

# THE IMPORTANT ROLE OF SELF-EFFICACY IN DETERMINING ENTREPRENEURIAL ORIENTATIONS OF MALAY SMALL SCALE ENTREPRENEURS IN MALAYSIA

ROHANI MOHD  
BADRUL HISHAM KAMARUDDIN  
SALWANA HASSAN  
MAZZINI MUDA  
*Faculty of Business Management  
Universiti Teknologi MARA*

KHULIDA KIRANA YAHYA  
*School of Business Management  
Universiti Utara Malaysia*

## Abstract

*The purpose of the study is to understand the role of self-efficacy in influencing entrepreneurial orientations of small scale Malay entrepreneurs. Entrepreneurial orientations are consistently found to influence performance quite positively. Therefore, the understanding of how strong self-efficacy influences entrepreneurial orientations would also help in identifying ways to improve the performance of small scale businesses. There was a lack of research to see what drives business owners to choose among the entrepreneurial orientations, while there were so many researches conducted to see the impact of entrepreneurial orientations on performance. Thus, finding what influences entrepreneurial orientations would be a significant contribution to the field of entrepreneurship. The samples comprised of 162 small scale Malay SMEs in the manufacturing industry in all the states of Malaysia. The Rasch Measurement Model was used for the purpose of construct reliability and validity. In order to identify the influence of self-efficacy on entrepreneurial orientations and its two dimensions (proactivity and innovativeness), a simple linear regression and independent-t test were undertaken by using the SPSS as a tool. The findings indicated that self-efficacy was significantly related to entrepreneurial orientation and self-efficacy of the Malay entrepreneurs has affected innovativeness more strongly than the proactive dimension of entrepreneurial orientations. The independent-t test also was able to identify that Malay entrepreneurs with high self-efficacy level were more entrepreneurial than Malay entrepreneurs*

*with low self-efficacy. The findings give important implications to management consultants whose clients are SMEs to design training modules that specifically focus on developing self-efficacy among average performing SMEs because self-efficacy was found to improve the entrepreneurial orientations of entrepreneurs.*

**Keywords:** *Self-efficacy, entrepreneurial orientations, innovativeness and proactivity.*

## Introduction

The literature indicates a growing number of studies on entrepreneurial motivation and orientation which include self-efficacy (SE) as an explanatory variable. SE becomes one of the most studied topics of today, especially in psychology, after Bandura's (1977) seminal paper was published. SE turned out to be important because, as discovered by Bandura and other research scholars, SE could have an impact on everything from the psychological state to behaviour. Bandura found that an individual's SE plays a major role in how goals, tasks and challenges are approached.

Self-efficacy is defined as an individual's belief (or confidence) about his or her abilities to mobilize motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context (Bandura, 1997; Stajkovic & Luthans, 2003). Other concepts similar to self-efficacy identified by Mitchell and Daniels (2003), which have been used by other research scholars include personal agency beliefs, personal efficacy, capacity beliefs, and perceived competence. The importance of SE to owner-managers of SMEs can be seen very clearly in the definition. However, the importance of SE is discussed most often by scholars in education (Dinther, Docky, & Segers, 2011; Howell, 2007) and has been given attention by research scholars in entrepreneurship only quite recently (Drnovsek, Wincent, & Cardon 2010; Hmieleski & Baron, 2008). Sadly, research on self-efficacy among Malay entrepreneurs in Malaysia is lacking. Thus, it is the hope of this paper to fill the research gap and expects that more research on the roles of self-efficacy on entrepreneurial behaviours could be conducted especially in Malaysia. This is because self-efficacy is not inborn rather could be developed and trained. If the role is found important, more effective training could be designed specifically to improve the self-efficacy of entrepreneurs. Therefore, the purpose of this study is twofold.

Firstly, it attempts to identify the relationship between self-efficacy and entrepreneurial orientations. Secondly, it aims at investigating the impact of self-efficacy on each dimension of the entrepreneurial orientations of entrepreneurs of small scale SMEs.

## **Literature Review**

### **Self-efficacy**

Self-efficacy is seen as task-specific self-confidence by McShane & Glinow, (2008) and self-efficacy for a specific task is claimed by them to be a robust predictor of an individual's performance in that task and helps to explain why people of equal ability can perform differently. For example, an individual with high self-efficacy for a given task will exert more effort for a greater length of time, persist through set backs, set and accept higher goals, and develop better plans and strategies for the task.

Moreover, a person with high self-efficacy is believed to take negative feedback in a positive manner and use that feedback to improve his or her performance. These motivational attributes are described by McShane and Glinow (2008) as important to the entrepreneurial process because they believed that business situations are often ambiguous; hence effort, persistence, and planning are important. Since it is broader and covers multiple performance levels, it is relevant to study self-efficacy among business owners to understand their behaviours. This is because in business, tasks are not specific, but are multiple in nature.

