

Revisiting SMEs' Business Strategy: Shifting Outsourcing to Crowdsourcing Practices to Enhance SMEs' Performance

(Semakan Semula Strategi Perniagaan PKS: Peralihan Penyumberan Luar kepada Amalan Penyumberan Awam Untuk Meningkatkan Prestasi PKS)

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ABSTRACT

The emergence of digital technology platforms such as crowdsourcing platform allows SMEs to establish an unmediated connection between suppliers and the customers; hence, enabling a close engagement with other stakeholders. Crowdsourcing practice offers the SMEs an unprecedented opportunity to enhance their business performance via the utilization of a large pool of crowds' wisdom. Based on the above business strategy, it is very crucial to revisit SMEs' business strategy; i.e., by shifting traditional method of conducting business (outsourcing) to new business phenomenon i.e. crowdsourcing practices. Specifically, this paper attempts to explore the roles of crowdsourcing practices, innovative owner-managers, and the relationship quality in enhancing SMEs' business performance. The analysis technique used in this study using PLS-SEM. The study's findings revealed that innovative owner-manager and relationship quality of commitment can be explained further via leveraging on crowdsourcing practices to improve business performance. This study may enrich the crowdsourcing knowledge among SMEs to revisit their existing business strategies; and to implement and better manage crowdsourcing practices in their organizations, particularly in sustaining their businesses post COVID-19.

Keywords: Crowdsourcing; innovative owner-manager; relationship quality; SMEs performance.

ABSTRAK

Kemunculan platform teknologi digital seperti platform penyumberan awam, membolehkan usahawan PKS mewujudkan hubungan langsung antara pembekal, pelanggan dan membina hubungan baik dengan pihak berkepentingan. Amalan penyumberan awam mampu menawarkan PKS peluang yang belum pernah diperolehi bagi meningkatkan prestasi perniagaan mereka melalui mengoptimumkan penggunaan kumpulan besar bijaksana di kalangan orang ramai. Berdasarkan strategi perniagaan di atas, adalah sangat penting kepada PKS untuk menyemak semula strategi perniagaan melalui perubahan pendekatan secara tradisional dalam menjalankan perniagaan (penyumberan luar) kepada pendekatan perniagaan baharu iaitu amalan penyumberan awam. Secara khusus, kajian ini meneroka peranan amalan penyumberan awam, pemilik-pengurus inovatif, kualiti hubungan dalam meningkatkan prestasi perniagaan PKS. Teknik analisis yang digunakan dalam kajian ini menggunakan PLS-SEM. Penemuan kajian mendapati bahawa pemilik-pengurus inovatif dan kualiti perhubungan komitmen dapat dijelaskan dengan lebih lanjut melalui amalan penyumberan awam bagi meningkatkan prestasi perniagaan. Kajian ini dapat meningkatkan pengetahuan mengenai penyumberan awam di kalangan PKS dalam menyemak semula strategi perniagaan yang sedia ada; dan pelaksanaan serta pengurusan amalan penyumberan awam di organisasi supaya lebih baik dalam memastikan perniagaan terus kekal semasa pasca COVID-19.

Kata kunci: Penyumberan awam; pemilik-pengurus inovatif; kualiti hubungan; prestasi PKS.

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INTRODUCTION

Globally, majority of businesses in that include Small and Medium Enterprises (SMEs) are encountering many business challenges such as uncertain business environment, the advent of Industry 4.0 and sudden

COVID-19 outbreak that radically changed the business environment (Chatterjee et al. 2022). The SMEs cannot avoid these situations whereby they are also badly suffering such as health issues i.e. COVID-19, shortage and increase of raw material prices, supply chain constraints, as well as restriction to businesses rules and

regulations imposed by government to combat and stop the COVID-19 outbreak. All of these have simultaneously caused demand and supply shocks to the local economy. Hence, many business entities including SMEs struggled with the stress created by the said pandemic. These challenges contribute to the slowdown of the business activities and forced many SME owner-managers to alter their business strategies for business survival.

The reason why SMEs are this study's main focus is because numerous studies have acknowledged that SMEs have a vital function and are the 'backbone' of a nation's economic progress. SMEs contribute to the growing industrial sector mainly to exports, the Gross Domestic Product (GDP), and job opportunity (employment) (Mutalemwa 2015). Again, SMEs are also recognized as being very crucial for developing countries including SMEs in Malaysia. From the global SMEs' perspective, Abdul Rahman et al. (2016) emphasized that majority of businesses worldwide are SMEs; i.e. 97.4% of business establishments in Malaysia are SMEs (SME Corp 2022). Meanwhile, majority of businesses worldwide are made-up of SMEs with the percentages as follows: 97.0% in Thailand (Savlovski & Robu 2011), over 96.0% in America (US Small Business Administration & Census Bureau 2006), 99.8 % in European Union (Lukacs 2015), 90.0% in Arab and Ghana respectively (Nichter & Goldmark 2009), and 95.0% in Mexico. The country that has the highest number of SMEs is China whereby 80.0% of employment was contributed by its 50 million SMEs (Goyal 2013). Therefore, a conclusion could be made that SMEs play pertinent role in a nation's economic progress and overall production output.

