THE SME SURVIVAL MODEL FOR THE TECHNOLOGY TRANSFORMATION ERA

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ABSTRACT

This study investigates the relationship between customer knowledge management, digital crowdsourcing, social media practice, competitive advantage, and business performance (survival) in Thai Small and Medium-sized Enterprises (SMEs).

Three million Thai SMEs make up the population of this research. The data has been collected from 397 Thai SME owners in various businesses using the questionnaire survey method. In addition, partial Lease Square Structural Equation Modelling (PLS-SEM) has been used for data analysis and added with the qualitative triangulation method.

The study found that the proposed SME survival model identifies the influence of customer knowledge management, digital crowdsourcing, and social media adoption on business performance (survival). In contrast, only digital crowdsourcing directly impacts competitive advantage. Eventually, the data analysis carried out the tests of the postulated hypothesis.

This study introduces a new insight into how Thai SMEs can improve their competitive advantage and business (survival) in presenting the findings. The study also gives recommendations to SMEs and policymakers on how to support Thai SMEs to survive in the economic uncertainty and digital disruption era. There have been very few studies on customer knowledge management and digital crowdsourcing regarding Thai SMEs.

Keywords: Customer knowledge management; SMEs survival model; SMEs; Crowdsourcing; social media adoption; Competitive advantage; Business survival; Technology Transformation.

INTRODUCTION

In Thailand, 90 per cent of the companies are small and medium-sized enterprises (SMEs). Thai SMEs employ more than 85% of the working population in Thailand. The survival and growth of SMEs have a high impact on Thai citizens. In previous years, the development of SMEs and contribution rates were slow, reflected by the economic value added to the GDP. It was stable at around 40 %, while the increase in the number of SMEs in the past decade has reached 30% annually (Office of SME promotion, 2019). The promotion of sustainable performance among SMEs is crucial. Therefore, the researcher has chosen Thai SMEs as the case study for the survival model in the current economic uncertainty and digital disruption economic landscape. However, the SMEs contribution to the economic performance is uneven and still less than that of large enterprises (OSMEP, 2017) The main reason could be that SMEs have limited resources compared to large enterprises, accessibility to the capital and technology limitation and lack of business networking, skills, experience, lack of capital, marketing,

information, and technology among entrepreneurs (Na-Nan et al., 2017). Therefore, this paper is aimed to identify the factors that improve the SME's competitive advantage (CA) and business performance (BP) in the economic uncertainty and digital transformation era.

(Grant et al., 2013) suggested the strategic development process differently, using an inside out perspective or resources-based view (RBV). The RBV claims that valuable, rare, inimitable, and organisational resources contribute to competitive advantage. RBV describes the elements that establish a compatible competitive advantage. According to this view, stretched resources have a significant impact on organisational performance and competitive advantage. In the extension of RBV, the Knowledge-based view of the firm (KBV) is a management concept of organisational learning that provides firms with strategies for achieving competitive advantage. This view suggests analysing the firms in the frame of their knowledge resources. This view focuses on the firms' ability to excavate and deploy new knowledge for generating competitive differentiation (Defee et al., 2010). RBV and KBV suggested that Customer Centricity and Technology Adoption has an impact on competitive advantage and business performance (survival) (Aarikka-Stenroos & Jaakkola, 2012; Aghamirian et al., 2015; Alexy et al., 2018; Anwar, 2018; Dean, 2019; Adeola et al., 2020). This research adopted RBV and KBV as the guideline using the Customer-Centric and Technology Adoption strategies.

The researcher focused on the factors related to technology adoption and customer-centric orientation, which are more precise and suitable for SMEs' survival in the technology transformation era. This study's approach is different from the previous research because the researcher would like to examine the moderation of the model, not only the cause and effect of variables.

Customer Knowledge Management (CKM)

One of the most effective methods to adapt to customers' changing needs is to utilise customer knowledge, which refers to the knowledge from the customer, knowledge for the customer, and knowledge about the customer (Chua & Banerjee, 2013). Therefore, customer knowledge management has become a critical competency for managers in creating customer value (Cepeda-Carrion et al., 2017).