In addition, self-efficacy is a useful concept for explaining human behaviour as research reveals that it plays an influential role in determining an individual's choice, level of effort, and perseverance (Chen, Gully, & Eden, 2004). Simply stated, individuals with high self-efficacy for a certain task are more likely to pursue and then persist in that task than those individuals who possess low self-efficacy (Bandura, 1997). Pursuing goals and persistence in efforts are described by Pinder (1998) as two important elements of motivation. Interestingly, McShane and Glinow (2008) claimed that pursuing goals and persistence in efforts involved cognitive thinking which has been described by Bandura as 'self-efficacy'. For that reason, self-efficacy is regarded as internal motivation by the present study. According to Bandura (1989), people with a strong sense of SE would:

1. View challenging problems as tasks to be mastered.
2. Develop deeper interest in the activities in which they participate.
3. Form a stronger sense of commitment to their interest and activities.
4. Recover quickly from setbacks and disappointment.

However, people with a weak SE would:

1. Avoid challenging tasks.
2. Believe that difficult tasks and situations were beyond their capabilities.
3. Focus on personal failures and negative outcomes.
4. Quickly lose confidence in personal abilities.

Those listed effects of self-efficacy highlight the power it has on behaviours. The effects of self-efficacy on someone as posited by Bandura (1997) above could help us see how an entrepreneur or business-owner would react to challenges and opportunities if his or her self-efficacy is high or low. Since self-efficacy reflects the confidence level of someone to do certain tasks, those who are involved in business may already have a certain level of self-efficacy. This is because to make a decision to be involved in business is a big decision which requires a high degree of courage and confidence. So those who are entrepreneurial might have a high sense of self-efficacy. This assumption is made based on the basic principle that lies in the theory of self-efficacy (derived from the Social Cognitive Theory developed by Bandura).

The basic principle that lies in the theory of self-efficacy is that people are likely to engage in activities that they perceive themselves to be competent in. To perceive as being competent or having the capability to handle tasks provides forces that motivate people to proceed with what they intend to do. With regards to entrepreneurship and SMEs, business-owners will be more likely to attempt to have perseverance, and to be successful in business. Thus, he or she has a sense of efficacy. When he or she fails, this may occur because he or she either lacks the ability to succeed or because he or she has the ability but lacks the sense of efficacy to use his or her ability well. Further, self-efficacy was discussed by Robbins and Coulter (2007) as an important motivational element as it is able to increase or reduce an individual's effort.

With the above views, the present study used self-efficacy as a motivational variable in understanding the internal motivational

drive of Malay business-owners to grow. Compared to the “need for achievement” drive, “self-efficacy” is closely related to one’s perception about his or her ability to perform. The present study holds that if the Malay SMEs were found to have a low level of self-efficacy, appropriate training on specific skills and competencies (since self-efficacy is seen as task-specific self-confidence) that could help improve their confidence level, needs to be suggested.

In addition, recent studies suggest that an individual’s self-efficacy might be elevated through training and education; thus, potentially improving the rate of entrepreneurial activities (Florin, Karri, & Rossiter, 2007; Mueller & Goic, 2003; Zhao, Seibert, & Hills, 2005). However, if they were found otherwise, that is, producing low performance, further investigation on their relationship with personal values and regional variation should be made to explain the possibility. This is because personal values are claimed to be a strong factor to influence behaviour (see the discussion of personal values and entrepreneurial orientations in Section 2.7.2), thus they could give greater impact on entrepreneurial orientations than self-efficacy. Another possible explanation could be due to the moderating effect of regional variations (environment) on the relationship between self-efficacy and behaviours. This was indicated by Hornsby, Naffziger, Kuratko and Montagno (1993) that entrepreneurial behaviour is a function of the interaction between the entrepreneur (traits, personalities, values, motivation) and organizational situation.

In a review of Albert Bandura’s work, Stajkovic and Luthens (2003) have given a brief, but clear explanation of the SE concept:

*... This increasingly recognized psychological construct deals specifically with the control of human action through people’s beliefs in their capabilities to affect the environment and produce desired outcomes by their actions. For instance, unless employees believe that they can gather up the necessary behavioral, cognitive, and motivational resources to successfully execute the task in question (whether working on a product/service or developing a strategic plan), they will most likely dwell on the formidable aspects of the required performance, exert insufficient effort, and as a result, not do well or even fail on the task. This personal confidence, or more precisely self-efficacy, plays a pivotal role in SCT (Social Cognitive Theory).*

Thus, with a clear concept of self-efficacy provided by Stajkovic and Luthens (2003), it is relevant to study its effect on Malay entrepreneurs. If a low sense of self-efficacy were found, there would be ways to improve because as mentioned by Florin et al. (2007), Mueller and Goic (2003), Zhao et al. (2005), self-efficacy can be gained through training, learning and observing others (described in Social Cognitive Theory).