This situation becomes more critical to all enterprises across the continents including Malaysian SMEs. It clearly reported by SME Insights New Release 2019/2020 (SME Insights 2019/2020) that, SME is one of the most badly affected businesses by the COVID-19 pandemic. 89.9% of SMEs suffered a drastic drop in sales. The main constraints faced by them are cash flow, followed by reduction in demand and disruptions in supply chains. Furthermore, the SME Gross Domestic Product (GDP) growth improved moderately at 5.8% in the year 2019 compared to 6.2% in the prior year. It was due to economic slowdown in 2019; in which caused global economic challenges and domestic supply disruptions. It became worst for the SMEs due to the COVID-19 outbreak. It was a critical situation, as it is a significant global health crisis, affecting every aspect of the business. There were health issues, economic slowdown, financial imbalance, interrupted social life and political consequences. In short, the COVID-19 pandemic has affected and reshaped all the continents including Malaysia. The businesses have to revisit their business strategies such as moving from their traditional business operation to digitalized business landscape via crowdsourcing.

Therefore, based on the above scenarios it is very pertinent to conduct this study by revisiting the

SMEs' existing business strategy from traditional business landscape i.e. outsourcing to the new business phenomenon via crowdsourcing practices to boost the SMEs' performance. Conducting this study may contribute to the literature by investigating the role of crowdsourcing practices as mediator in the relationship between innovative owner-manager, relationship quality (trust and commitment) and SMEs' performance. Furthermore, this study offers insights practical guideline to SME owner-managers related to the new business phenomenon of crowdsourcing practices in term of potential crowdsourcing benefits, relevant platforms can be used, opportunities to minimise resources scarcity for Malaysian SMEs to improve their business performance.

The study is organised into several sections. First, discussion begins with the SMEs scenario in Malaysia and its roles to a nation's economic growth. Second, reviews of past studies related to the outsourcing and crowdsourcing practices, innovative owner-manager, relationship quality of trust and commitment as well as SMEs performance. Third, research methodology used in this study. Forth, findings and discussion of each hypothesis conjectured. Finally, the discussion proceeds to the study implications and conclusion.

LITERATURE REVIEW

CROWDSOURCING VS. OUTSOURCING PRACTICES

Before analyzing crowdsourcing practices, this study will first distinguish the outsourcing and crowdsourcing practices in order to have a better understanding on both business strategies. Outsourcing is defined as subcontracting certain tasks to a third party by a business entity (Unal & Donthu 2014). Ukidwe and Bakshi (2005) used the word, 'outsource' for the external party being awarded the outsourced tasks by the company, i.e. outsourcer. Other term that signifies similar meaning is sub-contractor. In addition, McCarthy and Anagnostou (2004) defined outsourcing as the externalization of an activity or an entire process, which was previously performed internally by the company to an external party or suppliers. The literature has defined outsourcing through various aspects such as make or buy decision from the transaction cost perspective. Other studies employed the resource-based competency view that suggests firms to outsource every activity that they are not competent in. In short, outsourcing is referring to a contractual relationship between business organization and service providers i.e. supplier, contractor and so forth. In simple word, a business organization pays another company to do some work for it.

Nevertheless, crowdsourcing involves an open-call to external crowds about assigning tasks that are normally performed by workers of companies to non-employees (Soon & Saguy 2017). The idea is populated and coined by Jeff Howe (2006). The participants to

the crowdsourcing are with diverse backgrounds and they may work from remote locations, provided that they have an internet access. Many organizations have utilized the crowdsourcing practices. It is because crowdsourcing is more flexible as it is based on the organization's requirement and customization by the crowdsourcer (organization). Thus, crowdsourcing can be referred as a business strategy that the organization exploits external resources such as freelancer, external crowd or expert to perform certain business activities for the organization rather than employ external consultant and other business entities. These strategies are also more effective and advance through the using Internet of Things (IoTs); Technology Web 2.0 such as social media i.e. Facebook, Blog, Twitter, Instagram and so forth. This is because, the current trend of using social media; i.e. Facebook as a business platform is becoming a necessity (SME Annual Report 2019/2020). These create an opportunity for the SME owner-managers to shift their business landscape to crowdsourcing practices. This is because this strategy is related to internet-based business platforms i.e. crowdsourcing platform. Prior studies found that crowdsourcing practices are being leveraged by many organizations. For instance, Nescafe has managed to reignite the interest of consumers for instant coffee through 138 suggestions obtained from at least 40 nations. For marketing concept, Starbucks and Unilever have used the crowds' co-creation approach to search for better design of product for their organizations (Dinkovski 2016).

