Analysing the Adoption of Malaysian Standards (MS) on SME Performances: The Mediating Effects of Innovation Adoption Factors*

Haslinda Musa  
Faculty of Technology Management & Technopreneurship  
Universiti Teknikal Malaysia Melaka  
Melaka, Malaysia  
haslindamusa@utem.edu.my

Fadhlur Rahim Azmi  
Faculty of Technology Management & Technopreneurship  
Universiti Teknikal Malaysia Melaka  
Melaka, Malaysia  
fad_marketing@hotmail.com

Fararishah Abdul Khalid  
Faculty of Technology Management & Technopreneurship  
Universiti Teknikal Malaysia Melaka  
Melaka, Malaysia  
fararishah@utem.edu.my

Ahmad Rozelan Yunus  
Faculty of Technology Management & Technopreneurship  
Universiti Teknikal Malaysia Melaka  
Melaka, Malaysia  
rozelan@utem.edu.my

Abstract— this study aims to explore the adoption of Malaysian Standards (MS) on SMEs performances and is mediated by characteristics of MS, characteristics of SMEs and external factors. This study was conducted using questionnaires distributed to 300 SMEs in various sectors. The statistical analysis utilized Statistical Package for the Social Science (SPSS). A multiple mediation model enabled us to investigate the specific indirect and direct effect of each mediator. Results showed that the proposed MS factors were significant in impacting SME performance. The results also showed that characteristics of MS, characteristics of SME, and external factors are positively associated with SME performance. The results imply that adoption of MS may increase SMEs performance through mediating factors. The study shed new light on SMEs performance through this adoption. The results also have implications for practitioners and academics.

Keywords— Malaysian Standards (MS), Characteristic of MS, Characteristic of SME, External factors, Mediating effect, SMEs performance

I. INTRODUCTION

Department of Standards Malaysia (Malaysian Standards) is the national standards body and the national accreditation body, providing confidence to various stakeholders, through credible standardization and accreditation services for global competitiveness [1]. MS spearheaded the Standards Component of the Strategic Reform Initiatives-Competition Standards & Liberalization (SRI-CSL) under the Economic Transformation Program, to primarily enhance the quality of Malaysian products and services for both the nation as well as the world. MS promised to the consumers is to deliver quality, safety, reliability, efficiency, compatibility, cost-effectiveness and sustainability in bringing product and service solutions across 24 sectors of the economy. MS’s continuing motive for businesses is to help improve efficiencies, reduce waste and enhance quality for greater marketability of their products and services locally and internationally. Besides that, it also supports other National Sectoral Policies that further economic objectives. In developing world-class Malaysian Standards
(MS), MS follows transparent procedures in keeping with the principles of good governance and international best practices. As a purpose-driven institution, MS is motivated and guided by vision, mission and values. Previously, the standards used by organizations were MS ISO 9000 Quality Management (QMS), MS ISO 14000 Environmental Management (EMS), MS ISO/IEC 27000 IT Security Management (ISMS), MS ISO 50001 Energy Management, Malaysian Standards on LEDs and Halal Series. Those popular standards were implemented on the variety sectors in Malaysia.

Personnel numbers that fall below a certain limit is known as Small Medium Enterprise (SME). These small firms are independent businesses which are managed by their owners. Besides it was also mentioned that the size of the firm could be small in comparison to the large market. The SMEs, or more often referred to as the informal sector, is generally assumed to comprise heterogeneous economic activities [2]. As for Malaysia, the definition of SME is that the sales turnover for the manufacturing industry is not to exceed RM50 million or full-time employees of more than 200 people. On the other hand, as for the services or other sectors, sales turnover is not to exceed more than RM20 million or full time employees of more than 75 people [3]

According to Turner [4], SMEs play an important role in the development and growth of the employment and economic sector. For an instance, in Ireland, 14% of the economy is accounted for by innovation in SMEs and 25% of the turnover of SMEs is accounted for by new and improved products. In order to sustain in the market, SMEs should have a successful innovation which is not an easy task. There are several disadvantages found for these small firms; limited knowledge and skills, restricted cash flow, and low quantity of sales compared to innovation costs. Thus, in order for SME to achieve its objective, the money spent on innovation has to be planned in a proper manner. In order for a SME to sustain in the market, they need to be able to increase their competitiveness and quality. Project management is said to be playing an important role in the management of innovation and growth in SMEs. Project management is a deep-rooted regulation that defines in the tools and techniques mandatory to define, plan and execute projects. However, in the initial stages, project management was developed for heavy engineering industries but later it evolved to address smaller projects, but medium-sized projects in large firms.