Previous studies suggested that the application of the CKM would lead to gaining a competitive advantage for the organisations in eCommerce (Aghamirian et al., 2015). CKM enhances customer orientation and competitive advantage; customer orientation enhances competitive advantage. Customer Knowledge is the source of competitive advantage(Zanjani et al., 2008). CKM has a positive influence on firm performance(Wang & Huang, 2006). (Hakimi et al., 2014) suggested the company should hold competence in managing customer knowledge through innovation to gain a competitive advantage. Both KM and CKM are critical factors in improving corporate performance and suggested that CKM be a significant factor of intervention between KM and the company performance (Tseng, 2016).

Digital Crowdsourcing (DCS)

Many businesses today have adopted the concept of task distribution to the online crowd networking in a different area, such as graphic design, software coding, photo or video editing, creative writing as well as marketing activities, advertising concept, new product development concept idea, as well as funding(Chaffey & Ellis-Chadwick, 2016). Thailand is among the top 10

individual markets globally that use social media extensively, with Facebook as the leading social media site (Leesa-Nguansuk, 2018). Statistics show that 63% of Thai companies spent up to 20% of their marketing budget on business social networking activities (Morris & Nguyen, 2019). The crowdsourcing strategies are such as announcement posting, competition, voting, bidding, and auction. (Howe, 2009)has differentiated four primary strategies as crowdvoting, crowdwisdom, crowdcreation, and crowdfunding. Many previous studies show that a company that uses crowdsourcing to capture the knowledge of its consumers and turn it into innovation skills will achieve better performance (Xu et al., 2015). (Mansor et al., 2018) recommend small and medium-sized companies that need to develop new or adopt crowdsourcing practices to improve their business performance.

Social Media Adoption (SMA)

The use of social media for small business owners often gives a relative advantage to businesses. Modern communication tools allow organisational owners to reach their customers faster and more frequently, creating a more honest and open dialogue that leads to more relevant feedback(Barnes & Jacobsen, 2013). According to (Constantinides, 2014), social media adoption can be divided into two major approaches, which are 1. Passive approach, the utilisation of social media in the public domain as a source of customer reflection. 2. Active approach, the marketing strategy aims to use social media to communicate, direct sales, direct marketing, customer acquisition, and customer retention. The previous studies found that social media adoption leads to competitive advantages and firm performance. The Social Media approach has a strong relationship to the company's competitive advantage(Singla & Durga, 2015). Social media used in marketing can offer a competitive advantage to the business organisation (Bornhofen, 2012), and social media usage has a positive impact on marketing and customer care cost reductions, strengthened customer relations and improved information usability(Sulaiman et al., 2015).

Research Question

Do Customer Knowledge Management, Digital Crowdsourcing, and Social Media Adoption impact a firm's Competitive Advantage and Business Performance?

Hypothesis

H1: Customer Knowledge Management has a positive impact on Competitive Advantage

H2: Customer Knowledge Management has a positive impact on Business Performance (Survival)

H3: Digital Crowdsourcing has a positive impact on Competitive Advantage

H4: Digital Crowdsourcing has a positive impact on Business Performance (Survival)

H5: Social Media Marketing has a positive impact on Competitive Advantage

H6: Social Media Marketing has a positive impact on Business Performance (Survival)

H7: Competitive Advantage has a positive impact on Business Performance (Survival)

METHODOLOGY

The researchers used the quantitative survey method to collect primary data from a sample of Thai SMEs business decision-makers for their business practice and attitude related to CKM, DCS, SMA on CA, and BP. In this study, the sample data has been obtained at the SME Association's regional annual conferences throughout Thailand using a multistage sampling technique. The conference participants were SME's business owners or decision-makers. First, the population was divided into five regions according to the SME regional annual conferences. Secondly, the researcher has distributed 2,500 sets of the survey questionnaire to all participants at each conference registered point. Thirdly, After the completed questionnaire has been returned, the researcher used systematic random sampling (SRS) to select 20% of the questionnaire from each conference proportionally. The 397 sample sets of data were collected and analysed. According to (OSMEP, 2020), the estimated total number of SMEs in Thailand is 2,913,212. Therefore, with a calculation from the above formula, the margin of error is at 5% and the confidence level at 95%. The level of confidence tells how sure it can be. It is expressed as a percentage and represents how often the actual percentage of the population that would choose the answer lies within the confidence interval. The 95% confidence level means that it can be 95% certain. Most researchers use the 95% trust point (Junk, 1999). The researcher uses (Krejcie & Morgan, 1970) formula to determine the sample size and indicate 397 samples as the appropriate samples.