Strategically, crowdsourcing can be considered as the golden opportunity for organizations to access external expertise and enjoy reduced expenditure due to the utilization of e-employees (Kietzmann 2017), foster organizational innovation by gaining outside experts' skills (Camacho et al. 2019), procure access to valuable resources that are not internally available, brand visibility, enjoy services by specialists as well as diverse solutions (Ye & Kankanhalli 2015). On the top of that, the increased number of SMEs indicates an excellent interest to leverage on crowdsourcing in their business operations as a result of its benefits; i.e., cost-effective and attract an extensive number of individuals for innovation agility (Jiao et al. 2021). In view of the above, past studies evidenced that many organizations leveraging on crowdsourcing have gained various external intangible

resources. Thus, this study is pivotal considering the role of owner-managers in the enterprises; specifically, innovative owner-managers and relationship quality to ensure crowdsourcing practices can be implemented to enhance the Malaysian SMEs' business performance. In order to have better understanding the difference between both practices depict in Table 1.

INNOVATIVE OWNER-MANAGERS

Many researchers tend to agree that one of the factors in understanding business growth is the innovative behavior of owner-manager or owner-manager characteristics. This element offers some indications on the relative important factors to corporate performance (Blackburn et al. 2013). At the same time, Finkelstein and Hambrick (1996) stated that due to the small operation size of SMEs, the CEOs will play the dual role of owner and manager in their respective organizations. Owner-managers of SMEs are more dominant in the development and implementation of business strategies. They also play an important role in determining and reshaping strategy, decision making and setting of organizational climates through their style, goals and attitudes. The literature often discusses that owner-managers' traits as organizations' most prized resources; and these owner-managers' dedication to their firms' growth is highly influential in corporate progress and performance (Hansen & Hamilton 2011).

Therefore, the decisions made by the SMEs are mainly the prerogative of the owner-managers. Entrepreneurs or owner managers are behind the formulation of strategies, recognition of opportunities and translation of opportunities into organizational activities (Beaver & Jennings 2005). In view of that, it is important to examine the crowdsourcing practices from the perspective of owner-manager's behavior, which is an innovative owner-manager. This is because the innovative owners-manager is the one who makes the decisions related to the allocation of the organization's internal resources and direction of business strategies (Abdul Halim et al. 2017).

RELATIONSHIP QUALITY OF TRUST AND COMMITMENT

For market competitiveness, SMEs must work together with other parties to succeed. This is because many SMEs

TABLE 1. Differences between Outsourcing and Crowdsourcing Practices

Elements	Outsourcing Practices	Crowdsourcing Practices
Employees	Hiring external vendors, contractor, business entities, suppliers to perform the organizational activities.	Hiring undefined individuals to perform the organizational tasks
Business platform	Via business tender and tend to physically perform the business activities by the external vendor	Crowdsourcing platform, Technology Web 2.0 and tend to perform the task virtually.
Cost	Payment based on lump sum fees	Payment based on structuration of small task
Project duration	Long-term projects and requires long duration to complete the business tasks.	Short term projects and requires short duration to furnish the business tasks.

are challenged with resource constraints to develop their enterprises. Thus, it is important for the SMEs to collaborate with other parties such as experts, as well as medium and large organizations. Hence, enabling the acquisition of tangible and intangible benefits that can be offered by those parties. One of the tangible benefits is to be their spin company that produces certain product parts. Meanwhile, intangible benefits include reputation, business rapport and so forth.

Najafi-Tavani et al. (2022) stated that relationship quality positively influences the development and preservation of relationship between a customer and vendor to gain competitive advantage and enhance business performance. In the crowdsourcing practices context, this study concentrates on establishing relationship quality between crowdsourcers and crowdworkers or among crowdsourcing communities. It is about formulating activities that result in the establishment, development and preservation of profitable relationships via crowdsourcing. Casidy and Nyadzayo (2017) opined that, as many SMEs are being constrained by their resources and stiff competition from large companies, a strategic relationship that is founded on the perception of long-run relationship as well as competency and trust will facilitate relationship quality and loyal behaviors. Nevertheless, this study is focusing on trust and commitment. The selection of trust and commitment as relationship quality's constructs is considered because they are the qualities of a good relationship by researchers (Nyadzayo et al. 2016; Dawson et al. 2017). Both dimensions are commonly used in the outsourcing and client-vendor relationship and contribute positively to the quality of a relationship (Sharma et al. 2016).

The first dimension of relationship quality is trust. The study defines trust as one's readiness to depend and have faith in their partner (Yang et al. 2012). It is the main element for a successful long-term relationship and a critical success factor in variable relationship. In crowdsourcing context, the willingness of both parties is related to trust; i.e. crowdsourcers to rely on the crowdworkers of gaining benefits in an exchange between tasks and rewards. It is perceived as a crucial factor in the effort to build relationships. This is because it facilitates cooperation and lowers the anxiety of being taken advantage of and free rides (Morgan & Hunt 1994; Xu et al. 2022). Second dimension of quality relationship is commitment. Commitment concept was initially borrowed from the industrial and organizational psychology fields. It is perceived as the intention of continuing a behavior or activity; i.e. continue collaborate with the business partner. This is because the foundation to relationship quality building is commitment; in which representing the utmost relational bonding of those involved (Jalal Ahmad & Skallerud 2015). In this study, commitment is defined as the desire of maintaining an association between crowdsourcers and crowdworkers. Commitment is the key ingredient of a long-term

relationship. It acts as relationship quality's indicator that signifies the significance of the collaboration with crowdworker, whereby they perform their tasks to the fullest effort to safeguard the relationship (Acar 2019).