II. RESEARCH MODEL

The characteristics of a new idea would influence the evaluation and the decision to adopt it as part of the organization. Scholars have developed and advanced several models of diffusion of innovations and a number of innovation characteristics have been identified as determinants of adoption [5]. Rogers and Shoemaker [6] identified five (5) attributes of innovations; relative advantage, compatibility, complexity, divisibility and communicability. Roger subsequently modified these characteristics as follows: perceived relative advantage, compatibility, complexity, observability and trialability. One of the main aims of the organizational innovation literature is to identify organizational characteristics that influence adoption of an innovation within the organization [5]. These characteristics involve organizational size, position in supply chain, manager’s support, decentralized organizational performance, supply chain strategy integration [7]. However, SMEs are more personalized and centered on the individual hence this study eliminating the other factors relating supply chain position, decentralized organizational performance or supply chain strategy integration. Some additional factors relating the SME characteristics towards small enterprise performances are trainings (microedit), values, management practices, entrepreneurs’ experiences, entrepreneur’s education, religious values, family support, age of firm and type of industry [8]. From previous studies we develop research models as below. Figure 1 shows the Research Model.

![Fig. 1. Research Model](image-url)
III. DATA COLLECTION

The respondents for this research were randomly selected from the SMECop directory. A list of SMEs which are Halal Standards certified was provided by the Jabatan Agama Islam Negeri. Data collected through the primary data include individual interviews, telephone interviews, through the electronic media interview - questionnaires that are either personally administered, sent through email or observation individual. Questionnaires were distributed through online by using Survey Monkey as well as manually. In total, 300 questionnaires were distributed. Out of these, 200 (66.67%) were found usable for this study.

IV. LITERATURE REVIEW

A. Managerial Innovation

During the 1980's and 1990's, benchmarking appeared to play an important role to improve competitive advantage which was adopted by the management of an organization. The benchmarking is said to be a vital tool for organizations to further progress their operations. In the year 1999, benchmarking was said to be one of the pinnacle five management tool [9]. Benchmarking allows advanced performance by knowing practices and setting demanding performance goals. It gives a room for the company to identify their strength and weakness. There are three types of benchmarking; internal, external, and best practice. Adebanjo, in their study also added that even though benchmarking appeared to be vital to a lot of organizations, it still had its set back. There were quite a few shortcomings due to the fact of lack of consensus on its classification. They also added that lack of involvement from employees was another factor that affected the set back. The benchmarking could be a good idea to be implemented for the managerial innovation as it allows a room for the employees to grow and innovate better.

There has been a dramatic globalization around the world. This is clearly visible especially with new technologies and diversification that is happening around us. Many companies are trying hard to adapt the change in technology and also other challenges such as improving management. Innovation is an important criteria that is to be fulfilled in order to uphold competitive advantage. This would enable the companies to survive and sustain in the market for a longer time period [10]. In their findings, Ota also added that in comparison between the American and Japanese firms, the Japanese firms appear to adapt to the changes of technology more rapidly. They put in a fairly high amount of resources into adopting and improving the pre-existing products and technologies especially in well-developed areas.

Yalabik [11], in their studies also found that innovation is vital to management as it allows a strong link between expansion, affluence and the endurance of the firm. In the modern times, it is becoming very important for managers to comprehend the key extent of innovation strategy realizing the fact that introducing the idea of managing innovation can be a great challenge on its own. Innovation is qualified in the current times as a mutual process motivated by vision and goals that brings together business strategy and operational competence with external markets. On the other hand, alignment is a factor that effects the firm’s performance that would support the business level strategies. According to Slack [12], in order to have the most powerful forces that rises the market needs through the organization, alignment is vital as it is applied to the market atmosphere.

