The Role of Social Media on Customer Relationship Management and Business Resilience Among Agriculture Entrepreneurs

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ABSTRACT

This paper investigates the intricate interplay between Customer Relationship Management (CRM) strategies, business resilience (BR), and the moderating influence of social media (SM) platforms within the context of agriculture entrepreneurship. A survey was conducted among 92 respondents who are agricultural entrepreneurs. The data was analyzed statistically using Partial Least Squares-Structural Equation Modelling (PLS-SEM) facilitated by SmartPLS 4 software to estimate the hypothesized model. The findings support the contention that CRM promotes business resilience. However, SM does not significantly lead to business resilience among agriculture micro-entrepreneurs and also did not moderate the relationship between CRM and BR. This means that agriculture micro-entrepreneurs would prefer to do business within their limited circles rather than establishing new channels for bigger impact for their business which can be inferred that they only liaise with whom they know and trust. This study confirms that social media did not influence business resilience of agriculture entrepreneurs. Our findings offer valuable implications for policymakers, industry practitioners, and agriculture entrepreneurs in enhancing their adaptive capacities and the ability to withstand and recover from adversities.

Keywords: Social media, resilience, customer relationship, agriculture, entrepreneur

INTRODUCTION

In times of extreme uncertainty and turmoil, supply chain risks and interruptions are frequent for enterprises (Wulandhari et al., 2022). The viability of small firms is contingent on their resistance to adversity, especially when the black swan risk, such as COVID-19, materialises. The COVID-19 epidemic has caused economic closures, creating a situation for small enterprises that is unprecedented. The pressing need to explore how small and medium-sized businesses (SMEs) respond to vulnerable conditions makes research on business resilience increasingly desirable (Saad et al., 2021). Agriculture entrepreneurs are among the businesses most severely damaged by the crisis. Despite being vital and exempt from closure, agriculture sectors are still harmed by the pandemic (OECD, 2020). The crisis has forced agriculture entrepreneurs to reconsider its strategies due to its vulnerability. The entire chain of upstream and downstream in the supply chain network needs to operate smoothly for the entire agriculture business to function. Only then will the agriculture entrepreneurs remain in business. The pandemic has created new business ways, and customers have indirectly changed their

consumption habits (OECD, 2020). In coping with these situations, businesses often focus on strategies to ensure business resilience. Saad et al. (2021) defined business resilience from a small and medium business context as the adaptability, performance, and ability to seize business opportunities. This definition concurs with Tengeh (2016) who characterises resilience as the ability to survive, grow and thrive despite the hostile business environment, such as during economic, social, and political instabilities. For businesses, including agriculture entrepreneurs, to be resilient, they need to meet the customers' demands. More specifically, agriculture entrepreneurs need to build a close relationship with customers to understand their needs and preferences. Hence, a good customer relationship management serves as an important success factor for business resilience among agriculture entrepreneurs.

The literature suggests that customer relationship management (CRM) is a key tool for increasing business profitability by recognising its best customers and meeting their needs, which keeps them loyal to the company (Alberti et al., 2018). CRM is a strategy to improve customer relationships by establishing effective channels and methods for engaging with customers (Guerola-Navarro et al., 2021). Along with recent technological and internet development, CRM can be further enhanced. For example, Savira et al. (2022) found that businesses need to upgrade and further develop mobile application systems to reach their consumers better and more conveniently. Customer engagement creates a social network, which Pham et al. (2021) refer to it as one of the social capitals. According to Pham et al. (2021), social networks enable businesses, especially small and micro firms, to adapt, integrate and reconfigure their resources to cope and further thrive in changing conditions. However, studies that relate data driven opportunities to enhance supply chain performance in the agriculture industry is still scarce. Although Kamble et al. (2020) suggested that the internet of things, the blockchain, and big data technologies are potential enablers of sustainable agriculture supply chains, the investigation of how social media could offer benefits to small agriculture entrepreneurs remain largely neglected.

Prior studies showed that small businesses use social media to avoid supply chain disruptions (Devi & Ganguly, 2021). Social media can help to create and strengthen networks among business entrepreneurs and customers (Voorveld, 2019; Kahar et al., 2012). For any organisation to remain competitive and able to expand its market share, the use of social media is vital to manage relationships and keep customers closer (Elena, 2016) and in the loop. The COVID-19 pandemic has triggered the emergence of a new business model of using online platforms (OECD, 2020). Social media offers the opportunity for most businesses, including small agriculture entrepreneurs, to connect with their customers. Yu et al. (2021) found that businesses that incorporate social media as their way of doing business do lead to business resilience.