INNOVATIVE OWNER-MANAGERS, CROWDSOURCING PRACTICES AND SMES PERFORMANCE

Entrepreneurial traits and owner-manager characteristics have been criticized for the lack of significant empirical findings to claim that entrepreneurs are psychologically different from the general population (Liguori & Winkler 2020). Many prior studies found that owner-manager/entrepreneurs' characteristics have positive relationship with SMEs' business performance (Baron et al. 2011; Blackburn et al. 2013; Chatterjee 2020). Nevertheless, current study focuses on innovative owner-managers with creativity and openness as well the inclination to seek new methods and solutions (Sharma & Tarp 2018). This research aims to explore the role of innovative owner-manager in crowdsourcing practices to further explain its impact on SMEs' performance in Malaysia. Based on Resource Base View theory, innovative owner-manager is an intangible asset that is valuable, unique and difficult to imitate (Sajilan et al. 2015). Interestingly, not every business owner-manager possesses the essential characteristics that will lead them towards the organization's competitive advantage. In short, innovative owners-managers can be assumed to be valuable intangible resources for the SMEs that determine the organization's successful performance.

Previous studies had examined the impact of crowdworkers' characteristics, i.e. behaviour and demographic on crowdsourcing platform and the way the crowdworkers use the platforms (Thimo et al. 2011). The authors found that there is no connection with the level of education. This is due to skills learned from formal education are not necessary in the handling of task on the MTurk platform. It only requires low-skill workers to perform task such as computer skills, language or web navigation. Another study conducted by Feitosa et al. (2015), was on crowdsourcing and personality measurement equivalence. The study investigated the measurement equivalence of Big-Five personality; measuring across crowdsourced sample, undergraduates and employees who were more representative of crowdworkers. The study found that, extraversion, agreeableness, neuroticism and openness to experience had lower factor loadings and were insignificants. There are hardly any studies that systematically theorised on crowdsourcing practices as a mediator in the correlation between innovative owner-manager and SMEs' performance.

Hence, current study aims to explore the influence of innovative owner-manager on crowdsourcing practices and SMEs' performance. It is because innovative owner-managers are likely to be market oriented, experiment on new ways of doing things and improve products and

processes to fulfil customer demands for the sake of business survival (Sharma et al. 2018). In accordance to the discussion presented above and limited literature, the study's hypothesis is as follows:

- H₁ Crowdsourcing practices are the mediator to the relationship between innovative owner-manager and SME performance.

RELATIONSHIP QUALITY, CROWDSOURCING PRACTICES AND SMES PERFORMANCE

There could be a serious repercussion to firm's long-term performance and reputation if the relationship between the firm and vendor or contract manufacturer fails. This leads to failure in overall crowdsourcing efforts. It can be presumed that the failure to manage and maintain the relationship quality between crowdsourcer and crowdworkers will lead to high failure rate in crowdsourcing process and business performance (Petruzzelli et al. 2019). Relationship quality signifies the quality of the partnerships' outcome in meeting the expectation of those who participate. However, this study refers to each activity that is being designed in creating, developing and maintaining profitable alliance between crowdsourcers and crowdworkers.

A few research has found that relationship quality and performance are positively linked (Lahiri et al. 2012 & Hashim 2015). Nevertheless, this study differs from the above studies where this study analyses the role of crowdsourcing practices and relationship quality in enhancing SMEs' performance. The relationship quality of this study is centred on trust and commitment. This is because a relationship's main factor is commitment (Morgan & Hunt 1994). Both factors are vital in the studies related to relationship marketing. It was introduced by Morgan and Hunt (1994) in examining long-term relationship. Relationship trust and commitment can be applied to different research context including crowdsourcing where both elements are the right framework in understanding online social behaviour in crowdsourcing communities (Shen et al. 2018). Relationship quality (trust and commitment) draws its theoretical arguments from Resource Based View as both trust and commitment are emphasised as intangible value (Wong & Sohal 2002) and used to achieve competitive advantage (Campbell & Park 2017).

Several studies have conducted an analysis on relationship quality in outsourcing relationship such as Rhodes et al. (2014) and Kaipia et al. (2017). However, very limited studies have considered trust and commitment in crowdsourcing; and there are hardly any studies that empirically analyse crowdsourcing practices as mediator in the link between relationship quality and SMEs' performance, especially for Malaysian SMEs. Nonetheless, there are several studies that examined system trust among the crowdsourcing communities (Leimeister et al. 2015; Shen et al. 2018; Petruzzelli et al. 2019).