The operational construct was adapted from previous research. All internal consistencies Cronbach alphas of the adopted items are over 0.7. Therefore, the adopted instruments are valid and have good reliability. In particular, the Customer Knowledge Management items was adopted from (Salojärvi & Saarenketo, 2013; Alshrari, 2018).Digital crowdsourcing items were adopted from (Alshrari, 2018) Social Media Adoption was adopted from (Sulaiman et al., 2015), Competitive Advantages items were adopted from(Auzair, 2011) and Business Performance (Survival) was adopted from (Naidoo, 2010). The internal consistency reliability from 35 sample sets was examined as a pilot test. The result showed that Cronbach's alpha for all constructs was higher than 0.70, confirming that the instrument is reliable (J. C. Nunnally, 1994).

RESULTS AND DISCUSSION

This research applied the PLS-SEM method using ADANCO version 2.1.1 for the structural equations (Henseler et al., 2015; 2016). Considering the research model and the construct's nature are the formative model, poses with latent variables, prediction oriented, and moderate sample size. Therefore, the use of PLS-SEM is an appropriate statistical method in this study.

Construct Reliability

Model reliability indicates the construct's internal consistency. Cronbach's alpha was used to assess internal consistency. A minimum of 0.7 is required to show (J. Nunnally, 1978). Jöreskog's rho (ρc), used as the composite reliability indicator, is also regarded as the construct's reliability. The composite reliability values greater than 0.7 are accepted as the indicator of

reliability and homogenous construct (Henseler et al., 2016). The result shows that all three components' values are more significant than 0.7.

Discriminant Validity

To assess the convergent validity of reflective constructs, the researcher considers the outer loadings of indicators and the Average Variance Extracted (AVE). Fornell & Larcker (1981) suggested that the minimum cut of value for each latent construct's AVE should be 0.50, the items loading less than 0.50 should be removed (Joseph F Hair Jr et al., 2016). Therefore, the results in this research confirmed the high reliability of the latent constructs. All AVE scores are above 0.50, and item loadings of other internal consistency indicators shown in Table 1 are more significant than 0.70, which also confirmed the high internal consistency of the constructs.

TABLE 1 OVERALL CONSTRUCT RELIABILITY LOADING AND CONVERGENT VALIDITY					
Construct	**Item Loading**	**Dijkstra-Henseler's rho (ρA)**	**Jöreskog's rho (ρc)**	**Cronbach's alpha(α)**	**AVE**
CKM -Sharing -Application	0.89 0.91	0.79	0.90	0.78	0.82
Digital Crowdsourcing -Performance - Effort	0.88 0.96	1.03	0.92	0.84	0.85
Social Media Adoption -Passive -Active	0.93 0.85	0.83	0.90	0.76	0.80
Competitive Advantages -Differentiation -Cost Leadership	0.93 0.89	0.83	0.91	0.80	0.83
Performance (Survival) -Perceived -Subjective	0.89 0.83	0.69	0.86	0.70	0.75

SRMR and Partial Least Square-Structural Equation Model

Standardised Root Mean Square Residual (SRMR) is the square root of the sum of the squared differences between the model implemented correlation matrix and the empiric correlation matrix. The lower the SRMR, the more the theoretical model matches. A value of 0 for the SRMR will imply a perfect fit, and, in general, and SRMR value of less than 0.08 is appropriate as suggested by(Hu & Bentler, 1999). The model's SRMR value result was 0.08, which met the criteria for the model fit.

