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# **Integrating TQM Practices and Knowledge Management to Enhance Malaysian Digital Banking**

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## **Abstract**

**Purpose - The purpose of this study is to develop an integrated model of total quality management (TQM), knowledge management (KM) for Malaysian digital banking financial crime mitigation to enhance bank reputation. Design/methodology/approach - The quantitative study has been carried out in Malaysian banks. Data were collected from 100 employees the executive management team level and above in banks dyads working in Malaysia and is analyzed through structural equation modeling technique using SPSS 22.0 and SmartPLS 2.0. Findings - The results reveal that Integrating Total Quality Management Practices and Knowledge Management Processes helped in Enhancing Malaysian Digital Banking Reputation, which combat financial crimes through strengthening its anti-money laundering and terror financing capabilities, so as to maintain their global competitive edge in this domain. Research limitation/recommendation – the study is only focusing on the digital banking service in Malaysia. There have digital bank where are different with digital banking and also digital banking service in Malaysia might have some different compared to other countries. Hence, there have not standardization of digital banking to be measured. Practical implications – This Findings of study can be utilized by banks to Enhance digital banking reputation, which has been identified as a key to growth and development. Originality/value This study complements the previous researches and seeks to extend literature in digital banking. Malaysia still in earlier stage of adopting digital banking. Hence, reputation can influence decision and confidence of customer.**

**Keywords: Total Quality Management, Knowledge Management, Bank Reputation, Digital Banking**

## **Integrando las prácticas de TQM y la gestión del conocimiento para mejorar la banca digital en Malasia**

### Resumen

Propósito: El propósito de este estudio es desarrollar un modelo integrado de gestión de calidad total (TQM), gestión del conocimiento (KM) para la mitigación del delito financiero bancario digital de Malasia para mejorar la reputación bancaria. Diseño / metodología / enfoque: el estudio cuantitativo se ha llevado a cabo en bancos de Malasia. Los datos se obtuvieron de 100 empleados del nivel del equipo de gestión ejecutiva y superiores en las diadas de bancos que trabajan en Malasia y se analizan mediante la técnica de modelado de ecuaciones estructurales utilizando SPSS 22.0 y SmartPLS 2.0. Hallazgos: los resultados revelan que la integración de las prácticas de gestión de calidad total y los procesos de gestión del conocimiento ayudaron a mejorar la reputación de la banca digital en Malasia, que combate los delitos financieros mediante el fortalecimiento de sus capacidades contra el lavado de dinero y el financiamiento del terrorismo, a fin de mantener su ventaja competitiva global en este dominio . Limitación / recomendación de investigación: el estudio solo se centra en el servicio de banca digital en Malasia. Hay bancos digitales que son diferentes con la banca digital y también el servicio de banca digital en Malasia podría tener algunos diferentes en comparación con otros países. Por lo tanto, no existe una estandarización de la banca digital para medir. Implicaciones prácticas: los bancos pueden utilizar estos resultados de estudio para mejorar la reputación de la banca digital, que se ha identificado como una clave para el crecimiento y el desarrollo. Originalidad / valor Este estudio complementa las investigaciones anteriores y busca ampliar la literatura en banca digital. Malasia aún se encuentra en una etapa temprana de adopción de la banca digital. Por lo tanto, la reputación puede influir en la decisión y la confianza del cliente.

Palabras clave: gestión de la calidad total, gestión del conocimiento, reputación bancaria, banca digital

### 1. Introduction

Economy always is a critical and significant issue to every country even

in global. The eighth goals of sustainable development goals (SDGs) is concerned about decent work and economic growth (SDGS, 2017). One of the strategic thrusts in Malaysia Plan-11 is re-engineered economic growth for increasing prosperity. Gross Domestic Product (GDP) is a statistical method to represent economic performance according to figure shown in a region or country (11th Malaysia Plan, 2018). According to Department of Statistics Malaysia, service sector has the major contribution (54.5%) to GDP Malaysia total RM1,174.3 billion in year 2017. Financial service is one of the key contributors in service sector. Banks is one of the board range of business in financial services. Bank plays a vital role in developing a progressive and inclusive financial industry that involves maintaining the key principles of financial stability at all times, ensuring effective and effective financial intermediation, and contributing to economic growth and development.