Agricultural sector is exposed to various types of risks such as lower yields and catastrophic events (Komarek et al, 2020). Moreover, the agricultural sector is also highly vulnerable to sudden challenges and structural changes such as those triggered by the COVID-19 pandemic (Morton, 2020), political reforms, and climate change (Malhi et al, 2021). Not surprisingly, resilience has been included as one of the priority goals in the upcoming agricultural support agenda of the 2021–2027 financial programming period. However, the studies on economic resilience in agriculture are scarce, fragmented and mainly focused on the ecological rather than economical side of the system. It remains unclear what resilient small businesses do and how business resilience may be achieved. Thus, this study aims to examine the relationship between CRM and BR among the agriculture entrepreneurs. Additionally, this study explores the moderating role of social media on the relationship between CRM and BR among the agriculture entrepreneurs.

In this section, the research topic and its relevance to the agriculture sector have been introduced which presents the problem statement or research questions that aims to address. In the next section, highlight the importance of business resilience for agriculture entrepreneurs and mention the role of Customer Relationship Management (CRM) in enhancing business resilience are explained. Next section in Literature Review where explore the existing literature on CRM strategies in the agriculture sector and their impact on business resilience. The third section, i.e., Methodology is to describe the research approach used in this study. Next section in Findings, where the empirical findings of the study are presented. Here clearly describe the results of data analysis related to CRM strategies, business resilience and the moderating role of social media are also included. Interpret the findings in the context of your research questions and literature review. In conclusion part, the implications of the results and how they contribute to the understanding of CRM-business resilience dynamics in agriculture entrepreneurship are explained.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Resilience theory

Many definitions of resilience have been suggested in the literature. Norris et al. (2008) view resilience as "a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance" (p.130). A more comprehensive definition of resilience describes the concept as "the ability of an entity - e.g., asset, organisation, community, region - to anticipate, resist, absorb, respond to, adapt to, and recover from a disturbance" (Carlson et al., 2012). Studies have shown a growing interest in resilience research among social workers (Van Breda, 2018) and most discussions focus on psychological behaviour (e.g., Vella & Pai, 2019; Ungar, 2008). However, not many studies have used resilience theory to explore and understand resilience from the business point of view. Given that the resilience of small businesses is influenced by the practices and behaviours enacted by the owner-mangers themselves (Hadjielias et al., 2022), we argued that resilience theory enables a deeper understanding of business resilience. Furthermore, this theory is relevant for small business resilience during exogenous shocks, such as the COVID- 19 pandemic (Hadjielias et al., 2021). According to Van Breda (2018), resilience is a better-than-expected outcome of a process triggered by an adverse environmental pressure, intervened by a moderating process (Figure 1).
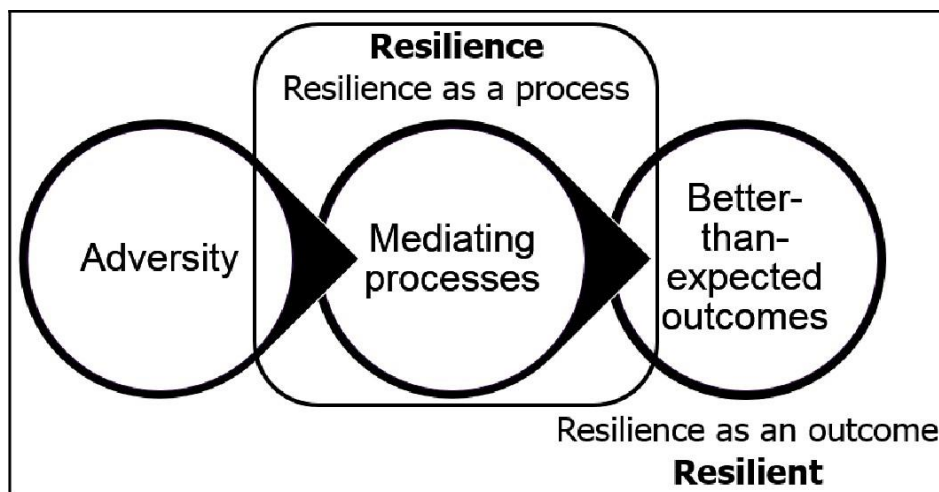

Figure 1: Processual components of resilience (Source: Van Breda, 2018).