### **Motivation and Entrepreneurial Orientation**

Since literature on how self-efficacy influences entrepreneurial orientations is still lacking, the review was made on literature that illustrated the significant relationship between motivation (any type of motivation) and entrepreneurial orientations/behaviours. A review of the entrepreneurship literature revealed some empirical works of Lumpkin and Erdogan (2004), Poon, Aidnudin and Junit (2006), Zhao et al. (2005), Forbes (2005), Hmieleski and Baron, (2008), Drnovsek et al. (2010), Kumar (2007) and Mohd et al. (2014) that suggest motivation influences entrepreneurial orientations. Poon et al. (2006) who conducted a study on the self-concept trait, entrepreneurial orientation and performance, found that entrepreneurial orientations mediated the relationship between self-concept traits (including self-efficacy) and performance. Lumpkin and Erdogan (2004) found that only certain psychological characteristics predict certain entrepreneurial orientations. In their study, innovativeness is found to be related positively only to risk-taking propensity motivation, while product innovativeness is correlated negatively to tolerance for ambiguity motivation, and competitiveness is positively correlated to internal locus of control motivation. These reveal to us that entrepreneurial orientations only resulted from certain drives that are specific to entrepreneurs' traits (motivation). Internal locus of control and risk-taking propensity were important motivational traits that led entrepreneurs to be proactive, innovative, competitive, or risk-taking.

In the aspect of motivational factors that drive entrepreneurs to behave entrepreneurially, many studies (McClelland & Koestner, 1992; Lumpkin & Erdogan, 2004; Forbes, 2005; Kumar, 2007; Markman, Baron, & Balkon, 2005; Hmieleski & Baron, 2008; Mohd et al., 2014) showed that motivational factors like self-efficacy, achievement orientation, and internal control are positively related to entrepreneurial orientation (either innovative, proactive, competitive, autonomy, or risk-taking). For example, McClelland and Koestner (1992) suggested that people with high levels of achievement

motivation would be future-oriented and take tasks seriously if they believed that current tasks would influence future goals. In the most recent study, Mohd et al. (2014) found that self-efficacy motivation did not only influence entrepreneurial orientations but it also mediated the relationship between personal values and entrepreneurial orientation. For instance, Lumpkin and Erdogan (2004) found that achievement motivation is positively correlated with proactivity and innovativeness. This is consistent with the classic findings of McClelland (1992) who was the first to relate achievement motivation to entrepreneurship.

Quite recently, self-efficacy has been found to correlate positively with innovativeness (Kumar, 2007), new venture creation and goal attainment (Hmieleski & Baron, 2008; Forbes, 2005). Their studies suggest that the high self-efficacy of an entrepreneur is likely to influence his or her ability to see the positive potential outcomes that might accrue from new ventures and pursue those goals vigorously. Self-efficacy is also found to be the factor that has differentiated entrepreneurs from non-entrepreneurs (Markman, Balkin, & Baron, 2002; Chen, Green, & Crick, 1998), where entrepreneurs have been found to have high self-efficacy. A high level of self-efficacy could help entrepreneurs maintain their efforts for goal attainment until their initial goals are met (Gist, 1989). This suggests the connection between high self-efficacy and proactive behaviours. This is because goal attainment results from an individual who believes in the positive potential of his or her own ability to succeed. This in turn encourages him or her to take proactive actions rather than just wait and see others take action first. Different from achievement and internal locus of control drive, self-efficacy could be learnt and improved (Rauch & Frese, 2007). Therefore, low and average achievement business owners could still have the chance to be entrepreneurial and successful if they knew how to improve their level of self-efficacy because self-efficacy was found to be a predictor of entrepreneurial orientations and performance.

Interestingly, Poon et al. (2006) and Cools (2008) found otherwise. They found no predictive effect of an internal locus of control on entrepreneurial orientations. Quite astonishingly, Cools (2008) found that self-efficacy is negatively related to proactive behaviour, and achievement motivation has been found to have no impact on people's willingness to introduce new products, to be proactive towards environment and to take risks. These inconsistent findings need further investigation. Therefore, the hypotheses of the present study were developed.

**H1:** *There is a positive relationship between self-efficacy and entrepreneurial orientations.*

**H2:** *Owner-managers with strong self-efficacy level are more entrepreneurial than those with low self-efficacy level.*

## **Methodology**

A cross-sectional research design was used to examine the relationships between self-efficacy motivation and entrepreneurial orientation among the small scale Malay SMEs. The target population was Malay SMEs in the manufacturing industry. They were SMEs which have been in business for 5 to 10 years and have 5 to 50 employees. By using the MARA sampling frame which consisted of 1707 SMEs with the specified characteristics, 850 questionnaires were distributed using systematic random sampling.

For this research, the size, the age of firm, and the industry were the control variables so that the relationship between internal motivation of self-efficacy and entrepreneurial orientations could be effectively examined (Rauch & Frese, 2007).

H1 was tested employing the linear regression analysis and H2 was tested with the independent t-test. The Rasch Model was employed to investigate the psychometric properties of the utilized instrument for determining scale dimensionality, construct validity, endorsement of items, and estimation of items and person reliability.

## **Measurement**

For internal motivation, the self-efficacy variable, Chen et al.'s (2004) instrument was adopted. All questions were understood by the SMEs interviewed. There are 22 items which were measured on a 5 point Likert scale. The questions asked the respondents to rate the degree of surety in performing well in each of the roles and tasks listed in the questionnaire.