Martinez et al. (2017) studied trust among participants as a mediator to the relationship of participation intention and intrinsic motivation. It was discovered that system trust has a partial mediation influence on the correlation of intrinsic motivation and the intention to participate among crowdworkers. Meanwhile, there is another study that analyses the impact of commitment and team trust on collective intention in contributing to wiki community. It was found that the two elements have significant influence on the we-mode collective intention (Shen et al. 2018). Meanwhile, Tajvidi et al. (2017) examined the role played by relationship quality in brand value co-creation of social commerce (e-commerce). The said study concluded that relationship quality has positive correlation with social support. This is as evidenced by the significant influence of relationship quality and social support on the customers' intention in co-creating brand value in the virtual world.

Based on above scenario, this study proposes that the relationship between SME performance and relationship quality will be mediated via crowdsourcing. Hence, the following hypotheses:

- H₂ Crowdsourcing practices mediate the correlation between relationship quality of trust and SMEs' performance.
H₃ Crowdsourcing practices mediate the correlation between relationship quality of commitment and SMEs' performance.

METHODOLOGY

The quantitative method has been used by this study and the survey was done via the internet. The population of this study involves 1000 SMEs in Malaysia. Nevertheless, the respondents of this study were 200 Malaysian SMEs obtained from the SME Corp database. This study adopted the purposive sampling approach. The inclusion criteria are: only SMEs leveraging on crowdsourcing and SMEs registered with SME Corp of Malaysia. This is important as to ensure that only the right respondents and accurate data are collected for the study. The informants of this research were business partners, owner-managers, and managers. The data were then analyzed through PLS-SEM for the examination of measurement and structural models. The measurement model focuses to assess the validity and reliability of the items and the structural model is to test the relationship between variables as well as for systematic evaluation of hypothesis.

RESULTS AND DISCUSSION

RESPONDENTS' DEMOGRAPHIC PROFILE

Upon data analysis, 55.0% of the respondents were business-owners, where their businesses leveraged

on crowdsourcing practices. The majority of them possessed experience in business of between 1 and less than 3 years (34.5%), and from services sectors (57.0%). Again, most respondents were small-sized enterprises (45.0%), female (56.0%), aged between 30 to 39 years (32.5%) and married (72.5). In terms of education level, the majority of the respondents were university graduates (41.5%). In summary, this research could interpret that, most businesses that used crowdsourcing have owners with a business experience of between 1 and 3 years, and they were of the service sector. The summary of the demographic profile depicts in Table 2.

MEASUREMENT MODEL

Measurement model could be defined as the link between latent and observable variables (Urbach & Ahlemann 2010). Specifically, the model below focuses on assessing the items' reliability and validity. Three main assessment criteria are internal consistency reliability, validity test i.e. discriminant validity and convergent validity and discriminant validity i.e. Fornell and Lacker Criterion and Heterotrait-Monotrait Ratio (HTMT).

INTERNAL CONSISTENCY RELIABILITY

It is used to measure the consistency and stability of the variables studied (Sekaran 2006). Internal consistency reliability is assessed based on composite reliability (CR); and could be explained as Cronbach alpha (Henseler et al. 2009). For exploratory research, the acceptable composite reliability value has to be above 0.6. and composite reliability values ranging from 0.7 to 0.9 is satisfactory. Meanwhile, for advanced studies, the CR value must range between 0.7 and 0.9 (satisfactory) (Hair et al. 2014).

The loading values of all items have to be examined for their reliability. It shows that, each item's loading value is above 0.7. McNeish (2017) suggested that Cronbach's alpha must not be used and another reliability measurement is more appropriate to look into omega reliability or CR. Nevertheless, this study used CR as assessment of internal consistency reliability. The acceptable value of CR value must exceed 0.7 (Fornell & Larcker 1981).

Table 3 shows that all constructs have satisfied the criterion; with CR value for performance is 0.954, and crowdsourcing practices is 0.951. The CR values of innovative owner-manager, relationship quality of trust and commitment are 0.972, 0.970 and 0.968, respectively. In a nutshell, based on the CR values, all the constructs could be considered reliable.

REFLECTIVE MEASUREMENT MODEL

All constructs are reflective measurement model. The study had examined two types of validity, namely convergent validity and discriminant validity.

TABLE 2. Respondents' demographic profile

Demographics	Frequency	Percentage
<i>Entrepreneurs position</i>		
Business owner	110	55.0
Manager	35	17.5
Business partner	27	13.5
Other	28	14.0
<i>Respondents experience</i>		
Less than 1 year	41	20.5
1 year – less than 3 years	69	34.5
4 years – less than 7 years	42	21.0
8 years – less than 11 years	20	10.0
12 years and above	28	14.0
<i>Business sector</i>		
Manufacturing	36	18.0
Services	114	57.0
Agriculture	12	6.0
Construction	9	4.5
Other activity	29	14.5
<i>No. of employees</i>		
<i>Manufacturing:</i>		
Small (5 – less than 75 employees)	95	47.5
Medium (75 – not exceeding 200 employees)	7	3.5
<i>Services and other sectors:</i>		
Small (5 – less than 30 employees)	90	45.0
Medium (30 – not exceeding 75 employees)	8	4.0
<i>Gender</i>		
Male	88	44.0
Female	112	56.0
<i>Age</i>		
18-29 years	53	26.5
30-39 years	65	32.5
40-49 years	57	28.5
Above 50 years	25	12.5
<i>Marital status</i>		
Married	145	72.5
Single	46	23.0
Widow	8	4.0
Widower	1	0.5
<i>Education</i>		
Primary School	2	1.0
Secondary School	41	20.5
Diploma	50	25.0
Degree	83	41.5
Master and above	24	12.0