Banks also need to keep improving, updating and changing their service with the fluctuating market and needs of customers. Majority of banks have providing a new service, named as “Digital Banking” to enhance customer experience There is a confusion between electronic banking which is considered as the online banking and the another type of banking which is called digital banking. Moreover, the online banking is considered as a part of the digital banking. Online banking is also known as internet banking or electronic payment system (Kauffman & Weber, 2018).. The simple explanation is checking balance, transferring money and paying bills through online either desktop or smartphone (Forder, 2005). All the conventional banking activities only provide services to customers when they are physically in the branch of bank while digital banking is moving toward digitalization which ease the process of banking activities and convenience to customers (Chapra, 2000). A comprehensive consolidation of projects by bank at front-office, middle-office, back-office to enable entire journey of digital banking. In other words, digital banking has the same features as headquarters, branch office, online service, bank cards, ATMs and sales point computers. In Malaysia, CIMB bank is started moving forwards to digital banking services due to the trends of market and needs of customer. CIMB Bank Bhd CEO said more than 95% of customers’ transactions are performed via digital or self-service platforms (Dhesi, 2018).. Apart from CIMB bank, digital banking also performed in Hong Leong bank, Maybank, Public bank, RHB bank, and UOB bank (Vincent, 2018).. Malaysia still in earlier stage of adopting digital banking. There might have some challenges occurred during this adopting stage. Customer al-

ways seek for flawlessly and highly efficiency services. High reputation bank will be the main choices of customer. Once there any rumors such as bank going bankrupt, peoples will rush to withdraws their money (Prasad, 2017).Hence, reputation can influence decision and confidence of customer. Therefore, there need to have a precautionary measures or guidelines on digital banking.

Financial crime is considered as one of the biggest challenges in banking. The financial crime is a concern of entire society due to its case number has gradually increased in world (Tom, 2016). The financial crime brings various negative impact in different level and result in hot topic throughout the world (Goldrick, 2018). In general, financial crime is covering wide range of offences. For instance, electronic crime, money laundering, terrorist financing, fraud, bribery and corruption, market abuse and insider dealing, and information security (Jill, 2016). One of the most common tricks is offenders ask Malaysian housewives to help them to do transaction with a huge amount through their account and transfer money to another oversea account by giving a few hundred Ringgit Malaysia as commission to them. Those who lacked knowledge or awareness housewives will believe this trick as a simple and quicker way to earn their extra pocket money (Triona, 2018) All these criminal issues occurred will affect the reputation of bank which also will reduce confidence of customer towards to bank (Tim, 2016).This issue happened might be due to the careless of employees in banking or employees do not have such knowledge to handling or checking. As staff of bank, they have the responsibility to aware and prevent these crimes to be occurred. In this case, bank need to have the system as protection to prevent any mishap happened. All related staffs of bank should also be trained and educated to face these problems. On the other hand, good reputation can be continuing to get the trust and confident from customer. Moreover, it is not only can sustain even to attract new customer. As a result, in this research to develop TQM and KM to overcome the financial crime in digital banking in order to shield the bank reputation. Integrated model of total quality management (TQM) and knowledge management (KM) are beginning from (Honarpourand Nor, 2017). The researchers said that TQM can help to produce superior products and attain extreme high satisfaction in customer perspective that is a competitive weapon in e-Commerce. On the other hand, KM could gain synergy from TQM experiences because the significant commonalities. In this particular study, the author has assessed the status of TQM and KM and documented a level of quality and knowledge on digital banking and

bank reputation A review of TQM and knowledge management models and studies in Malaysia banking system is provided, a conceptual model is suggested, and a study survey is performed. The data collection process is in the form of survey and the aimed community is a chosen of staffs of the Malaysian Banks. as CIMB bank, Hong Leong Bank, Maybank, Public Bank, RHB Bank and UOB Bank.