Drawing from the above definition, this study posits that social media moderates the relationship between customer relationship management and the resilience of a business. Small businesses need to utilise social media in their CRM practices to survive in post Covid19 pandemic. The empirical schema is depicted in Figure 2.
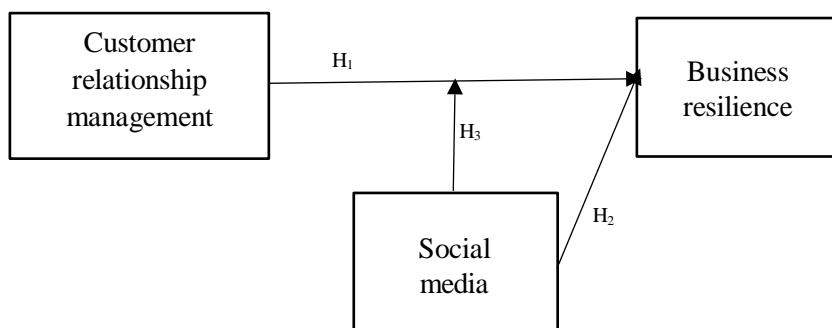

Figure 2. Conceptual framework

Business Resilience (BR)

Psychological resilience involves the ability of an individual to adapt or thrive in the face of life's adversities, uncertainties, and difficult circumstances which may influence business resilience (Hadjielias et al., 2021). Even

though small businesses seem to be vulnerable in crises due to their limited financial resource and weaker market positioning, they can take advantage of their small size to be more agile, adaptable, innovative, and resilient during challenging times (Khanzad & Gooyabadi, 2021).

The notion of resilience originated from Holling (1973), who describes resilience as "ability to absorb change and disturbance and still maintain the same relationships between populations or state" (page. 14). Bene (2013) defines resilience using three dimensions: absorptive coping, adaptive and transformative capacity. The capacity of a system to absorb disturbances is the first dimension. This capacity indicates the short-term ability of a system to sustain its functions and performances despite the disruption. The adaptability component considers strategies regarding how quickly and to what extent the economic system can recover following a disturbance. The potential of the system to transition to a growth path that is qualitatively superior after a catastrophe is shown by the transformational aspect of resilience.

More recently, the concept has emerged as an important tool for managing supply chain risk and vulnerability (Novak, Wu & Dooley, 2021; Adobor & McMullen, 2018). Thus, supply chain resilience can be defined as a reactive capability that occurs after a disruption or shock has taken place. The concept can also be viewed as a multi-dimensional and multidisciplinary phenomenon (Novak, Wu & Dooley, 2021). Similarly, Adobor and McMullen (2018) noted that disruptions to commercial supply chains could have significant economic impacts. Managing risk and vulnerability associated with supply chains have therefore assumed some urgency.

The impact of COVID-19 on small agriculture entrepreneurs

The COVID-19 pandemic has had a significant impact on small agriculture businesses, with many facing a range of difficulties. Some of the major difficulties that have been highlighted by previous research are shown in Table1.

Table 1. Difficulties faced by small agriculture entrepreneurs.

Types of difficulties	Description	Sources
Supply chain disruptions	The pandemic has led to disruptions in the supply chain, making it difficult for small agriculture businesses to get the inputs they need to produce their products.	Cuong & Tien (2022)
Reduced demand	As a result of economic downturns and lockdowns, many consumers have reduced their spending on non-essential items, leading to a reduction in demand for some agricultural products.	Gupta et al (2022)
Labor shortages	The pandemic has made it difficult for small agriculture businesses to find and retain workers.	Grigorescu et al (2022)
Reduced access to financing	Small agriculture businesses have been hit hard by the economic downturn, and many are struggling to access the financing they need to continue operations.	Du et al (2023)
Logistics and distribution challenges	The pandemic has led to increased demand for online food delivery and home delivery. This has led to increased competition among food sellers and increased costs for the small agriculture businesses.	Bairagi et al (2022)

Overall, the COVID-19 pandemic has had a major negative impact on the business resilience of small agriculture businesses, and many have struggled to adapt to the changing business environment and maintain their operations as indicated in Table 1.

Customer Relationship Management (CRM)

One of the potential strategies to maintain business resilience is by implementing Customer Relationship Management (CRM) (Kaur et al, 2022). CRM is a system or strategy used by businesses to manage and analyse interactions with customers and potential customers (Umarani et al, 2022). CRM systems can provide valuable insights into customer behaviour and preferences, which can be used to improve marketing campaigns and product development (Ledro et al, 2022). In recent years, CRM has been used for tracking online customer behaviour and performances, customising prices, enabling real-time communications and capturing new customers (Soltani et al., 2018). CRM can be considered oriented toward digital transformation and sustainable business model innovation (Gil-Gomez et al., 2020). Soltani et al. (2018) suggest that the interrelationship between customer orientation and organisational capability, information technology, and customer knowledge management has been recognised as one of the key factors for CRM success. According to Itani et al. (2020), social media and CRM technology aid in market sensing and customer-linking activities. Social media utilisation enhances the competitive information collection abilities of the seller. CRM positively affects seller product information communication, which enables buyer information sharing intentions. Sellers capture value from buyers by CRM utilisation. Seller experience has significant moderating and explanatory power regarding the use of sales technology (Itani et al., 2020). CRM enhances relations with customers leading to the profitable and sustainable growth of revenue (Soltani et al., 2018).