For the entrepreneurial orientations variable, the instrument was adopted from Lumpkin and Dess (1996). The dimensions were: proactive, risk-taking, innovative and autonomy with a total of 12-items with the scale ranging from 1 (Strongly Agree) to 5 (Strongly

Disagree). The competitive aggressiveness dimension was dropped from the list because as indicated by Okhomina (2010), competitive aggressiveness is found to be similar to proactivity (proactive actions reflect SMEs competitive behaviours (Schumpeter, 1950 as in Okhomina, 2010). The questions asked the respondents to rate the degree of agreement on the statement related to entrepreneurial orientation that best described their reaction. In the beginning all the four dimensions were included in the survey. However, the Rasch measurement model identified risk-taking and autonomous as irrelevant dimensions because all the items of these dimensions were known to be common to all entrepreneurs. All together, there were 34 items in the questionnaire (22 items for SE and 12 items for EO).

## **Results and Analysis**

### **Rasch Analysis**

The data under study predictably fit the model as all the indicators (Cronbach Alpha, person reliability value, person measure, valid responses, item reliability value, and Standard Error) were in the accepted range. The Cronbach Alpha person raw score reliability of 0.93 and person reliability value of 0.90 indicate that the overall response reliability of the respondents was excellent. 12,150 responses were recorded; large enough to obtain useful stable person measure estimates and useful stable item calibrations. With these good values of the indicators, it was expected that the data could produce statistically stable measures. The item reliability of 0.97 indicates that the overall number of instruments used for the study were sufficient, with a very small standard error of item mean of 0.04. Inspection of the infit and outfit means square scores of 34 items revealed that 17 items were outside the set cut off of 0.6 and 1.4, leaving 17 items valid for further analysis. The 17 items left for further analysis were: 11 items of SE and 6 items of EO. The scalogram and the person-item map produced from the Rasch Model was evidence to prove that the construct (all 17 items left) used for the study was valid because all the 17 items left were able to discriminate respondents with different levels of ability (different levels of agreement on the items). Variance explained by measure of 43 per cent which appeared in the unidimensionality test indicated that the instrument used for the study measured what it intended to measure.

### Demographic Profile

Out of the 850 questionnaires distributed, it was possible to collect only 165. However, only 162 were useful as the other three questionnaires contained lots of missing data. The majority of the respondents were females who made up more than half of the sample group. The samples mostly had secondary level of education. 67.3 per cent of the respondents had been in business for five to six years. The majority of them had between 5 to 9 employees.

The firm age and firm size were treated as control variables so that the relationships between SE and EO were not biased (Raush & Frese, 2007; Field, 2013). The regression analysis between these control variables on entrepreneurial orientations showed that these variables had no significant relationship with EO indicating that they did not influence EO.

Table 1 is the descriptive statistics for each variable. The high mean score for each variable shows that the respondents were quite entrepreneurial and had high self-efficacy. The small value of SD reflected the small deviation of the mean score from the actual score. This showed the data was good to proceed with the hypothetical analysis.

Table 1

*Descriptive Statistics for Each Variable*

Variable	Mean	SD
SE	4.0013	.49663
EO	3.6595	.69761

The first hypothesis was then tested to achieve the first objective of the research study, which was to identify the relationship between SE and EO. Two hypotheses were developed to achieve the second objective which was to investigate the impact of SE on EO of Malay entrepreneurs. The two hypotheses were developed because the impact should be investigated on each dimension of EO. For H1, a linear regression was undertaken to determine the relationship. Table 3 illustrates the results of the analysis.

As shown in Table 2, SE was significantly related to EOs  $\beta = 0.459$  at  $p < 0.001$ .  $R^2$  of 0.210 indicating that SE accounted for 21.0 per cent of

variation in EO. This meant that for any change in EOs, SE contributed by 21 per cent. The F-ratio which was greater than 1 indicated SE as a predictor of EO,  $F(1, 160) = 42.597$ ,  $p < 0.001$ . This analysis signalled the acceptance of H1.

Table 2

*The Results of Linear Regression between Self-efficacy and Entrepreneurial Orientation*

	B	S.E	$\beta$	R <sup>2</sup>	Adj R <sup>2</sup>	F
Constant	.842	.203				
SE	.572	.088	.459*	.210	.205	42.597

a Predictors: (Constant), SE; dependent: EO;  $p < .001$ .

For H2, the impact was investigated by identifying whether entrepreneurs who had higher than average level of self-efficacy were more innovative and proactive than the group of owner-managers who had lower than average level of self-efficacy. The independent t-test are performed to achieve this objective. The results of the t-tests are shown in Table 3 and Table 4.

Table 3 demonstrates the different means of the two groups (High and Low SE) with regards to their innovativeness and proactivity. The groups with higher than average self-efficacy level had higher means of innovativeness ( $M = 2.5970$ ,  $S.E = 0.05089$ ) and proactivity ( $M = 2.1940$ ,  $S.E = 0.05018$ ) than groups with lower than average self-efficacy level.