The researchers found that a high level of growth and dynamism is happening due to the fact of innovation [13]. There are two major issues which are generally discussed in innovation; the background of the innovation from their internal and external perception and the outcome of innovation on business performance. Innovation has a very strong influence on the business performance. Being an SME, the source of future growth is often flagged down. In this study, they also found that SME's have the tendency to depend more on incremental rather than radical innovation. It doesn't come as a surprise if the manufacturing firms do fairly well compared to service based industry. This is because, the source of innovation is lesser when it comes to intangible products compared to tangible products. They also suggested that organizations should pursue in two types of innovation in order to be successful; exploratory and exploitive innovation. They believe that, stability between two sections is better than emphasizing on one area at the expense of the other. This phenomena is known as ambidextrous organization.

According to Todd [14], innovation doesn't only mean creating new products but also being innovative in methods of managing employees. There are four types of innovation; operational innovation, product/service innovation, strategic innovation, management innovation. Operational innovation is the process of transforming an input into output. Product/service innovation is the generation of new product and services with a temporary advantage. On the other hand, strategic innovation is also known as "bold new business models" which allows temporary competitive advantage that is easily decoded by other people. Lastly, the management innovation is where the goals of the organization is advanced by the way each work is carried out and how the customs of organizational forms are modified. Todd in his findings mentioned that management innovation tops the list and is the most important factor to be considered. The management innovation allows a room for the managers to change the way of what they do. Innovation has the ability to screams out at you from advertisements for products or services offered by any organization. It has a strong effect on our lifestyle. Our lifestyle is persistently created and recreated by the procedure of innovation. Innovation is determined by the capability to see links, to find opportunities and to take benefit of them. Similarly it is vital to see where and how fresh markets can be formed and developed. In order to perform innovation,
the need to manage the process arises. As the managers of the companies, it is their duty to ensure the innovation goes on in a smooth way. They should not only innovate the product or services offered by the company but also innovate the employees in order for them to work better [15].

Managerial innovation is known as a set of conceptual components, which have been almost effectively adopted by organizations. There have been a few studies which discuss the different innovations. Imitation is used compared to rational choice when it comes to the adoption of innovations by the organizations [16]. In order for someone to be innovative, they have to be flexible. According to Camison [17], flexibility plays an important role in gaining competitive advantage. The major types of flexibility is often affected by a firms' internal resources or its external environment. Demand and technology are said to be the two main sources of variability. In order for product flexibility to increase, there is a strong need for demand. Thus the volume of flexibility would fluctuate according to the quantity of demand. To be flexible, there should be an ability to take risks. There is a saying that goes "You can't make an omelet without breaking eggs- you can't innovate without taking risks" [15].

According to Bessant and Tidd [15], innovation does not happen in vacuum. It is a focus to a variety of internal and external factors which outline what is potential and what really emerges. In exacting it desires apparent deliberate leadership and route alongside with the promise of resources to formulate this to take place. There are times when the organization would require an external perspective in order to accomplish the goals. No business has resources to desecrate in that scattergun manner; innovation requires a plan. Another important thing needed is a level of guts and guidance in order to maneuver the organization away from the norm into fresh spaces. A wide range of structures, tools and techniques are used by the organizations to innovate. Many organizations for an example would take time-off site and away from day-to-day pressures of their normal operations in order to reflect and develop a strategic framework for innovation.

In a study by McDermott and Prajogo [13], there was a question that was discussed if or not the organizational size would have an impact on innovation activities and its outcomes. There is a need to have an attitude in order to be able to take risk to be innovative. Based on the findings, it was found that size has a positive impact on the innovation of an organization. The bigger the firm, the bigger the resources to cater for R&D and any other activities needed to be conducted in order to innovate. On the other hand, they also found that SME's have a greater chance of being innovative simply because they are small in amount and are flexible to accept change compared to a large organization. In an SME, there are very few layers that would be affected by the change done compared to those large organizations.

B. Mediating Factors

Rogers [5] interpreted relative advantage as “the degree to which an innovation is perceived as better than the idea it supersedes”. Relative advantage is an important factor influencing the rate of adopting the innovation with numbers of sub-dimensions including low initial cost, lower perceived risk, decrease in discomfort, time save, and immediate reward [6]. At the organisational level, the capability of an organisation to adopt innovations depends on the skills of its members, its ability to provide training for developing these skills, or the hiring of experienced staff. As a result, some innovation benefits can be identified as “administrative efficiency, staff well-being, personal growth, increased satisfaction, improved group cohesiveness, better interpersonal communication”. Diffusion researchers investigated the relationship between the perceived relative advantage of an innovation and the scale and rate of its adoption. Most empirical studies report a positive relationship between perceived relative advantage and the adoption of innovation and agreed that relative advantage is one of the most important factors influencing the adoption of the innovation [18]. Musa [19] describes the benefits of the technology as relative advantage, in which will affect the decision to adopt it by users.