## 2. Literature review

Digital banking is the application of technology to all banking activities, processes and programs, making the customer's experience simple, easy and convenient and eliminating the need to be physically located. Digital banking also involves online banking and provide more function and services (Assistant, 2011).. Digital banking depends strongly on big data, analytics and artificial intelligence to enhance the experience of the customer beyond "credit and debit". Typically, online banking involves building on a banking relationship that started from physical location (Kumawat, 2014). Digital banking relationship usually starts and stay entirely online (usually on a smartphone application) without the need to visit any physical location branches. Currently, online marketing strategy is a common business strategy in competitive business environment. With the development of internet, it is unavoidable for banks to make steps towards providing digital banking for customers. The existing bank branches still remain the most traditional method for conducting banking transactions, but personal financial services had changed the way, design and deliver to customers, through internet technologies (Wang et al., 2003). (Shih, 2004) define internet banking as a current kind of information system that utilizing the resources of the internet and www (world wide web) in order to make their customers make their financial tasks in a very convenient way. For instant, internet platform can have a wide range of banking transactions electronically service via bank's website also known as online banking (Tan and Teo, 2000). In the beginning of online banking contained their primarily products and services information for their customers. Now banks use online banking even digital banking as a transactional and informational medium due to the development of asynchronous and secured electronic transaction technologies. Therefore, online banking users can do some banking transactions such as pay bills, transfer funds, check account balances, top up prepaid card, writing cheques. Online banking has provided "one stops service and information unit" that can give great benefits to banks and customers (Tan and Teo, 2000).

Digital banking operates same way as traditional banking services. The essential comparison and difference of digital banking and traditional banking is customer do not need to write their information on paper and hand it to counter staff, customer only need to access their account and information, making payments and reconciling statement complete it through online. Digital banking services are critical elements as competitive advantages for long term survival of banks in current electronic commerce world (Tan and Teo, 2000). Before twenty centuries, some researchers predicted the market for online banking will be growing dramatically and affect the competitive advantages of traditional physical bank branches (Kumawat, 2014). The advantages of convenience, and anytime, anywhere service access with digital banking service channel through smartphone, desktop, internet are important to banks' survival (MBAMA, 2017). Digital banking services can enhance customer experience are arguing by some researchers (Martins et al, 2014). Digital banking services can help to reduce some unnecessary expenses such as the cost of banks with post statement letter to customer, face-to-face transactions between staff and customer in branches, paper for number waiting, utilities and so on. In this modern era, customers want there have comparable levels of interactions between the ease of social media and digital banking services (Dootson et al, 2016).

## 2.1 Total Quality Management

The implementation of TQM in firm can improve the quality of products and services (Yusuf, 2014). However, there are difficult to make a conclusion on the practice and dimensions of TQM due to the different method used by scholars (Hoang and Laosirihongthong, 2010). According (Bon and Mustafa, 2013), the first generation of developed measurement TQM practices was done by (Saraph et al., 1989). Those TQM practices are selected and based on the previous empirical studies. The eight TQM practices are role of quality department, training, process management, the architecture of the product, supplier quality management, the reporting of the data quality, top management leadership, and relationship of the staffs. Customer focus in service industry, customers are the main resources income. Delighted clients are the primary determinant for the company's service industry's sustainable competitive advantage. The survival and success of a company is depending on retaining current customer and attracting new customer (Sanuri and Mokhtar, 2013). Therefore, bank need to satisfy needs, meet expectations and fulfil the desires of customers in

order to maintain loyalty of customers. Hence, customer focus can improve efficient productivity by decreasing the inner and external costs of failure and ensuring that only those products that are in demand are generated. (Tsang, & Antony, 2001) found that customer focus is the most important factor for TQM implementation in the UK service industries. The important of customer focus also conducted in the studies by (Abdallah & Matsui, 2008) and (Samat & Saad, 2006). This statement had been argued in (Sit, et al., 2011) which stated focusing on customer was not a vital element in service quality in commercial banking industry Malaysia. Top management commitment or organisational commitment is the key of success of the quality improvement program or activities. Totally commitment of top management is able to influence the lower levels of an organizations (Tsang, & Antony, 2001). Top management can also create values, goals, and systems in order to satisfy customer expectations and increase organisational performance ( Ahire et al., 1996). Top management invests in economic and human resources to attain the objectives as they are the drivers of quality management policies. (Teh & Yong, 2008) mentioned top management able committed on director the organization and assess organizational performance. The result of ( Loay & Jamal, 2015) provide supporting evidences to show there have exist a strong relationship between top management commitment and organizational performance. Some authors argue that top management commitment was not significantly associated with quality performance (Sit, et al., 2011) and (Talib, Rahman and Qureshi, 2013).