CRM is underpinned by relationship marketing and its underlying principles (Guha et al., 2018). CRM improves customer interactions and allows firms to manage and monitor their use of social networks while effectively managing consumers (Nupus & Ichwanudin, 2021). Lozada-Contreras (2021) argued that social media increases the interaction between firms and customers which facilitates new opportunities for developing CRM capabilities. According to Kim and Wang (2019, p.40), "investing in social media technology can lead to substantial CRM benefits and greater market value for the firm". Gil-Gomez et al. (2020) noted that CRM can lead to dual benefits to small and medium enterprises (SMEs) in terms of both customer knowledge management and innovation. Based on this empirical fact, this paper supposes to examine the direct impact of customer relationship management towards the business resilience of agriculture micro-entrepreneurs. Therefore, the first hypothesis tested is:

H_1: Customer relationship management significantly influences the business resilience of agriculture micro-entrepreneurs.

Social Media in Supply Chain

Internet technology provides a potential opportunity for value creation in supply chains (Jonsson & Gunnarsson, 2005). Social media is used to understand, build and manage relationships with current and potential customers; these activities are linked to actions taken to protect a company's reputation (Siti-Nabiha et al., 2021). Although social media appears to be a necessary condition for business to be resilient, it may not be sufficient on its own (Siti-Nabiha et al., 2021). Social media has revolutionised how people interact with each other. By using social media, users can quickly generate and share information with their social circles through computers and smart devices, anytime and anyplace (Tseng et al., 2019). In 2020, it was estimated that about 3.6 billion people were using social media globally (Clement, 2020), showing that social media use has reached a considerable magnitude. Companies have assessed the opportunities offered by this development and have increasingly used social media in their businesses (Çiçek, 2018). Small businesses may integrate social media into their business activities, as it can activate their entrepreneurial spirit and enable them to dynamically build up connections between internal and external knowledge sources to enhance performance (Akpan et al., 2021; Ritz, et al., 2019).

Participants in a supply chain can use social media to monitor supply chain events and transactions to keep everyone updated with current situations. Social media has the potential to improve visibility and communication, bring about an increase in control, and cut down on both operational and labour costs (Bai, et al., 2021). Social media has become one of the most effective tools for developing customer relationships (Elena, 2016). Social media, if embedded in an organisation, can extend its role in the organisation (Kwayu et al. 2018) and enhance the customer experience (Dwivedi et al. 2021). Johnsen et al., (2020) studied the impact of simple and efficient means of sharing private information (i.e., simple one-way text messages) on an operative basis

(e.g., weekly or monthly) in a supply chain contracting context. Using laboratory experiments, they found that communication media affect cooperation in a supply chain when the buyer has private information about the end-customer demand. Most specifically, efficient coordination outcomes occur, but only if verbal communication takes place before the actual contracting stage Johnsen et al., (2020).

Social media provides farmers with better networking opportunities with stakeholders (Morris & James, 2017). Based on this empirical fact, this paper supposes to examine the direct impact of social media on the business resilience of agriculture micro-entrepreneurs and the moderation impact of social media on the relationship between customer relationship management and the business resilience of agriculture micro-entrepreneurs. Therefore, the second and third hypothesis tested is:

H_2:   Social media significantly influences business resilience of agriculture micro-entrepreneurs

H_3:   Social media significantly moderates the relationship between customer relationship management and business resilience of agriculture micro-entrepreneurs.