These results were supported by the main output of independent t-tests shown in Table 4. Table 4, indicates that self-efficacy level significantly affected innovativeness at  $p < 0.001$ ; and proactivity at  $p < 0.01$ . However, for proactive orientation, the variances were significantly different across the groups  $F(109.937) = 19.269$ ,  $p < 0.001$ . Hence, the result of the differences for proactivity was not meaningful because it violated the t-independence assumption. For innovativeness, the variances were equal across the groups. Therefore, the results of the whole analyses partially supported the hypothesis H4a, because a higher level of self-efficacy affected only innovativeness.

Table 3

*Comparison between Groups with Different Levels of Self-efficacy with Regards to Each Entrepreneurial Orientation Dimension*

	SE	N	Mean	SD	SE Mean
Innovative	Group with High SE	67	2.5970	.41656	.05089
	Group with Low SE	95	2.1649	.42072	.04317
Proactive	Group with High SE	67	2.1940	.70149	.08570
	Group with Low SE	95	1.9263	.48907	.05018

Table 4

*The Results of the Independent t-tests Comparing Groups of H/L SE with Regard to Innovativeness and Proactivity as Dependent Variables (Test Variables)*

Variable	Levene’s Test for Equality of Variances				t-test for Equality of Means				
	F	Sig.	t	df	Sig.	Mean DifF	SE of diff	95% confidence interval of the difference	
								Lower	Upper
Innovativeness	1.27	.262	6.46	160	.000	.432	.067	.300	.564
Proactivity	19.27	.000	2.69	109.94	.008	.268	.099	.071	.465

**Discussion**

The objective was to examine whether self-efficacy motivation was related to entrepreneurial orientations. There was a significant positive relationship between self-efficacy and entrepreneurial orientations, which means, the higher the level of self-efficacy the more entrepreneurial the person would be. This is because self-efficacy level is the confidence that an owner manager has on his or her ability to perform tasks related to business. If the level of self-efficacy is high, it means he or she is confident to perform difficult tasks. For instance, in order to be proactive (e.g. explore opportunities) and innovative

(e.g. create new products or venture into new business or market), one should have the confidence to take such actions. This explanation provides support to the link found between self-efficacy and entrepreneurial orientations in the study. This means that whichever behaviour someone chooses and how the behaviour is performed depend on the level of self-efficacy motivation. Thus, it is rational that the level of self-efficacy could influence someone to choose to be more or less entrepreneurial. This finding is supported by previous studies by McClelland and Koestner (1992), Zhao et al. (2005), Lumpkin and Erdogan (2004), Forbes (2005) and Kumar (2007), that motivation (be it self-efficacy, achievement motivation, internal locus of control) determines the entrepreneurial orientations of an entrepreneur.

The findings are also compatible with Bandura's (1989) theory of self-efficacy. According to the theory, before an individual initiates and pursues goal-directed tasks, he/she invokes personal cognitive capabilities to weigh, evaluate, and integrate information about personal skills relative to specific challenges and to form beliefs about probabilities of attaining success. The strength of these beliefs and certainty with which they are held are personal self-efficacy beliefs relative to that set of challenges. Thus, high self-efficacy reflects the strength of the beliefs and certainty of ability relative to the set of challenges. That is why in the present study, only respondents with high levels of self-efficacy showed high levels of innovation and had proactive orientations because those with high levels of self-efficacy had strong beliefs about their capabilities to cope with challenges. This explains why high levels of self-efficacy provided the force and drive to take the challenge of being innovative and proactive. This plausibly explains the positive relation between self-efficacy and entrepreneurial orientations. The above reason also explains why SME entrepreneurs who have higher than average level of motivation are more proactive and innovative. This is supported by McClelland and Koestner (1992) who found that people with high motivation levels were more entrepreneurial and more future-oriented, and took tasks seriously if they believed the current tasks influenced future goals. This is also supported by Kumar (2007) findings that self-efficacy is positively related to innovativeness.

The works of Hmicleski and Baron (2008) and Forbes (2005) on the positive relationship between self-efficacy and proactivity also supports the findings of this study. The similarity of the present study with that of prior research reflects the robustness of the theory of self-efficacy. This is because, as claimed by the self-efficacy theory,

the choices made by a person among alternative courses of action are lawfully related to psychological events occurring contemporaneously with behaviour. In other words, people's behaviour results from conscious choices among alternatives, and these choices, generally, are to maximize pleasure and minimize pain. An owner-manager's perception of his level of confidence in his skill or ability for the tasks at hand, and the degree of support he expects to receive from the government, are common examples of factors that can influence an owner-manager's self-efficacy motivation. Individuals with different levels of self-efficacy beliefs are expected to systematically differ in the amount of effort they spend on goal-directed tasks, the magnitude of coping activities they initiate to overcome impediments, and the degree to which they maintain persistent goal pursuits despite obstacles (Bandura, 1997; Stajkovic & Luthans, 2003). Therefore, the results of the present study adds more evidence, hence proving the robustness of the theory of self-efficacy.