Management of human resources is one of the key TQM methods for improving business and leadership procedures (Deros et al., 2006). In (Sila, 2018) also noted that management of people have positive relationship with operational performance. Human resource management have essentially linked with customer satisfaction (Sit et al., 2009). Teh et al., (2008) found that empowerment have positive effect on role conflict. The previous study showed that proper human resource management can significantly enhance the quality of service in Malaysia's commercial bank (Sit, et al., 2011). Continuous improvement is one of the major TQM practices which matching with the aims of TQM to improve the quality of product or service. (Talib, Rahman and Qureshi, 2013) showed that this practice was included in a relatively large number of studies on TQM.

Continuous improvement consists the incremental improvement and the break-through improvement. Both of them are part of the daily operations of manufacturing and service business units (Suliman & Amr,



2013). The intentions of continuous improvement are solving problems, providing equipment and improving other resource's quality. There is a need to monitor and improve continuously the process performance and employee performance. The advantages of continuous improvement can help to eliminate defective products, reduce waste or buffer in manufacturing sector (Tsang & Antony, 2001). Many organizations reduce their all non-value adding activities to a minimum on all aspects and functional areas in order to increase their operational performance (Hyland et al., 2000). Hence, continuous improvement is an essential requirement for implementing TQM in organization because it can help to achieve excellence performance (Al-Mukyad, 2006).

Leadership is one the most important practices of TQM due to leadership can identify the direction and establish vision even lead the organization to high expectations of performance (Deming, 1986). Through build and maintain a good leadership system will improve organisational performance, promote legal ethical successful, and produce successful organization (Porter, 1993). Leadership is most relevant to the characteristic and principle of TQM which supported by senior management involvement and commitment (Sila, 2018) Senior manager shows their leadership through correct management behavior and lead the TQM programme at all stages. Sulieman & Amr (2013) proved that leadership have a statistically significant effect on service quality in Jordan's cellular communication sector. Sit et al. (2011), showed that there had a positive link between the service quality and leadership in Malaysia's banking industry which this outcome does not similar to the research conducted by Patel (Samat & Saad, 2006).

Training and education is crucial and management team should the implementation of TQM is lead to a long-term commitment, not an immediately outcome. Training and education had more positive impact in service industry compared to manufacturing industry(Ooi, 2015).TQM system implemented efficiently through having training and education on employees. (Talib, Rahman and Qureshi, 2013) mentioned that for the purpose of success the implementation of TQM, manager, employee and workers need to undergo training class to be familiar with the tools and techniques of TQM. Through training and education can reduce employee turnover rate and improve organizational performance (Deli & Kamberovi, 2014). The critical role of training and education are able to maintain high quality level in service industry (Demirbag & Zaim, 2006).

Trust is a rarely element of TQM. The previous studies also mentioned that

TQM implementation have a high level of trust and trust is a component of the quality culture (Maccoby, 1994),(Dale & Lascelles, 1997).Role of trust in TQM act as a belief that manager trust the decision of employees will be useful for the entire organization. Trust are valid between all level of organizational structure, it associated with leadership, as a source of employees' satisfaction and also as condition of the organization ability when adapting the fast-changing environment (Bugdol, 2013).

## 2.2 knowledge management

In finance field, in order to improve and organize business processes and procedures, knowledge management can be described as the process of generating, institutionalizing and distributing knowledge among individuals (Girard & College, 2015). ("knowledge management- Investment & Finance Definition," 2010) The Ultimate Financial Resource, Finance, defined KM as use of organization's knowledge for competitive advantage (Baptiste et al., 2008). KM have a positive relationship to organizational effectiveness through inspection on capabilities of the information and knowledge architecture. In addition to that, the knowledge process capability (affected by acquisition, conversion, application and protection) ) ( Andrew et al., 2001). KM has made a significant competitive advantage and as a key tool for the management of the new century. KM comprises of knowledge creation, coding, sharing and application, leading to the efficient use of organisational resources (Meihami and Meihami, 2014).