Rogers [5] defined an innovation's compatibility as the degree to which it is perceived as being consistent with the existing values, past experiences and needs of the potential adopter. Compatibility as concerned with the similarity of the innovation to an existing product it may eventually supplement, complement, or replace [20]. They concluded from earlier scholar’s definition that compatibility is about relationships between innovation and other elements and how it can be perceived in a particular context which will influence the adoption of the innovation. A company seeks to adopt innovations, which are compatible with the nature of its work, processes and activities. According to Premkumar& Roberts [21] it is important that changes resulting from innovation adoption are compatible with the values and the belief systems of the company.

Rogers [5] defines complexity as “the degree to which an innovation is perceived as difficult to understand and use”. Generally, an innovation which can be understood easily by the potential adopter is likely to be adopted more rapidly than a complicated innovation, while an innovation that required new skills and understanding may take a longer time to be adopted (Rogers, 1995). Previous studies on the relationship between perceived complexity of the innovation and adoption has revealed a contradict findings. A study by Damampour [22] claimed that complexity is negatively associated with adoption. Further, scholars suggest that complexity is negatively associated with the decision makers’ perception of innovation adoption [5]. Sultan and Chan [23] however found that complexity is not associated with innovation adoption.

Rogers and Shoemaker [6] defined observability (or communicability) as the degree to which the results of an innovation are visible to others. Observability gives the adopter an opportunity to learn about and assess the innovation, which may
facilitate its adoption [24]. It is notable that a company may better assess an innovation through observing the results of adopting it rather than observing the innovation itself. Rogers reported a positive relationship between observability and innovation adoption.

Organisational size as a proxy variable that gives dimensions in term of economic and organisational resources which include number of employees and their scale of operations [25]. A small business indicated to have less than 20 employees significantly differs in term of resources compared to organisation with 200 to 2000 employees (larger organisation). Some studies argue that larger companies will tend to adopt innovations due to their capability of access to resources [26]. However, studies reported that there is no significant association between size of company and adoption of innovation [27].

Sector differences were observed in the acquisition of telecom products and services [28]. They found store tenure to be an important influence on the strategy selection of rural retail businesses.

Many studies consider manager’s support as a key determinant to the adoption of innovation. This is because the manager possesses power and authority as they are a key to the decision-making process. Moore [20] asserted that decision makers (the management) play important roles in innovation as they will choose whether or not the innovations is selected (to innovate or not) or to decide what methods of implementation to be used. Besides, the top management plays essential roles in a process of decision making for technology adoption in a firm [28]. Rogers and Shoemaker [6] described someone who is in a superordinate power position within the organisation (the boss) as “Authority innovation-decisions”. This person influences the decision in adopting innovation. Further, manager decides and anticipates the requirements of skills on staff for a new technology to match with the existing system [29].

An overview of the key elements to business strategy which include: (i) long term aspirations of organisation and management that will impact eventual strategy, (ii) organisation’s capability in terms of skills and resources of people, etc, and (iii) the operating environment where organisations compete such as technological developments, competitors, and changing market condition [26]. Kaplan et al. [30] agreed that in order to succeed, organisations should align their organisational structure and management processes to changes in the external environment and firm strategy.

Monferrer et al. [31] by comparing the results with the proposed structural equation model confirmed that network market orientation is a determining factor for firms to achieve better international results. According to Aziz et. al, [32], market orientation is seen as an innovative action, and then the two concepts should be approached together. The most important item in terms of marketing is meeting the needs of customers which continue to decrease and this can be accomplished through innovative practices in the creation of new goods and services. A market-oriented organisation has a superior capability in achieving higher profits compared to non-market oriented organisation. Market orientation can influence a firm’s manufacturing performance in several ways. Firms with higher level of customer and competitor orientation are likely to have a better understanding of the key elements along the buyers’ value chain, competitors’ moves and how these change over time [33].