Bandura (1989) spoke of self-efficacy as person-behaviour association held in the minds of individuals. The behaviour is chosen when an individual person perceives that he has the ability to do what it takes to do business. The point is that an individual owner-manager's subjective estimate of the odds that he can take action or choose positive behaviours is determined by his belief on his ability. The link between self-efficacy and entrepreneurial orientations could be easily shown by these questions raised by Drnovsek et al. (2010) when explaining the importance of self-efficacy in business: "why do some individuals get stuck in the business start-up process, such as succeeding in identifying opportunities but failing to go further in capitalizing on those opportunities?" or "why do some entrepreneurs venture into new business while some other entrepreneurs would not even try to explore the new opportunities facing them?" Since the findings of the present study are consistent with prior research findings and theories, they confirm the generalizability that entrepreneurs with higher levels of self-efficacy would be more entrepreneurial than those with lower levels of self-efficacy. This finding provides additional contribution to the literature of entrepreneurship and adds to the literature in the local context.

On the whole, self-efficacy is an important variable to make someone to be entrepreneurial because self-efficacy represents the various levels of confidence in skills to perform business. This means, lack of self-efficacy would affect their entrepreneurial orientations or behaviours. Since self-efficacy could be trained (Rauch & Frese, 2007),

every owner-manager still has the chance to improve his or her self-efficacy provided that he or she is willing to learn to improve his or her self-efficacy level. This is important because once the person gains his or her self-efficacy, he or she has the confidence to carry out difficult tasks that could bring success to his or her business.

### **Implication**

The implication is in the area of entrepreneurship pedagogy (to the universities and colleges), where the linking of the relationship between self-efficacy and entrepreneurial orientations could be used as a technique for identifying students for entrepreneurial careers. Since self-efficacy is important in developing entrepreneurial orientations, universities and colleges should emphasize the development and the enhancement of students' sense of self-efficacy.

The second implication is on management practitioners and other business professionals who are involved in risky ventures. They may employ the entrepreneurial orientation model as a tool to assess entrepreneurial capabilities and managerial tendencies that may improve returns on investment in relation to human capital. For instance, prior research findings have proven the positive link between entrepreneurial orientations and performance; thus the model found in the present study could be the basis of values the entrepreneurs should inculcate among their employees so that high self-efficacy could easily be gained to effect the selected entrepreneurial orientation, be it innovativeness or proactivity or both.

Third, it may be a useful tool for selecting team members for new business start-ups, and evaluating applicants for entrepreneurship positions in the corporate world. This model can be applied by corporate leaders in the case of searching for the best business partners or the best managers for a company. They should look at candidates with high self-efficacy levels so that tasks can be completed with confidence and opportunities can be grabbed bravely. Further, this model could also be applied in developing entrepreneurial orientations/behaviours among members in a company. This could be done by providing training that could help enhance the level of self-efficacy of individual employees through exposure to the right values. Therefore, with proper training modules and the right approach, their self-efficacy levels could be increased.

Fourth, the use of the Rasch Model to analyse behavioural research was an alternative method to entrepreneurship research as most researchers used traditional ways of analysing, namely SPSS. The Rasch Model established more insights for the present study by applying deeper psychometric measures, which helped provide more comprehensive conclusions. Thus, the attempt made by this study could be emulated by other researchers in future to use the Rasch Model with more rigorous analysis, that is to do sub-tests for each sub-dimension so that the gap between the items could be traced and therefore, new items could be identified and added to the instrument more accurately.

Another significant methodological implication is the use of real SMEs, involved in the manufacturing industry, as samples. Prior studies have drawn their samples from mostly students, managers and non-entrepreneurs (Miner, Smith, & Bracker, 1989). Therefore, the findings were able to project the actual scenario of SMEs where the conclusions made would be reliable and meaningful as the results were based on a true sample (actual population of entrepreneurs).

### **Limitations and Future Research**

Among the limitations encountered were time and situational constraints, where the respondents were mostly from the Peninsular of Malaysia. In future the number of participants of Malay SMEs from the East Coast of Peninsular Malaysia should be increased because they might have different self-efficacy levels and different perceptions of the environment. A wider geographical area would have been preferable for generalizing the results to the overall population, thus more convincing conclusions could be made. Nevertheless, the response rate for this study was not encouraging enough and this could be the basis for improvement in future research. The reason being, if the study is to be extended to a larger sample, it could produce better results as cross validation could be done by dividing the large data into a few files to cross validate. From here, comparisons could be made to confirm the validity of the instrument and the model. A larger sample size could generate more convincing results (Field, 2013).

Finally, the small sample size might not be substantive for this kind of behavioural research. Moreover, the respondents comprised only

the Malays hence the results of this study cannot be generalized to the entire Malaysian entrepreneur population.