RESEARCH METHODOLOGY

This research used a quantitative design method where all the variables were measured using Likert Scale from a minimum of 1-point "Strongly disagree" to a maximum of 5-point scale "Strongly agree". Since there was no exact sample size of population, the study decided to use G*Power 3.1.9.7 a tool to compute statistical power analyses of different t tests, F test, X^2 tests and z tests. The sample size for this study was ascertained using the power analysis of the G*Power with the test of power (Power = 1- β; β: type II error the probability of falsely retaining an incorrect H_0) must be greater than or equal to 0.8, alpha value of 0.05 (95% confidence) and the effect of the size was 0.15 which is a moderate effect since the value is sufficient in social sciences (Cohen, 1992). Figure 3 shows the minimum sample size to be collected is 55.
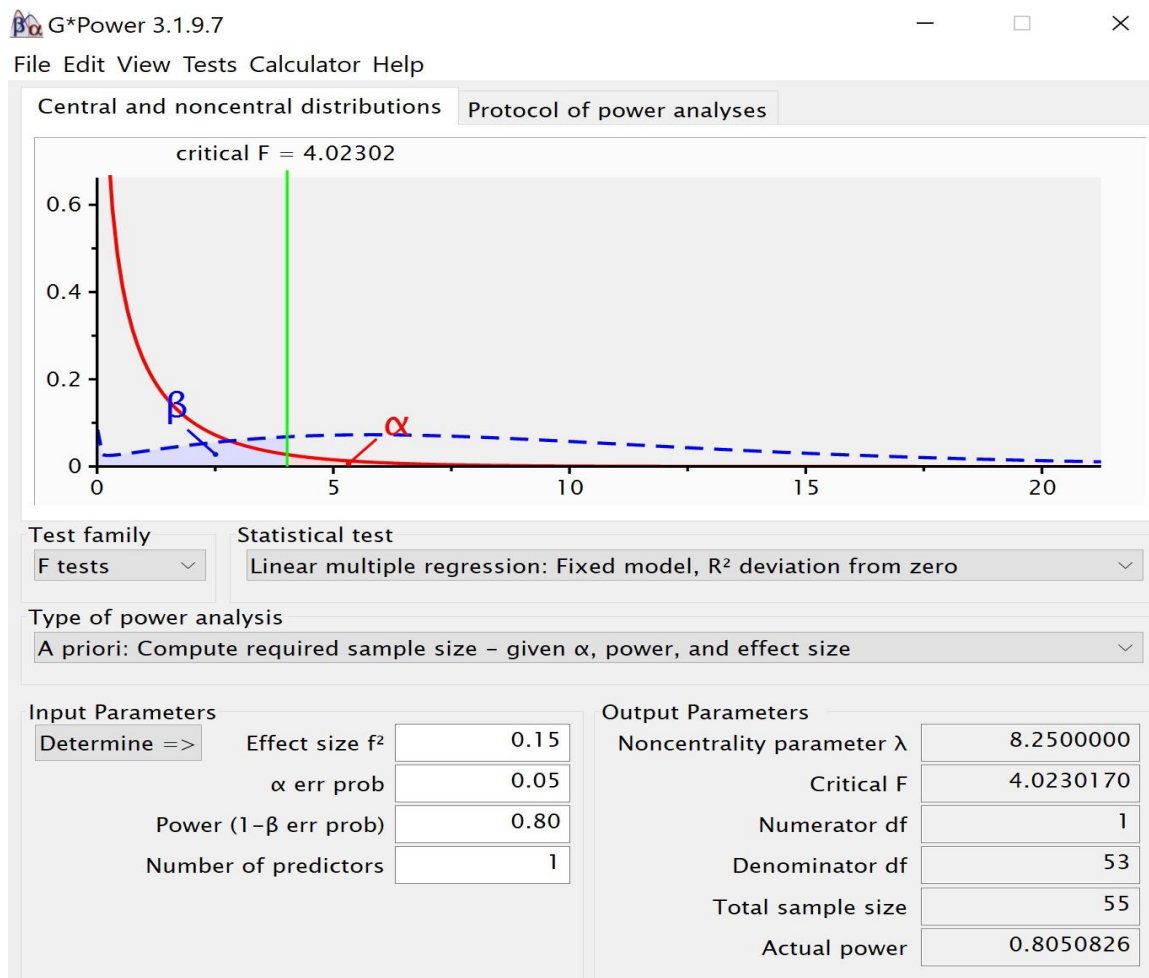

Figure 3. Sample Size

The survey was conducted at Malaysia Agriculture, Horticulture & Agrotourism (MAHA) 2022 at MAEPS (Malaysia Agro Exposition Park Serdang), Selangor from 4th August 2022 until 14th August 2022. This event is a premier agriculture fair showcases which aims at promoting agriculture and argot-based industries. Among the many highlights of MAHA 2022 are the ecosystem of agriculture which consists of input suppliers, farming companies, traders, processors, distributors logistics & consumers, other industry adjacent business, data device & analytics, automation & machinery and software & technologies that interrelated among each other's. This study managed to collect responses from 92 respondent who are agricultural sellers. Data was analysed using Statistical Package for the Social Sciences (SPSS) version 26 for descriptive analysis of the sample size. The data was further analysed statistically using Partial Least Squares-Structural Equation Modelling (PLS-SEM) and software SmartPLS 4 to estimate the hypothesised model.

RESULTS AND DISCUSSION

Data Analysis

Once the sample was obtained and the database was generated, validation of the scale of measurement proposed for the analysis of the database was performed. The questionnaire responses were coded and fed into SPSS Version 26. This study also employed PLS for measurement and structural model evaluation following Hair et al. (2011) as a better means of exploratory study (Reinartz, Haenlein & Henseler, 2009). Second, PLS has recently gained increasing popularity in individual and service study areas (Hair et al., 2018). To this end, we used structural equation modeming based on PLS variances (Hallak et al, 2018). PLS facilitates the analysis and estimation of the structural measurement model proposed considering the dependent variables of the model. This technique makes it possible to quantify the size of both direct and indirect effects between variables (Hair et. al, 2019). The PLS-SEM technique has been widely used in the field of social sciences, particularly in previous studies analysing datasets from social networks.

