enterprise performance (HM3). Additionally, there is a positive indirect effect found on the relationship between autonomy and micro-enterprise

Hypo	Coefficient	CI Min	CI Max	Sig.	Decision	r^2	f^2	Q^2
H1. CI → EC	0.323	0.182	0.437	0.00	Accept	0.277	0.079	0.136
H3. RT → EC	0.102	0.002	0.227	0.07	Reject		0.008	
H5. PR → EC	0.109	0.009	0.224	0.04	Accept		0.010	
H7. AU → EC	0.120	0.017	0.225	0.03	Accept		0.016	
H2. CI → EP	0.152	-0.006	0.305	0.06	Reject	0.332	0.018	0.194
H4. RT → EP	-0.057	-0.182	0.070	0.37	Reject		0.003	
H6. PR → EP	0.046	-0.082	0.170	0.46	Reject		0.002	
H8. AU → EP	0.135	0.037	0.234	0.01	Accept		0.022	
H9. EC → EP	0.423	0.309	0.541	0.00	Accept		0.193	

Notes: Creativity and Innovativeness (CI), Risk Taking Propensity (RT), Proactiveness (PR), Autonomy (AU), Entrepreneurial Competencies (EC), Enterprise Performance (EP)

Source: Author(s) own compilation

Table IV.
Path analysis

Path	Beta	CI-Min	CI-Max	Sig.	Decision
HM1. CI → EC → EP	0.136	0.067	0.203	0.000	Mediation
HM2. RT → EC → EP	0.043	0.001	0.102	0.102	No Mediation
HM3. PR → EC → EP	0.046	0.004	0.102	0.054	No Mediation
HM4. AU → EC → EP	0.051	0.007	0.101	0.039	Mediation

Notes: Creativity and Innovativeness (CI), Risk Taking Propensity (RT), Proactiveness (PR), Autonomy (AU), Entrepreneurial Competencies (EC), Enterprise Performance (EP)

Source: Author(s) own compilation

Table V.
Mediating effects

performance. This confirms a mediating effect of entrepreneurial competencies on the relationship between autonomy and micro-enterprise performance (*HM4*).

Discussion

Given that micro-enterprise performance contributes to industrialization and its association with human capital characteristics ([Barney *et al.*, 2001](#)), this study examined the effect of entrepreneurial orientation on entrepreneurial competencies and enterprise performance among micro-enterprises in Kelantan, Malaysia. The findings revealed creativity and innovativeness had a positive effect on entrepreneurial competencies. This particular finding agreed with earlier studies by [Dess and Lumpkin \(2005\)](#) and [Sánchez \(2013\)](#), who demonstrated that entrepreneurs have the ability to provide creative and innovative solutions to solve business problems, thereby facilitating the development of specific competencies. However, creativity and innovativeness had a positive but statistically insignificant effect on enterprise performance. This was because enterprise performance can only be enhanced through additional resources and competencies ([Dimitratos *et al.*, 2014](#)).

The finding also revealed that risk taking propensity had a positive but statistically insignificant effect on entrepreneurial competencies. In other words, the willingness to take risks was less important than competency development. Moreover, risk taking propensity had a negative and statistically insignificant effect on enterprise performance. This finding implied that the willingness to take risk was likely to have adverse effect on micro-enterprise performance. The finding also showed that proactiveness had a positive effect on enterprise competencies, which was in agreement with [Lumpkin and Dess \(1996\)](#), [Sánchez \(2013\)](#) and [Priyanto and Sandjojo \(2005\)](#). This meant that proactiveness was expected to facilitate entrepreneurial competencies. Conversely, proactiveness had a positive but statistically insignificant effect on enterprise performance.

In addition, this study found a positive and statistically significant effect of autonomy on entrepreneurial competencies. This finding was in line with previous studies ([Dimitratos *et al.*, 2014](#); [Rugman and Verbeke, 2001](#)) which demonstrated that autonomous activities performed by low-income households in Kelantan could promote entrepreneurial competencies. Similarly, the result showed a positive and significant effect of autonomy on micro-enterprise performance. This finding was consistent with existing studies ([Badjuri, 2017](#); [Birkinshaw and Pedersen, 2001](#); [Dimitratos *et al.*, 2014](#)), which confirmed that autonomous activities could improve micro-enterprise performance among low-income households. Besides that, there was a positive effect found on the relationship between entrepreneurial competencies and enterprise performance. This finding underpinned RBV and previous studies which agreed that entrepreneurial competencies were valuable and intangible capabilities for organizations to achieve outstanding performance ([Al-Mamun *et al.*, 2016](#); [Ahmad *et al.*, 2010](#); [Barney, 1991](#); [Gerli *et al.*, 2011](#); [Grant, 1991](#); [Mitchellmore and Rowley, 2013](#); [Tehseen and Ramayah, 2015](#)).

Last but not least, the finding showed a mediating effect of creativity and innovativeness and autonomy on micro-enterprise performance among micro-enterprises. Concurring with RBV and existing studies, this finding indicated that entrepreneurial orientation was considered unique and valuable resource that instigated entrepreneurial competency and performance ([Barney, 1991](#); [Dimitratos *et al.*, 2014](#); [Grant, 1991](#)).