Knowledge acquisition is "the process by which knowledge is obtained" (Nawab et al., 2015).According to (Birasnav, 2014).The features of knowledge acquisition are to forecasting positive change in the organizations' profit level and ensuring delivery on-time and quality of product and process(Nonaka, 1994). Organization can also detect problem in a shorten time, find various and creative solution in the unpredictable issues (Liao & Liu, 2010).. Some researchers agree that organization need to acquire knowledge as the part of managing or collecting knowledge (Fathi and Easa, 2012) (Hsiao and Chen, 2011).Collecting knowledge can be categorized as seeking and acquiring completely fresh expertise or creating new understanding from current knowledge through cooperation between people and company partners (Gharakhani, 2012).With acquiring internal and external knowledge, organization can reduce uncertainty and achieve greater number of administrative ((Sarin and McDermott, 2003).

Sharing knowledge is a synergistic process, means employees can gain more than their invest. Knowledge is fragile and ephemeral(Ganguly, Talukdar and Chatterjee, 2019). Knowledge will lose its value without proper used and shared to other(Galeazzo and Furlan, 2019). Knowledge sharing is also one of the critical success factors of organization (Torabi and El-Den, 2017). Knowledge sharing in an organization is through capturing, organizing, reusing and transferring experience-based knowledge. As a result, knowledge sharing creates opportunities to increase the capability of organization to satisfy the needs of customers and generates solutions effectively that can become a competitive advantage of organization (Reid, 2003).

Knowledge Application is another important aspect of the KM process in organization. (Nonaka, 1994) claimed that the value of knowledge assets is determined through use assets to create products or provide services. Some researchers defined knowledge application as the utilization and use of expertise in the process of value-adding. It also includes information allocation to develop or generate an organisational capacity. The implementation of knowledge also involves the adaptation, integration and implementation of knowledge to the products and services of the organization. Knowledge application capability can also describe as the ability of employees to create frameworks for solving problems and deal challenges through using the knowledge they adapted. Knowledge application allows employees to apply the knowledge gained from the internal or external of the organization and used it for their own purpose. Employees can reduce their mistakes, improve their efficiency and decrease redundancy by applying knowledge effectively (Dale & Lascelles, 1997).

### 2.3 Bank Reputation

Reputation is a relatively stable, issue specific aggregate perceptual representation of an organization's past actions and future prospects compared against some standard (Walker, 2010). Bank, as a services sector with a higher selection risk on the effect of reputation on customer attitudes. When customer select a service provider, they usually are relying more heavily on reputation. Negative reputation has higher potential to lead customer do a mistake result (Walsh et al., 2014).Corporate reputation is hard to build and easy to lose. According (Keh and Xie, 2009) noted

that corporate reputation is not just only good or bad in overall judgement. Management of corporate reputation is an important factor that can affect the opinion of external stakeholder. That means in service industry, reputation of organization can affect the decision of customers. Consequently, reputation build on the perception and understandings of various stakeholders to the organization (Fombrun et al., 2000).

Bank reputation play as an important role in the customer behaviors on determine purchasing and repurchasing. Reputation is significant to retail bank industry where quality cannot be evaluated accurately before purchase. Apart from that, reputation can be used as for predicting service-production process outcome and be the most dependable indicator of the ability of bank to satisfy the needs of (Nguyen and LeBlanc, 2001). According (Belen et al., 2016), bank reputation can be influence by two categories, cognitive and emotional. Cognitive aspects are including products or services, employer branding, reliability or financial strength, and corporate social responsibility (Raithel et al., 2010). While for the emotional are customer satisfaction and trust or word of mouth that have been discussed in a few literatures (Walsh and Beatty, 2007; Walsh et al., 2009b). The emotional aspects of reputation can be considered as the most important conditioners for the company growth and success (Lewis and Soureli, 2006; Walsh et al., 2009a). Reputation plays a particularly significant strategic role in the services sector because the pre-purchase assessment of service quality is indistinct and incomplete, particularly in the banking sector.

#### **2.4 Total quality management practices lead to improved bank reputation**

The author believe that TQM practices have certain impact on influencing bank reputation. If TQM implement properly in organization or bank, reputation can be shield even improve the reputation. Normally, bank reputation is built on or based on the perception of customer and public. Belen et al., (2016) proved that product and service, employer branding, reliability or financial strength, customer-based relationship, customer satisfaction and trust have positive consequence to bank reputation. Based on the Frombun (2000), there have more model and scale of reputation that mentioned in previous part. Among some of them are actually matching with the TQM practices element. Customer satisfaction and trust are the important factor to influence bank reputation (Walsh et al., 2009b; Belen et al.,2016). Meanwhile, customer focus also considered as a must in TQM

practices by a few researchers (Calvo-Mora, et al., 2014; Walsh et al., 2009b). Trust also proved to become one of the TQM practices (Bugdol, 2013).