Descriptive Analysis

Descriptive statistics are used to summarize data in an organized manner by describing the relationship between variables in a sample or population. Calculating descriptive statistics represents a vital first step when conducting research and should always occur before making inferential statistical comparisons (Kaur et al., 2018).

In this study, based on Table 2, there are 51 (55.4%) of the study respondents were male while 41 (44.6%) were females and 42.4% which is 39 respondents out of 92 respondents are 19 to 25 years old range. More than half of the respondents are Malay (79.3%) which held "degree" (41.3%). In terms of people in household, there are range three (3) to five (5) people and 68.6% live in city residency. According to the table, the main types of crops sold are vegetables (62.8%). The results also shows that the estimated monthly income of the respondents is more than RM15000 (29.3%) and they do not have employees (77.6%). Lastly, 84.4% of the respondent's agricultural produce supply channels are buy directly from the farmer.

Table 2: Demographic Profile

Demography	Scale	Frequency	Percentage (%)
Gender	Male	51	55.4
	Female	41	44.6
Age	Under 18 years old	0	0
	19-25 years old	39	42.4
	26-33 years old	16	17.4
	34-41 years old	18	19.6
	42-49 years old	19	20.7

	50 years and above	0	0
Race	Malay	73	79.3
	Chinese	19	20.7
	Indian	0	0
	Others	0	0
Level of education	Primary School	1	1.1
	SRP/PT3	1	1.1
	SPM	24	26.1
	Certificate	4	4.3
	Diploma	24	26.1
	Degree	38	41.3
	Masters	0	0
	Others	0	0
Number of people in the households	< 3 people	28	30.4
	3-5 people	43	46.7
	6-10 people	21	22.8
	> 10 people	0	0
Residence	City	43	46.7
	Rural	49	53.3
The main types of crops sold	Vegetables	21	22.8
	Fruits	37	40.2
	Vegetables & Fruits	34	37
Number of employees	No employees	10	10.9
	1-4 employees	42	45.7
	5-74 employees	39	42.4
	75 employees and above	1	1.1
Estimated Monthly Income	Less than RM2500	2	2.2
	RM2500-RM3169	7	7.6
	RM3170-RM3969	17	18.5
	RM3970-RM4849	3	3.3
	RM4850-RM5879	4	4.3
	RM5880-RM7099	19	20.7
	RM7110-RM8699	1	1.1

	RM8700-RM10959	8	8.7
	RM10960-RM15039	4	4.3
	RM15040 and above	27	29.3
Types of supply channels	Buy directly from the farmer	79	42.9
	Buy from wholesaler	68	37.0
	Buy from a government agency	23	12.5
	Others: Own farm	14	7.6

Measurement Model

Subsequent to demographic analysis, the data was further analysed for validity and reliability of the data which analysis referred to as Measurement Model assessment. The assessment involved determining the construct reliability, discriminant and convergent validity following the guidelines of Hair et al. (2020) and Ramayah et al. (2018). Any loading more than 0.5 for a reflective indicator shows a good measurement for latent construct (Hulland, 1999). A minimum standard value of $\alpha > 0.7$ is acceptable for the internal consistency represented by the Cronbach's alpha (Nunnally, 1978; Hair et al., 2021). A value of more than 0.7 for the composite reliability is considered as adequate consistency (Gefen, Straub and Boudreau, 2000). The value of convergent reliability which explains the variance of its indicator (Hair et al., 2021) is assessed using the average variance extracted (AVE) and the value of AVE > 0.5 is acceptable (Fornell and Larcker, 1981; Bagozzi and Yi, 1988). From the assessment, the values of discriminant validity which measure the constructs are assessed using the hererotrait-monotrait (HTMT) ratio as described in Table 3. Values of HTMT which are less than 0.9 are acceptable (Hair, et al., 2019) since theoretically the constructs should not be highly related to each other. Since all the values of assessment in the Measurement Model in Table 4 are within the acceptable range, thus, it is proven that the measurement items are both valid and reliable. The Measurement Model of the study is depicted in Figure 4.

Table 3: Discriminant Validity (HTMT)

	BR	NRM	RM
BR			
NRM	0.683		
RM	0.174	0.235	

Table 4: Assessment of the Measurement Model

Variables	Items	Loading	AVE	CR	Cronbach's alpha
BR	BR1	0.738	0.542	0.825	0.721
	BR3	0.693			
	BR4	0.705			
	BR6	0.803			
CRM	CRM1	1.000	1.000	1.000	1.000
SM	SM1	0.735	0.662	0.795	0.502
	SM5	0.885			