Future data-based research studies addressing psychological characteristics and sociological influences on entrepreneurial orientations should employ a more representative sample, for example, from multiple industries and races with provisions for inter-industry variations in life cycles. Future research to verify the results of this study could be conducted via cross-cultural and cross-country studies. In addition, attempts to investigate similarities and distinguishing characteristics of business entrepreneurs among various nationalities, industries and sizes could also be done in future research. Moreover, those studies could also be based on broader sets of cultural values. Potentially a cross-cultural study investigating differences between Malays and non-Malays could provide additional insights in terms of motivation and entrepreneurial orientations, in which the findings would be more comprehensive and conclusive. Therefore, the conclusion whether entrepreneurs really have high self-efficacy regardless of race or ethnic difference, religion and regional variation, would be an interesting study. Potential correlations between some of the independent variables (e.g. state, education, religion, culture and different cycle-stage of firms) are other implications that could also be revealed from future research.

In addition, since the present study revealed the importance of personal values on entrepreneurial orientations, it will be worth for future research to identify the antecedent of self-efficacy so that corrections could be made from the very root. This presents a new direction for future research, that is, what influences the self-efficacy of Malay SME entrepreneurs.

In the present study, entrepreneurs with high self-efficacy levels are found to be more entrepreneurial than other groups. The assumption has been made from this finding that the groups with higher self-efficacy are successful because previous research consistently proved a positive link between entrepreneurial orientations and success or good performance. Therefore, it is good that future research investigates the link between self-efficacy, entrepreneurial orientations and success because if success is added to the existing model, the equation becomes complete, that is,  $\text{success} = f(\text{self-efficacy, entrepreneurial orientations})$ .

Replications of the present study should also be conducted on other ethnic groups in Malaysia or in other countries in the future,

so that if the findings were found to be consistent with the present study, confirmation on the important role of self-efficacy could be made, while differing results make it necessary to address particularly the impact of the business environment on self-efficacy and entrepreneurial orientations. These are the issues that future research should be focusing on, by adding more variables relating to the business environment, representative of the Malaysian context if the comparison is to be made between the different ethnic groups in Malaysia.

Since the findings of the present study show the importance of self-efficacy to business success, and it was found in previous studies that self-efficacy could be gained through training (Rausch & Frese, 2007), those who were found to be less entrepreneurial, could still have the chance to be entrepreneurial and be successful if they know how to improve their self-efficacy levels especially on how to work under pressure and make decisions under uncertainty. For future research, if only the SPSS programme is used, it is suggested that multidimensional self-efficacy constructs should be developed and employed so that self-efficacy on the task of business which is lacking could be identified; thus it becomes easier for the consultant to develop modules specifically to improve the relevant self-efficacy that could help improve entrepreneurial orientations. This is because unlike the Rasch Model, SPSS cannot identify specific items that receive low endorsement. Hence the self-efficacy item that they were not certain to do could not be traced. If self-efficacy is developed in different dimensions, then only SPSS can find which dimension is important to entrepreneurial orientations. Specifically, we argue that by adopting a view of self-efficacy that includes multiple dimensions (entrepreneurship domain context, content and valence of self-efficacy beliefs) we may better understand why some individuals and not others are successful during the start-up process, and when and where during the business start-up process that failures are likely to occur.

One important finding of the study is that self-efficacy was found to influence both proactivity and innovativeness. The findings also rejected the issue of whether personal characteristics may not be enough to explain entrepreneurial orientations as posited by Gartner, (1988). This was because self-efficacy could explain almost 50 per cent of the variation in the entrepreneurial orientations of Malay SMEs which indicated strong influence of this variable on entrepreneurial orientations.

## Conclusion

This study sought to determine whether self-efficacy predicted the entrepreneurial orientations of Malay entrepreneurs. There were three objectives to be achieved with two hypotheses. All the three objectives, were accepted. Self-efficacy was found to influence both proactivity and innovativeness. Even though the results of this study were inconsistent with Bandura's self-efficacy theory on the reciprocity of theory, the findings confirm the important role of self-efficacy to determine behaviour as claimed by Bandura.

Besides theoretical and methodological contributions, the research results do provide some practical implications, in terms of pedagogical aspects for learning institutions, new entrepreneurship training approaches for the Ministry of Entrepreneurship, as well as SME entrepreneurs learning the whole new model recommended by this research. Several directions for future research were drawn based on the limitations of the study. In conclusion, this research has added valuable theoretical, practical, and methodological ramifications to the body of knowledge in the respective field.

## References

- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175–1184.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Chen, C., Green, P., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13, 295–316.
- Chen, G., Gully, M., & Eden, D. (2004). General self-efficacy and self-esteem: Toward theoretical and empirical distinction between correlated self-evaluations. *Journal of Organizational Behavior*, 25, 375–395.
- Cools, E. (2008). The hunt for Heffalump continues: Who is the Flemish entrepreneur. In H. C. Landstrom (Ed.), *Entrepreneurship, sustainable growth and performance: Frontiers in European entrepreneurship research* (pp. 29–53). Massachusetts: Edward Elgar.
- Dinther, M. V., Docky, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Educational Research Review*, 6(2), 95–108.