These statements show a clear relationship between TQM practices and bank reputation. Besides that, items existing in previous reputation survey such as business leadership, overall leadership, quality of management, products and services quality are also correlated with TQM practices. However, the management team of bank can only forecast or shield the reputation through some strategies. Therefore, the authors proposed that TQM can be one of the strategies to shield bank reputation.

## 2.5 Quality management practices lead to improved knowledge management

(Kim et al., 2012) showed that knowledge management system play role in supporting continuous improvement (one of the TQM practices). (Hung & McLean, 2010) showed that TQM act as the mediator between KM and innovation. However, Molina & Montes, (2007), considered knowledge transfer as mediator in the relationship between TQM and performance. This is because the dependent variables of two studies is different. The dependent variable of Hung is innovation; which present knowledge is play more important role in the part of innovation (Ooi, 2013). While Molina was examined the organization performance and the final result of TQM is improving performance. Hence, TQM is not act as a mediator, but position as independent variables.

## 2.6 Knowledge management lead to improved bank reputation

The previous part has explained clearly the relationship between TQM practices and KM processes. There also has some research proved that KM was suitable as the mediator through TQM (Qasrawi et al., 2017; Hung & McLean, 2010). There is no such research studied about KM processes and bank reputation. However, there have research proved the knowledge management is needed in banking industry (Ugurlu and Kizildag, 2013). Hence, the author believe that KM is also needed in digital banking service as digital technology is required a standard knowledge level to process and handle it in order to shield bank reputation.

## 2.7 Hypotheses

H1. Total quality management practices lead to improved bank reputation.

H2. Knowledge management processes lead to improved bank reputation.

H3. Quality management practices that result in knowledge management processes lead to improved bank reputation.

## 2.8 Theoretical framework

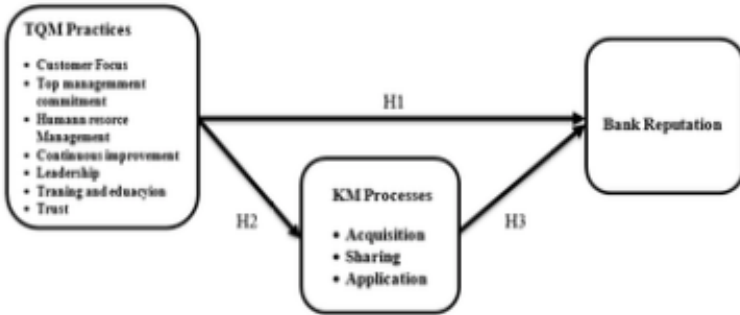
Figure 1 exhibits the theoretical framework of the research study which suggests find out the structural relationship between total Quality Management and Bank Reputation through the presence of knowledge management. The resource-based view (RBV) is one of the commonly used theories which are able to explain the relationship between the research's variables. These theories were developed to understand how organizations achieve sustainable competitive advantages (Wernerfelt, 1984). Consistent with this view, total Quality Management and knowledge management become resources that are valuable, rare, inimitable, and non-substitutable (VRIN) for maintaining competitive advantage (Conner & Prahalad, 1996).

## 3. Methodological approach

### 3.1 Sample and procedure

The samples that are involved in this research paper consists of staffs in banks of Malaysian in all the positions and departments of the bank (Kellogg et al., 2017) which has to request an interdependent step of transferring sharing information sharing between all the employees. In addition to that, the employees who are assigned the great roles to offer services can adapt easily to many new techniques and share new knowledge and new information. they also can easily suggest various solutions of the problems of the quality management performance (Almost et al., 2016). performance (Almost et al., 2016).

Figure 1 Conceptual framework



A total of 112 employees in banks of Malaysian in all stage. Including managers were basically involved to answer a survey questionnaire. Out of that, a total of 100 surveys resulting a valid response rate of 89 per cent to total respondents were returned and found to be valid for the purpose of data analysis.