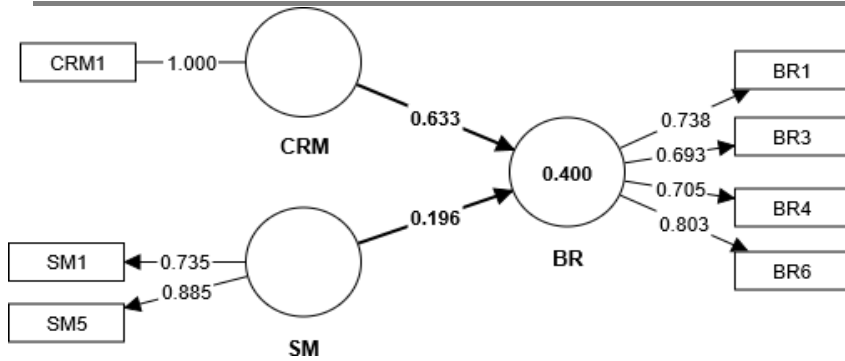Note: Items removed – BR2, BR5, CRM2, CRM3, CRM4, CRM5, CRM6, SM2, SM3, SM4, SM6

Figure 4: Measurement Model

Structural Model

The next stage of analysis is the assessment of Structural Model which will examine the significance and relevance of the path coefficient of hypothesised relationships determined by the study. Before evaluation of the Structural Model, variance inflation factor (VIF) was observed to ensure there was no issue of collinearity and value of < 5 is preferred (Hair et. Al., 2017). The VIF of inner model score of CRM and SM were 1.026 and 1.026 respectively suggesting that there was no collinearity issue. Bootstrapping procedures were later employed to estimate the spread, shape and bias of the sampling distribution of the study. Next step is to examine the R^2 which measure the variance in endogenous construct that is explained by all exogenous latent variables (Hair et al., 2017). From the analysis the value of R^2 of 0.40 explained 40% variance in business resilience. Changes in R^2 can determine whether the effect of the exogenous latent variable on endogenous latent variable has a substantive effect which can be measured from the effect size f^2. Values higher than 0.02 indicate a small effect size while 0.15 represents medium-sized effect and 0.35 is a large effect (Cohen, 1992). In this study, the CRM to BR depicts large effect size with $f^2= 0.652$.

Predictive relevance Q^2 serves to validate the model where the Q^2 values for endogenous construct should often be larger than zero to confirm the predictive accuracy of the model. The findings showed that there is a large predictive relevance in CRM to RB ($Q^2= 0.341$) (Hair et al., 2018). Q^2 values that are higher than 0 is considered small, 0.25 is medium while 0.5 is large in terms of the PLS-path model in predicting relevance (Hair et al., 2018). All predictive relevance values in the current result are recorded to be above the zero-threshold, indicating the predictive relevance of the endogenous constructs. The hypothesis testing of direct effect of Structural Model is represented in Table 5. The Structural Model of the study is shown in Figure 5 showing the result of path coefficient and the t-values of each hypothesised relationship.

Table 5: Hypothesis Testing of Direct Effect

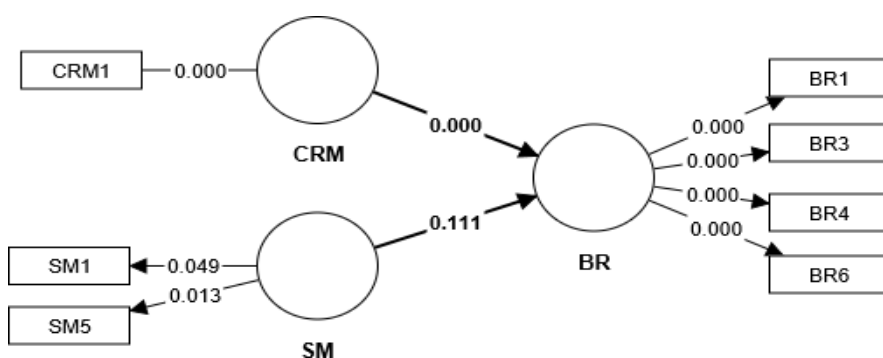| Hypothesis	Relationship	Std Beta	*t*-value	*p*-value	R^2	F^2	Q^2	Result
H1	CRM -> BR	0.633	5.053	0.000*		0.652		Supported
H2	SM -> BR	0.196	1.593	0.111*	0.40	0.062	0.341	Not Supported

*p<0.05

Figure 5: Structural Model

Based on the result of Structural Model analysis, CRM has a significant effect on BR (β = -0.633, p < 0.05), thereby providing support to H1. Our findings support the contention that CRM promotes business resilience. This is consistent with Gil-Gomez et al. (2020) and Soltani et al. (2018).

SM was insignificant effect on BR (β = 0.196, p > 0.05). Thus, H2 was not supported which suggests that SM does not significantly lead to BR among agriculture micro-entrepreneurs. According to Johnsen et al (2020), there must be verbal communication before the business transactions concludes. Since, there is yet to exist a proper online trading platform for agriculture business, there is no opportunity for the micro-entrepreneurs to connect with each other. As a result, SM could not be effectively used to enhance BR. Another reason is that the agriculture industry is lagging behind in the adoption of ICT (Morris & James, 2017).