CONVERGENT VALIDITY

Convergent validity is the extent to which an indicator reflecting a construct converges against indicators that measure other constructs (Urbach et al. 2010). It signifies the squared loadings' grand mean value for every indicator related to a construct (Hair et al. 2017). This is done by examining the value of AVE (average variance extracted) (Hair et al. 2014). For the convergent validity to be sufficient, all constructs must record an AVE value $\geq 50\%$ of the variance of assigned indicator (Fornell & Larcker 1981).

As depicted by Table 3, every construct has satisfied the recommended value, i.e., exceeded 0.5. The AVE values for performance and crowdsourcing are 0.723 and 0.708, respectively. Meanwhile, the AVE values for innovative owner-manager, relationship quality of trust and commitment are 0.833, 0.842 and 0.835 respectively. In summary, every construct has fulfilled the recommended threshold value (Hair et al. 2014).

DISCRIMINANT VALIDITY

Discriminant validity is the extent of differentiation of indicators among constructs, or the measurement of different concepts through the examination of relationship between measures that could be overlapping (Ramayah et al. 2018). Three analyses to evaluate discriminant validity are: cross loading criterion, Fornell-Larcker criterion, and Heterotrait-Monotrait ratio of correlations (HTMT).

As for the Fornell-Larcker criterion, a latent variable must be able to better explain its own indicators' variance instead of other latent variables' variances. Table 4 depicts the Fornell-Larcker criterion output; whereby the correlation output shows that the latent constructs (horizontal) are higher than all remaining constructs (vertical). It also noted that, the AVEs square roots for all constructs exceed every construct's correlation, and shows sufficient discriminant validity for this study.

The cross-loading criterion states that the loadings of all indicators should exceed their other cross loadings in ascertaining discriminant validity. Chin (1998) and Snell and Dean (1992) emphasized that, the variance of loadings among latent variables should exceed 0.10. In reference to the value of cross loading, it shows that each indicator has reached the threshold or attained greater value than the rest of its cross loading.

The Heterotrait-Monotrait Ratio (HTMT) refers to the correlation's ratio within constructs against the correlations across constructs. Table 5 exhibits that the HTMT criteria have met the requirement criterion of HTMT less than 0.90 (Henseler et al. 2015). Besides that, the HTMT value indicates that the confidence interval does not record '1' to the constructs, which is $-1 < \text{HTMT} < 1$ signifying no problem with discriminant validity.

Based on the above findings in Table 5, it reveals that the value for the HTMT less than 1.00. It can be interpreted

that, the confidence interval indicates no problem to the discriminant validity and met the requirement the rule of thumb as recommended by Henseler et al. 2015.

STRUCTURAL MODEL

The examination on a structural model would assist a study in its systematic evaluation of whether the data are supporting the hypotheses (Urbach et al. 2010). This may be done through a successful validation of the measurement model. There are five steps in structural modelling which are collinearity assessment on the constructs, coefficient of determination (R^2 value), size of effect (f^2), path coefficient of structural model to check the mediating effect and predictive relevance (Q^2) (Hair et al. 2014)

COLLINEARITY ASSESSMENT

The initial stage of assessing structural model is the collinearity assessment. It is pertinent to ensure that there is no issue of lateral collinearity. To examine the collinearity issues, the evaluation of tolerance and variance inflation factor (VIF) should be applied as proposed by Hair et al. (2014). The VIF value of a construct must be between 0.20 and 5.00. However, if the VIF value exceeds 5 it represents the potential of collinearity issue. Table 6 exhibits that there is no potential collinearity problem since the VIF output for all constructs is less than 5.

COEFFICIENT OF DETERMINATION (R^2 VALUE)

Coefficient of determination (R^2) value shows the extent to which the variance of an endogenous construct being explained by the predictor construct (Hair et al. 2016). It will indicate the variance size described by the model (Chin 1998). Meanwhile, Cohen (1988) has suggested that R^2 values will indicate the predictive accuracy; whereby 0.26 (substantial), 0.13 (moderate), and 0.02 (weak).

As proposed by Falk and Miller (1992), the R^2 values presented by Table 7 show that the endogenous constructs exceeded the 10% adequate level. The model has also achieved substantial threshold as suggested by Cohen (1988). Summarily, the R^2 values of the study for crowdsourcing practices and performance of 0.596 and 0.376 respectively explained a substantial portion of the variance in the endogenous constructs. It means that, the model used in the current study fits the data well, and is of substantial level.