The survey composed of 54 closed questions on the scale of 7 in Likert, and the staffs gave their answers to them in order to show their personal opinions, the questionnaire of this study is divided into two parts. The first part of questionnaire is related to the demographic of respondent such as gender, management level within organization, and educational level. The second part is to determine the implementation of total quality management and knowledge management in operation of bank especially in the service of digital banking. For consistency and ease of completion, seven-point Likert scales is used in this research, ranging from “1- strongly disagree” to “7- strongly agree”. According to (Likert, 1932), Likert scale is a unique rating scale format that requests respondents to show the level to which they agree or disagree based on their mental belief or behavioral belief statement towards an object. The target respondents of the study are all bank management employees such as executives, section managers, section heads, supervisors, accountants, and departmental managers, who had sufficient learning in the zone of value the board with great comprehension in TQM and KM within their organizations. The data gathering method is in the form of questionnaires and the target society is a selected of employees of the Malaysian Banks. as CIMB bank, Hong Leong Bank, Maybank Public Bank.RHB Bank and UOB Bank. Since a

basic total quality management and knowledge possession is required to realise concept and to answer the questions, 100 educated employees of the Malaysian Banks with a minimum of SPM were available and invited to answer the questions. 100 employees were clearly answered the questions of the survey and they are being chosen from different background.

**Table I Demographic summary of respondents (N = 100)**

<b>Title</b>	<b>Descriptive</b>	<b>Amount</b>	<b>Percentage (%)</b>
Gender	Male	33	33.0%
	Female	67	67.0%
Education Level	SPM	5	5.0%
	STPM/ A-Level	9	9.0%
	Diploma	23	23.0%
	Bachelor's Degree	46	46.0%
	Master's Degree	11	11.0%
	PhD	6	6.0%
Position Management Level	Executive Management	49	49.0%
	Middle Management	24	24.0%
	Top Management	27	27.0%
Bank name	CIMB bank	6	6.0%
	Hong Leong Bank	11	11.0%
	Maybank	16	16.0%
	Public Bank	41	41.0%

There was a test done and its result is illustrated in the following table:



**Table II Cronbach's alpha for each category of questions related to variables of the study**

Studied variable	Count of questions	Cronbach's alpha (%)
Bank Reputation	4	0.932
Leadership	5	0.944
Customer Focus	5	0.950
Top Management Commitment	5	0.964
Continuous Improvement	5	0.967
Trust	5	0.975
Training and Education	5	0.947
Human Resources Management	5	0.965
Knowledge Acquisition	5	0.972
Knowledge Application	5	0.973
Knowledge Sharing	5	0.962

#### 4. Data aggregation

the inter-rater agreement index (rWG(J)) was calculated for all variances, to adjust the steps of aggregation. The indices of rWG(J) for all variables are higher than the expected threshold amount of 0.70 (James et al., 1984). The next step can include the calculation of the intra-class correlation coefficient ICC(1) and ICC(2) to measure the data aggregation consistency (Bliese and Jex, 2002). The values of ICC(1) are obtained good and significant value for this research are higher than the expected lower cutoff amount of value that is considered as 0.05 (Bliese and Jex, 2002) being given the ratio between 0.159 and 0.339.

#### 5. Data analysis

The new research study implements the method or process of partial least square – structural equation modeling (PLS-SEM) for justification and analysis of the data by offering the software Smart-PLS for the calculations (outer) model and the structural (inner) model estimation. This software basically helps in giving a good supports a various of research variances and suggested to be utilized when the information is really smooth to the normally distributed estimation (Hair et al., 2011). Each construct in this research contains five basic things or items. Hence, total have 55 items to be justified. After having some conduction regarding the model of the measurements, the calculation of PLS algorithm and bootstrapping is operating. After having the test process, many items got overloaded and there is one and only item obtained a very low load and its value considered as less than 0.7 that means BR1 is being selected to remove from the

real model.

**5.1 Measurement model estimation**

After the deletion, the loading value of items in bank reputation have been changed. BR2 decrease from 0.910 to 0.895. As exhibited in Table III But the remaining items had increased the factor loading value. BR3 increase from 0.936 to 0.938, BR4 from 0.896 to 0.922 and BR5 from 0.879 to 0.892. For the overall Cronbach’s Alpha for bank reputation, CR and AVE had also increase after deletion, which are 0.932, 0.953 and 0.831 respectively. This result showed after delete the lower factor loading, most of the techniques are being fulfilled and totally conformed. The consequences and output of measurement is being also developed and gets appropriate validity. As stated in Table III, the loadings of all the items of all latent constructs is greater than 0.70 but the estimation of AVE for all As illustrated in Table III (Hair et al., 2006).