The data analysis was performed first by modelling an estimated structural model and afterwards by deciding the best decency of model fit by determining reliability and validity, trailed by path analysis investigation, and estimating model parameters; as a result, appeared in Figure 1.
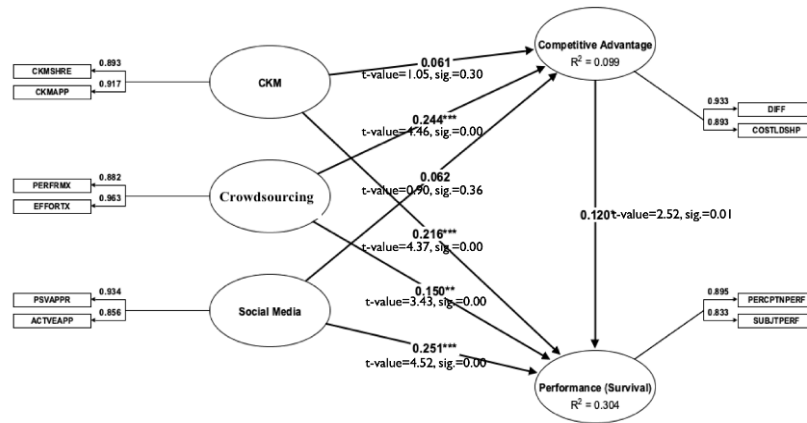
FIGURE 1

PARTIAL LEAST SQUARE-STRUCTURAL EQUATION MODEL (PLS-SEM)

Hypothesis testing shows a significant relationship between latent variables with a p-value below 0.05. Two of the hypotheses were not statistically significant, as shown in Table 2.

TABLE 2
PATH COEFFICIENT AND HYPOTHESIS TESTING RESULTS

Effect/Hypothesis	Original Coefficient	Mean value	Standard error	t-value	p-value (2-sided)	Interpretation
H1 CKM ⟶ CA	0.06	0.06	0.06	1.05	0.300	Reject
H2 CKM ⟶ BP	0.22	0.23	0.05	4.37	0.001	Accept
H3 DCS ⟶ CA	0.24	0.25	0.05	4.46	0.001	Accept
H4 DCS ⟶ BP	0.18	0.18	0.05	3.43	0.001	Accept
H5 SMA ⟶ CA	0.06	0.06	0.07	0.90	0.360	Reject
H6 SMA ⟶ BP	0.26	0.26	0.06	4.52	0.001	Accept
H7 CA ⟶ BP	0.12	0.12	0.05	2.52	0.010	Accept

It is found that the factor with a positive effect on competitive advantage is only digital crowdsourcing. The factors with a positive impact on performance (survival) are customer knowledge management, digital crowdsourcing, social media adoption, and competitive advantage. However, customer knowledge management and social media marketing do not positively affect the competitive advantage. The customer knowledge management, digital crowdsourcing, social media marketing, and competitive advantage positively impact business performance (survival).

IMPLICATION AND LIMITATION

This finding confirms the previously found in Bakri, (2017) that Social Media Adoption does not have a relationship with the competitive advantage of SME in the travel, restaurants and hotels sector in gulf countries. Considering the similar findings, and from this study's business respondent profiles which majority are also in the service and tourism sector, the further

research focusing on the relationship between social media adoption and competitive advantage among tourism, restaurant and hotels business of Thai SMEs should be explored.

The study results suggest that CKM boosts corporate performance and marketing outcomes. It empowers managers to increase the company's overall performance. Therefore, companies should work on implementing CKM practices and attaining CKM dynamic capabilities. Managers should boost support for SMEs to foster development activities focus on information management and CKM practices. This could be done by creating programs that foster an organisational culture focusing on customer service and information. Digital crowdsourcing is a new concept that increases awareness and gets public attention among Thai SMEs, advancing Thailand's internet speed facility and widely used online community. Thai SMEs may assign some work tasks to the Crowd Sourcing community to perform their job. By doing so, SMEs will benefit from lower operating and investment costs and get new business ideas, which will lead to financial performance both in terms of cost reduction and revenue increasing. The researcher also would recommend the newly proposed aspects of strategic technology adoption understanding can also be re-proposed to adapt to the complexity of each industry environment and situation. It would be helpful in the literature to extend this work into future research. The research limitation was a time constraint which the data collection period was when small and medium-sized enterprises in Thailand were faced with an economic recession that could affect their business performance and misinterpret the meaning of their business performance questions. The results may be different in other countries and none-SME enterprises.

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