- Drnovsek, M., Wincent, J., & Cardon, M. S. (2010). Entrepreneurial self efficacy and business start-up: Developing a multi-dimensional definition. *International Journal of Entrepreneurial Behavior & Research*, 16(4), 329–348.
- Florin, J., Karri, R., & Rossiter, N. (2007). Fostering entrepreneurial drive in business education: An attitudinal approach. *Journal of Management Education*, 31(1), 17–42.
- Forbes, D. P. (2005). The effects of strategic decision-making on entrepreneurial self-efficacy. *Entrepreneurship Theory and Practice*, 29(5), 599–626.
- Field, A. (2013). *Discovering statistics using SPSS*. London: Sage Publications.
- Gartner, W. B. (1988). Who is an entrepreneur? Is the wrong question. *American Journal of Small Business*, 12(4), 11–32.
- Gist, M. E. (1989). The influence of training method on self efficacy and idea generation among managers. *Personnel Psychology*, 42, 787–805.
- Hendrickx, L., Vlek, C., & Calje, H. (1992). Effects of frequency and scenario information on the evaluation of large-scale risks. *Organizational Behavior and Human Decision Processes*, 52, 256–275.
- Hmieleski, K., & Baron, R. (2008). When does entrepreneurial self-efficacy enhance versus reduce firm performance? *Strategic Entrepreneurship Journal*, 2, 57–72.
- Hornsby, J., Naffziger, D., Kuratko, D., & Montagno, R. (1993). An interactive model of the corporate entrepreneurship process. *Entrepreneurship: Theory and Practice*, 17(2), 29–37.
- Howell, J. (2007). Adventure boosts empowerment. *Reclaiming Children and Youth*, 45–48.
- Kumar, M. (2007). Explaining entrepreneurial success: A conceptual model. *Academy of Entrepreneurship Journal*, 13(1), 57–77.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Lumpkin, G., & Erdogan, B. (2004). If not entrepreneurship, can psychological characteristics predict entrepreneurial orientation? A pilot study. *The ICFAI Journal of Entrepreneurship Development*, 1(1), 21–33.
- Markman, G. D., Baron, R. A., & Balkon, D. B. (2005). Are perseverance and self-efficacy costless? Assessing entrepreneurs' regretful thinking. *Journal of Organizational Behavior*, 26(1), 1–19.
- Markman, G., Balkin, D., & Baron, R. (2002). Inventors and new venture formation: The effects of general self-efficacy and

- regretful thinking. *Entrepreneurship: Theory & Practice*, 27(2), 149–165.
- McClelland, D., & Koestner, R. (1992). Achievement motivation. In Smith C. P. (Ed.), *Handbook of thematic measures of motivation and personality* (pp. 205–210). New York: Cambridge University Press.
- McShane, S., & Glinow, M. (2008). *Organizational behavior: Emerging realities for the workplace revolution*. New York: The McGraw-Hill/Irwin.
- Miner, J., Smith, N., & Bracker, J. (1989). Role of entrepreneurial task motivation in the growth of technological innovative firms. *Journal of Applied Psychology*, 74(4), 554–560.
- Mitchell, T., & Daniels, D. (2003). Observations and commentary on recent research in work motivation. In L. B. Porter (Eds.), *Motivation and work behavior* (7th ed.). New York: McGraw Hill.
- Rohani Mohd, Khulida Kirana Yahya, Badrul Hisham Kamaruddin, Anizah Zainuddin & Maznah Che Ghazali. (2014). The mediatory effect of self-efficacy on the relationship between religious values and entrepreneurial orientations: A case of Malay owner-managers of SMEs in manufacturing industry. *Procedia-Social and Behavioral Sciences*, 130, 96–104.
- Mueller, S., & Goic, S. (2003). East-West differences in entrepreneurial self-efficacy: Implications for entrepreneurship education in transition economies. *International Journal of Entrepreneurship Education*, 1(4), 613–632.
- Okhomina, D. (2010). Entrepreneurial orientation and psychological traits: The moderating influence of supportive environment. *Journal of Behavioural Studies in Business*, 2, 1–16.
- Poon, J., Aidnudin, R., & Junit, S. (2006). Effects of self-concept traits and entrepreneurial orientation on firm performance. *International Small Business Journal*, 24(1), 61–82.
- Pinder, C. (1998). *Work motivation in organizational behavior*. Upper Saddle River, NJ: Prentice Hall.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation and success. *European Journal of Work & Organizational Psychology*, 16, 353–385.
- Robbins, S. P., & Coulter, M. (2007). *Management*. New Jersey: Pearson Prentice Hall.
- Schumpeter, J. A. (1950). *Capitalism, socialism and democracy* (3rd ed.). New York: Harper and Row.

- Stajkovic, A., & Luthans, F. (2003). Behavioral management and task performance in organizations: Conceptual background, meta-analysis, and test of alternative models. *Personnel Psychology*, *56*, 155–194.
- Zhao, H., Seibert, C., & Hills, C. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*(2), 1265–1272.