Throughout the World, governments tend to encourage and support the development of innovation. Alghamdi et al. [34] reported that the Malaysian government is encouraging small and medium enterprises (SMEs) to adopt e-commerce solutions and other innovation but to what extent the support is given is not known. Study by Keter [35], there is little or no promotive role by the government activities of this sector to promote SMEs. Musa and Chinniah discussed the challenges of Malaysian organization the area of skilled worker, and the economics of scales. According to their research, the most challenges faces organization in re-source availability includes financial, human and time [36].

Competitive environments have a strongly influence on the adoption of innovation. Scholars [27] provide several examples of companies in the U.S. that adopted the Internet mainly because of competitive pressures. Increasing numbers of SMEs from developing countries are adopting electronic technology as a means of communication and distribution under competitive pressure from suppliers and customers from developed countries.

V. RESULTS

A. Statistical Analysis

For statistical analysis, survey monkey was deployed to get the analysis of employees, sectors, estimated turnover, type of MS implemented and improvement after adapting MS. For hypothesis testing and mediating effect we are using Preacher and Hayes [37] SPSS Macro for Multiple Mediation. From this analysis we obtained the association of the variables and also the significant of the variables to answer the research question.

Statistic shows 95.5% of SMEs have a staff of 5-50 people, while 4.5% of 51-100 people. The most sectors that used MS are food industry by 76.5%, followed by the manufacturing industry 9.5%, wholesale industry 6.5%, service industry and medical industry of 6.5% to 1.0%. Estimated turnover (gross revenue) less than RM300, 000 annually is 60.5%, 31.0% more than RM300, 000 and more than RM 1 million 8.5%. Types of MS implemented on SMEs. 0.5% MS ISO 9000 series -
Quality management is implemented and 99.5% is other than options in question survey. 171 SMEs have given a positive response to the increase in performance after adoption of MS. The rest of 29 SME does not apply MS.

B. Hypothesis Testing

H1 examine MS adoption is positively associated with SME performances. Two (2) thing will occur on this hypothesis which is MS to SME performance without mediators (total effect) and MS to SME performance with the mediator (direct effect). Table I shows the result for the total effect. It has given a positive result (. 3665) with SME performance. Table II shows for the direct effect also gives a positive result (.2174). The two (2) results show that MS are positively associated with SME performance. H2, H3 and H4 examined the positive association Mediator (MV) with DV. Base on Table III, the results show that two variables (2) directly affect MV1 and MV2 on DV are positively associated; characteristic of MS (.0150) and characteristic of SME (.5915) respectively. But MV3, which represents external factors, shows negative association (-.0888) with SME performance. Table IV shows all the positive relationships. The positive results show that for every unit increase in mediator, it will lead to an increase in SME performance, while the negative association shows that for every unit decrease in mediator, it will lead to a decrease in SME performance.

We developed statistical diagram from research model to examine adoption factors that influence its adoption in SMEs. Figure 2 shows statistical diagram and Figure 3 shows statistical analysis. Figure 3 demonstrates the statistical analysis that has been made. “a” path indicates IV to MV. The path from X to MV1 is not significant p = 0.1339. Path from X to MV2 is significant (0.0000) and the path from X to MV3 also gives significant result (0.0006). Path X to MV1 not significant to this adoption. But X to MV2 and MV3 also gives significant to this adoption. “b” path shows MV to DV. The path from MV1 to Y is not significant (0.5041). This path shows it is not significant to this adoption. The path from MV2 to Y is significant (0.0000) and the path from MV3 to Y also shows significantly (0.0272) towards adoption. “c” path IV to DV without MV it is known as the Total Effect. Path from X to Y is significant (0.0000) indicating that this path to provide significant adoption. Lastly, “c” path shows IV to DV controlling for the MV called Direct Effect. The results show it was significant (0.0028) toward adoption. This significant indicator p value must be less than 0.005.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect of Independent Variable on Dependent Variable (c path)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>0.3665 Positive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect of Independent Variable on Dependent Variable (c' path)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>0.2174 Positive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direct Effects of Mediators on Dependent Variables (b paths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV1</td>
<td>0.0150 Positive</td>
</tr>
<tr>
<td>MV2</td>
<td>0.5915 Positive</td>
</tr>
<tr>
<td>MV3</td>
<td>-0.0888 Negative</td>
</tr>
</tbody>
</table>
TABLE IV. DIRECT EFFECTS OF MEDIATORS ON DEPENDENT VARIABLES (A PATHS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direct Effects of Mediators on Dependent Variables (a paths)</th>
<th>Coefficient</th>
<th>relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV1</td>
<td></td>
<td>0.2965</td>
<td>Positive</td>
</tr>
<tr>
<td>MV2</td>
<td></td>
<td>0.3025</td>
<td>Positive</td>
</tr>
<tr>
<td>MV3</td>
<td></td>
<td>0.3860</td>
<td>Positive</td>
</tr>
</tbody>
</table>