EFFECT SIZE (f^2)

The effect size (f^2) is employed to examine the impact on an endogenous construct by a predictor construct (Hair et al. 2014). It indicates the strength of an exogenous construct in explaining an endogenous construct through

TABLE 3. Convergent validity

Constructs	Items	Loadings	CR	AVE	Convergent Validity (AVE > 0.5)
SME Performance (PERF)	PERF1	0.875	0.954	0.723	YES
	PERF2	0.891			
	PERF3	0.874			
	PERF4	0.882			
	PERF5	0.731			
	PERF6	0.867			
	PERF7	0.835			
	PERF8	0.837			
Crowdsourcing Practices (CSP)	CSP1	0.808	0.951	0.708	YES
	CSP2	0.871			
	CSP3	0.851			
	CSP4	0.841			
	CSP5	0.807			
	CSP6	0.857			
	CSP7	0.872			
	CSP8	0.824			
Innovative Owner-Manager (IOM)	IOM1	0.900	0.972	0.833	YES
	IOM2	0.948			
	IOM3	0.925			
	IOM4	0.914			
	IOM5	0.944			
	IOM6	0.910			
	IOM7	0.846			
Relationship Quality Trust (RQT)	RQT1	0.923	0.970	0.842	YES
	RQT2	0.936			
	RQT3	0.937			
	RQT4	0.858			
	RQT5	0.915			
	RQT6	0.932			
Relationship Quality Commitment (RQC)	RQC1	0.903	0.968	0.835	YES
	RQC2	0.927			
	RQC3	0.910			
	RQC4	0.891			
	RQC5	0.931			
	RQC6	0.920			

TABLE 4. Discriminant validity using Fornell and Lacker criterion

	PERF	CSP	IOM	RQT	RQC
PERF	0.850				
CSP	0.485	0.841			
IOM	0.585	0.696	0.913		
RQT	0.532	0.440	0.549	0.917	
RQC	0.575	0.580	0.653	0.561	0.914

Note: PERF=performance, CSP=crowdsourcing practices, IOM=innovative owner-manager, RQT=relationship quality trust, RQC=relationship quality commitment

TABLE 5. HTMT criterion

	PERF	CSP	IOM	RQT	RQC
PERF					
CSP	0.509				
IOM	0.603	0.727			
RQT	0.556	0.461	0.569		
RQC	0.603	0.608	0.677	0.583	

Note: PERF=performance, CSP=crowdsourcing practices, IOM=innovative owner-manager, RQT=relationship quality trust, RQC=relationship quality commitment.

TABLE 6. Lateral collinearity assessment

Construct	Crowdsourcing Practices (CSP)	Performance (PERF)
Innovative Owner-Manager (IOM)	3.528	
Relationship Quality Trust (RQT)	1.865	
Relationship Quality Commitment (RQC)	2.192	
Crowdsourcing Practices (CSP)		1.619

TABLE 7. R² Values for endogenous

Construct	R ² Value	Threshold
Crowdsourcing Practices	0.596	≥0.26 (Substantial)
Performance	0.376	≥0.26 (Substantial)

TABLE 8. Effect Size (f²) of the Latent Variables

Structural Path	Effect size (f ²)	Threshold
Innovative owner-manager → Crowdsourcing practices	0.033	Small
Relationship quality trust → Crowdsourcing practices	0.005	No effect
Relationship quality commitment → Crowdsourcing practices	0.012	No effect
Crowdsourcing practices → Performance	0.039	Small

R² value. Cohen (1998) proposed the following f² values in explaining the effect size: 0.35 (large), 0.15 (medium) and 0.02 (small)

In accordance to Table 8, the findings of effect size (f²) shows that the variable that has small effect size for performance is crowdsourcing practices at 0.039. Besides, innovative owner-manager has small effect size (0.033) for crowdsourcing practices. Nevertheless, the items with no effect size are relationship quality of trust and commitment at 0.005 and 0.012, respectively. It can be interpreted that these items have small effect size for crowdsourcing practices. It is pertinent to bear in mind that although the effect size is small, the effect might not be insignificant.

PATH COEFFICIENT OF STRUCTURAL MODEL (MEDIATING EFFECT)

In order to test the mediating effect and to check whether each hypothesis is support or vice versa, the

path coefficient of structure model should be performed. Important to emphasized that to perform structural model, the measurement model, must be conducted first and need to fulfill the rule of thumbs. Mediation is defined as the process in which a variable influences other variable through intervening or mediating variables (Preaches & Hayes 2004). The crowdsourcing practices act as a mediator in this research. Particularly, the research focuses on the testing of mediating influence of crowdsourcing practices between innovative owner-manager, relationship quality (trust and commitment) towards SME performance.

This study also employed bootstrapping to an indirect effect approach. It refers to nonparametric resampling procedure and known as being one of the most vigorous and dynamic methods to test the influence of a mediator (Zhao et al. 2010). It is to note that, to test mediating effect, it is more desirable for a study with small sample size and mediators to adopt Preacher and Hayes (2008) method and bootstrapping approach.