Implications and conclusion

The objective of this study is to examine the effect of entrepreneurial orientation on entrepreneurial competencies and enterprise performance among micro-enterprises in Kelantan, Malaysia. The findings echoed with [Perić *et al.*'s \(2017\)](#) research, which contends

that entrepreneurial orientation and competencies are influential factors of enterprise performance. Theoretically, this study contributed to RBV by looking at the effect of entrepreneurial orientation on competencies and enterprise performance, especially both the direct and indirect effect of creativity and innovativeness, risk taking propensity, proactiveness and autonomy on enterprise performance as the relationships between these variables are complex in nature (Dimitratos *et al.*, 2014).

Accordingly, both path analysis and mediation test revealed that creativity and innovativeness is a valuable and unique firm resource influencing enterprise performance through the development of entrepreneurial competencies. On the other hand, autonomy is considered as both firm resource and capability that affects enterprise performance directly and indirectly. In terms of managerial implications, this study emphasized on the importance of entrepreneurial orientation and competencies to improve enterprise performance, thereby encouraging entrepreneurial activities among low-income households and enhancing their socio-economic conditions. All these findings can be used as reference by policymakers to address the economical vulnerability among low-income households in coastal Malaysia. Therefore, the underlying organizations should focus on the betterment of creativity and innovativeness, proactiveness, autonomy and entrepreneurial competencies through relevant policies and training programs, which in turn encourage the poor households to engage in entrepreneurial activities.

In the aspect of limitation, this study did not include other possible factors that influence enterprise performance. Although the dimensions of entrepreneurial orientation are prominent in the literature, the boundaries of “entrepreneurial orientation” remain vague. Moreover, this study was only limited to micro businesses in Kelantan, Malaysia, and could not be made generalizable to other types of business in different countries. Hence, future studies should incorporate contextual variables such as business strategies and culture to predict the performance of small businesses using a more diverse sample. Subsequently, this recommendation would enhance our understanding of small businesses growth (Wolcott *et al.*, 2008).

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Code	Questions	Source
CI – Item 1	<i>As a business owner</i> , I introduced many products or services in the past five years	Keh <i>et al.</i> (2007)
CI – Item 2	I am willing to try different ways of doing things and seek unusual and novel solutions	Bolton and Lane (2012)
CI – Item 3	I encourage people to think and behave in original and novel ways	Wang (2008)
CI – Item 4	I like to try new and unusual activities that are not typical but not necessarily risky	
CI – Item 5	I prefer a strong emphasis on unique projects that require one-of-a-kind approaches rather than revisiting tried and true approaches used before	
CI – Item 6	I favor experimentation and original approaches to problem solving rather than using methods for solving their problem	
CI – Item 7	I prefer using my own way when learning new things rather than following everyone does	
RT – Item 1	<i>As a business owner</i> , I have a strong preference for high-risk projects	Keh <i>et al.</i> (2007)
RT – Item 2	I believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives	Bolton and Lane (2012)
RT – Item 3	I like to take bold action by venturing into the unknown	
RT – Item 4	I am willing to invest a lot of time and/or money in something that might yield a high return in future	
RT – Item 5	I tend to act "boldly" in situations where risk is involved	
PR – Item 1	<i>In dealing with my competitors</i> , I typically initiate actions competitors respond to	Wang (2008)
PR – Item 2	I have a stronger tendency to introduce novel ideas or products than other competitors	Lumpkin and Dess (2001)
PR – Item 3	I am often the first firm to introduce new products/services, administrative techniques, and operating technologies	Bolton and Lane (2012)
PR – Item 4	I usually act in anticipation of future problems, needs or changes	
PR – Item 5	I prefer to "step-up" and get things going on projects rather than sitting and waiting for someone else to do	
PR – Item 6	I tend to plan ahead on projects	
AU – Item 1	<i>As a business owner</i> , I support the independent action of an individual or a team to bring forth an idea or a vision and carry it through to completion	Li <i>et al.</i> (2009)
AU – Item 2	I take action that is free of stifling organizational constraints	Lumpkin <i>et al.</i> (2009)
AU – Item 3	I support the efforts of individuals and/or teams that work autonomously	
AU – Item 4	I believe that the best results occur when individuals and/or teams decide for themselves what business opportunities to pursue	
AU – Item 5	I support individuals and/or teams that pursue business opportunities who make their own decisions without constantly referring to their supervisor(s)	

(continued)

Table AI.
Survey instruments

Table AI.

Code	Questions	Source
EC – Item 1	<i>As the owner of a business, I am able to develop a long-term trusting relationship with others</i>	Man et al. (2008)
EC – Item 2	I negotiate with others	
EC – Item 3	I apply ideas, issues, and observations to alternative contexts	
EC – Item 4	I determine long-term issues, problems, or opportunities	
EC – Item 5	I manage my enterprise effectively	
EP – Item 1	<i>Compared to your major competitors, my firm possesses a relatively higher customer satisfaction</i>	Morgan and Strong (2003)
EP – Item 2	Competitive position	
EP – Item 3	Customer retention	
EP – Item 4	Sales growth	
EP – Item 5	Return on investment	

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