Fig. 2. Statistical Diagram

Dependent, Independent, and Proposed Mediator Variables:
DV = SME Performance
IV = Malaysian Standards
MEDS = Characteristics of Malaysian Standards
Characteristics of SME
External Factors
Y = SME Performance
X = Malaysian Standards
MV1 = Characteristics of Malaysian Standards
MV2 = Characteristics of SME
MV3 = External Factors

Fig. 3. Statistical Analysis

VI. CONCLUSION

Our measurement analysis provides a better understanding of the consequences of implementation MS among SMEs. From a series of analyses, we conclude that, adoption of MS among SMEs in Malaysia gives a positive result with or without a mediator. This situation’s occurrence could be due to the entrepreneur’s concerned over MS because it is
becoming a need for the sustainability of the business. We found a negative effect for external factors towards SMEs performance. However, the importance of external factors for smaller organizations in order to obtain a sustainable competitive advantage by relating the degree of external factors to the extent of success in achieving critical performance outcomes [38].

The most significant factor in adopting MS is characteristic of SMEs (.5915). The elements involved include strategy integration, manager’s support, type of business and organizational size. A study conducted by Fink [38] mentioned that the Organization for Economic Co-Operation and Development (OECD) stated competitiveness of SMEs depends on the basic role of the owner/manager (his/her drive), intangible investment (intelligence management), tangible investment in technologically suitable equipment, and strategic capability (innovation and flexibility). On the personal characteristics of the owner-manager have been under increasing interest. Some attempts have been made to explain business success or failure in terms of personality traits of the entrepreneur [39]. Besides, managers create a new viewpoint revise their expectations of group members according to new requirements in the organization and prepare situations to gain the latest knowledge [40].

REFERENCES


ACKNOWLEDGMENT

The author would like to thank Universiti Teknikal Malaysia Melaka for their support in obtaining the info and material in development of our work and we also want to thank anonymous referees whose comments led to improved presentation of our work. Lastly we also thank the Ministry of Higher Education for TRGS/1/2014/FPTT/02/3/D00003 research grant and IEOM Society for comments that greatly improved the manuscript.

BIOGRAPHY

Haslinda Musa is a senior lecturer at the Universiti Teknikal Malaysia Melaka. She is also a Manager of Centre of Excellence in Institute of Technology Management and Entrepreneurship. She holds a Ph. D. in Operations Management from University of Leeds, United Kingdom, and a MSc by Research from Univeriti Teknologi Mara Malaysia and B.E. in Civil Engineering from Universiti of Malaya, Malaysia. Her research interest include Business Continuity and Risk Management, Malaysian Standards (MS), Drop-shipping Supply Chain and SMEs Performances. She has published in numbers of reputed journals and presented her work in numerous conferences worldwide. She is also a reviewer for numbers of journals.

Fadhlur Rahim Azmi is currently a fulltime Master by Research student at Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka. He holds a Bachelor of Business Administrative in Marketing from Universiti Teknologi Mara, Malaysia and a Foundation in Accountancy from Kolej Matrikulasi Johor, Malaysia. Mr. Fadhlur serves as a Research Assistant at Universiti Teknikal Malaysia Melaka doing several research from his supervisor.

Fararishah Abdul Khalid is a senior lecturer at the Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka. She holds a PhD in Management from RMIT University, Melbourne, and an MBA from Charles Sturt University. Her research interests include business incubation management, business startup, innovation management and entrepreneurship development. She has published in a number of reputed journals and conferences worldwide and is also a reviewer for a number of journals including Journal of Mixed Methods Review.