Based on mediation analysis, i.e., the hypotheses from H₁ to H₃, two out of three hypotheses mediate the relationship (i.e., H₁ and H₃). Table 9 exhibits that the influence of innovative owner-manager (t-value: 1.402), and relationship quality of commitment (t-value: 1.312) on performance is significantly being mediated by crowdsourcing practices. However, hypothesis H₂, i.e. the correlation between relationship quality of trust and SME performance is not being mediated by crowdsourcing practices.

PREDICTIVE RELEVANCE (Q²)

Q² value indicates predictive relevance, and it is in accordance to the PLS-SEM blindfolding approach. The effect size of Q² is employed to examine a predictor construct's predictive relevance against an endogenous construct (Hair et al. 2014). The blindfolding technique includes the resampling method where certain data are deleted for specific indicator block during estimation of parameter. The deleted data are estimated through the approximated parameters (Chin 2010).

The rules of thumb for Q² value is that, the value must exceed 0 for a particular reflective endogenous latent variable. Thus, the construct has acceptable predictive relevance (Sarstedt et al. 2017). Table 10 depicts that the Q² values for crowdsourcing practices and performance are at 0.387 and 0.246, respectively. This indicates that the value of Q² exceeds 0, signifying that there is adequate predictive relevance.

THEORETICAL AND MANAGERIAL IMPLICATION

This study enriches the crowdsourcing literature and SME research field. Conducting this research, it can be a basis for future research to further explore new drivers that contribute to the crowdsourcing practices and improve business performance for SMEs in Malaysia. Again, due to crowdsourcing is the in trend, new study also can be conducted to testify its effect to the SMEs.

Practically, the empirical findings obtained from this study signal to the SMEs owner-manager on the

importance of innovative trait among SMEs owner-manager and the relationship quality of commitment between crowdsourcer (SMEs) and crowdworker. It is because exploiting both elements may enhance the SMEs performance in Malaysia via leveraging crowdsourcing practices. To the government, the study findings may provide insightful information to the policy maker formulating, planning and organizing the development programs and policies related to crowdsourcing practices among SMEs. Subsequently, improve the crowdsourcing business model among Malaysian SMEs and reduce the government's burden of subsidizing these firms especially post COVID-19.

CONCLUSION

SMEs facing various business challenges i.e. uncertain business environment, the advent of Industry 4.0 and sudden COVID-19 outbreak that radically changed the business environment. They also badly suffering such as health issues i.e. COVID-19, shortage and fluctuation of raw material prices, supply chain constraints and lack of expertise in the organization that hinder their business performance. In order to minimize those impact, this study was conducted to assist the Malaysian SMEs to improve their business performance via revisiting SMEs' business strategy from outsourcing to crowdsourcing practices and integrating the role of innovative owner-manager and relationship quality of trust and commitment. The findings revealed that crowdsourcing practices can be explained further or mediate the relationship between innovative owner-managers and relationship quality of commitment and SMEs' performance.

Theoretically, this study enriches the crowdsourcing literature, SME research related field and a basis for future research to further explore new drivers that contribute to the crowdsourcing practices and improve business performance for SMEs in Malaysia. Pragmatic perspective, this study signal to the SMEs owner-manager the importance of innovative trait among SME owner-managers and the relationship quality of commitment

TABLE 9. Summary of mediation results

Hypothesis	Relationship	Std Beta	Std Error	t-value	Lower Limit	Upper Limit	Supported
H ₁	IOM→CSP→ PERF	0.046	0.033	1.402*	0.009	.119	Yes
H ₂	RQT→CSP→ PERF	-0.013	0.015	0.866	-0.044	.005	No
H ₃	RQC→CSP→ PERF	0.022	0.017	1.312*	0.003	.065	Yes

Note: H₁= Hypothesis 1, H₂= Hypothesis 2, H₃=Hypothesis 3
 *** p<0.01, **p<0.05, p* <0.10

TABLE 10. Predictive Relevance (Q²)

Construct	Q ² Value
Crowdsourcing practices	0.387
Performance	0.246

between crowdsourcer (SMEs) and crowdworker. It is because exploiting both elements may enhance the SMEs performance in Malaysia via leveraging crowdsourcing practices. To policy maker, the findings of the study provides insightful information related to crowdsourcing practices among SMEs and to prepare crowdsourcing action plan to fulfill the demand of IR 4.0. Thus, improve crowdsourcing business model in SMEs and reduce the government's burden of subsidizing especially post COVID-19. As other studies, this study also cannot avoid from some limitations. This study only covers several construct i.e. crowdsourcing practices, innovative owner-manager and relationship quality (trust and commitment) towards SMEs performance. The sampling frame used in the study limited to the SMEs registered under the SME Corp database and cross-sectional study. Nevertheless, future studies may integrate new variables that not being identified in this study such as environment factors, crowdsourcing platforms and crowdworker traits. Again, expanding sampling frame i.e. SMEs from MARA, Amanah Ikhtiar Malaysia databases and mixed or trigulation methods can be used in order to obtain better findings generalization.

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