Moderation Analysis

Next, to test the remaining hypotheses H3 that concerned the moderating role of SM on the relationship between CRM and BR. The result of the bootstrapping analysis is summarised in Table 5. As can be seen in the result, for Hypotheses 3 (H3), there was no moderating effect of SM was observed. Therefore, hypotheses 3 had to be rejected.
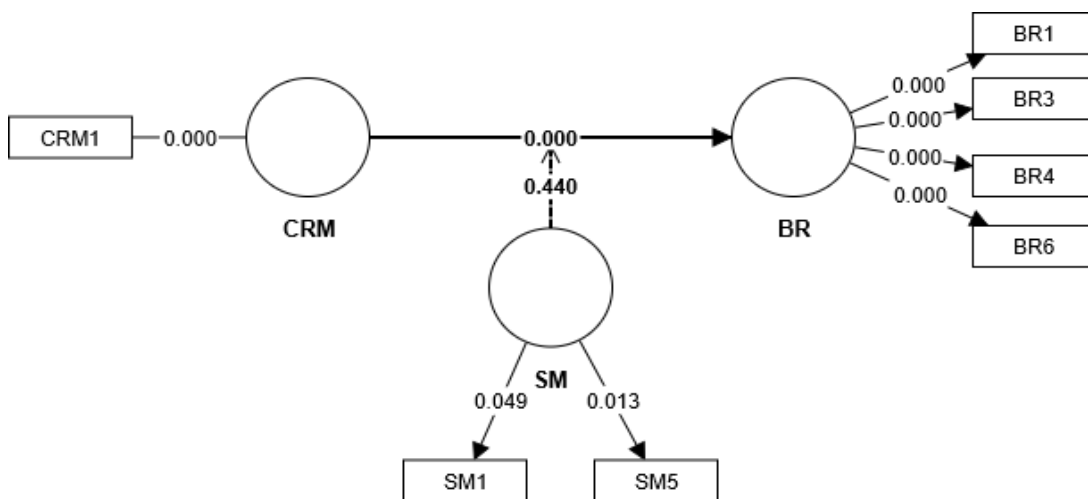

Figure 6: The structural model for moderation analysis

Table 5: Moderation Analysis and Path Coefficients

Hypothesis	Relationship	Std Beta	t-value	p-value	Result
H3	SM X CRM -> BR	0.101	0.772	0.440	Not Supported

This study further found that SM did not moderate the relationship between CRM and BR. A possible reason for this result is that 79.3% of the respondents were Malays entrepreneurs who prefer to have direct interaction with farmers in conducting business. This means that they would rather do business within their limited circles rather than establishing new channels for bigger impact for their business. It can be inferred that they only liaise with whom they know and trust. Prior studies show that repeated interaction using technology build up trust which leads to better communication and eventually better in business dealings among farmers and entrepreneurs (Savira et al, 2022; Morris & James, 2017) which contradicts with the present study.

CONCLUSION

This study examined the relationship between CRM and BR among the agriculture entrepreneurs and further explored how social media moderates the relationship. Our findings highlight the importance of CRM in ensuring business resilience among agriculture entrepreneurs. However, social media did not significantly influence business resilience nor moderate the relationship found between CRM and BR. As a result, we found no empirical support to the resilience theory based on the findings. Nevertheless, this study provides an important

impetus for researchers to explore further on the role of social media in enhancing business resilience. Drawing upon a comprehensive review of existing literature and empirical analysis, this study sheds light on the dynamic relationship between CRM practices and the ability of agriculture entrepreneurs to withstand and recover from adversities. Moreover, the paper delves into the role of social media as a potential moderator, amplifying the effects of CRM on business resilience. By merging theoretical insights with practical applications, the paper not only enriches academic discourse but also offers valuable policy implications for policymakers, industry practitioners and entrepreneurs aiming to enhance their adaptive capacities. The paper concludes by summarizing the key findings and highlighting the significance of the moderating role of social media in the CRM-business resilience relationship within agriculture entrepreneurship. It underscores the potential benefits of adopting such strategies and suggests avenues for future research.

By incorporating these comprehensive policy implications, the paper extends its impact beyond theoretical exploration, providing actionable insights for policymakers and industry practitioners alike. This integration of theory and practice fortifies the paper's usefulness and relevance in the dynamic landscape of agriculture entrepreneurship and resilience-building. Future research may investigate the necessary conditions for effective use of social media among entrepreneurs. Our study is limited by the sample collected which is confined to the agriculture entrepreneurs participating at the MAHA 2022 event. Therefore, it is recommended that future studies could be conducted to involve a wider selection of respondents.

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