**Table IV Reliability and convergent validity**

Construct	Items	Loading	AVE	CR
Bank Reputation	BR1	0.910	0.932	0.952
	BR2	0.895		
	BR3	0.938		
	BR4	0.922		
	BR5	0.892		
Customer Focus	CF1	0.937	0.950	0.962
	CF2	0.935		
	CF3	0.916		
	CF4	0.875		
	CF5	0.901		
Continuous Improvement	CI1	0.916	0.967	0.974
	CI2	0.947		
	CI3	0.970		
	CI4	0.909		
	CI5	0.957		
Human Resources Management	HRM1	0.930	0.965	0.972
	HRM2	0.943		
	HRM3	0.953		
	HRM4	0.914		
	HRM5	0.938		
Knowledge Acquisition	KAa1	0.955	0.972	0.978
	KAa2	0.948		
	KAa3	0.955		
	KAa4	0.940		
	KAa5	0.941		
Knowledge Application	KAp1	0.953	0.973	0.979
	KAp2	0.959		
	KAp3	0.967		
	KAp4	0.907		
	KAp5	0.959		
Knowledge Sharing	Ks1	0.923	0.962	0.971
	Ks2	0.951		
	Ks3	0.964		
	Ks4	0.876		
	Ks5	0.935		
Leadership	L1	0.901	0.944	0.957
	L2	0.959		
	L3	0.909		
	L4	0.879		
	L5	0.930		
Trust	T1	0.960	0.975	0.98
	T2	0.961		
	T3	0.968		
	T4	0.935		
	T5	0.942		
Training and Education	TE1	0.933	0.947	0.960
	TE2	0.922		
	TE3	0.932		
	TE4	0.838		
	TE5	0.916		
Top Management Commitment	TM C1	0.920	0.964	0.972
	TM C2	0.956		
	TM C3	0.946		
	TM C4	0.922		
	TM C5	0.933		
Trust	T1	0.960	0.975	0.98
	T2	0.961		
	T3	0.968		
	T4	0.935		
	T5	0.942		

Figure 2 Final outer model

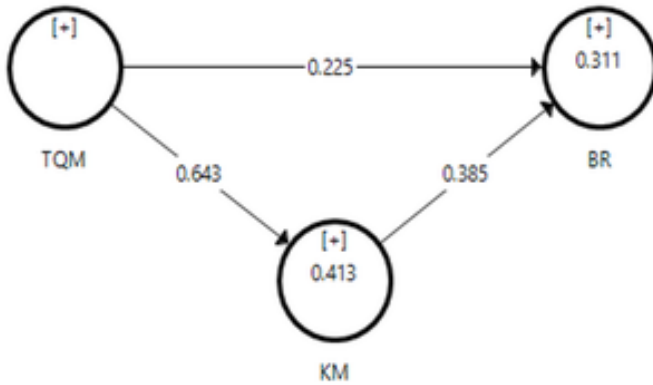


Table V Discriminant validity – correlation matrix – correlation matrix

	BR	CF	CI	HRM	KAc	KAp	KS	L	T	TE	TMC
BR	<b>0.912</b>										
CF	0.329	<b>0.913</b>									
CI	0.175	0.243	<b>0.94</b>								
HRM	0.185	0.229	0.688	<b>0.936</b>							
KAc	0.233	0.084	0.296	0.311	<b>0.948</b>						
KAp	0.549	0.247	0.104	0.075	0.345	<b>0.949</b>					
KS	0.419	0.394	0.364	0.274	0.36	0.533	<b>0.932</b>				
L	0.216	0.137	0.419	0.266	0.523	0.26	0.15	<b>0.904</b>			
T	0.376	0.195	0.282	0.32	0.347	0.273	0.406	0.185	<b>0.953</b>		
TE	0.315	0.244	-0.026	0.162	0.102	0.402	0.357	0.012	0.299	<b>0.909</b>	
TMC	0.378	0.346	0.249	0.129	0.366	0.433	0.525	0.338	0.276	0.382	<b>0.935</b>

Notes: The diagonal italic values are the square root of AVE values shared between the latent variables and all other variables; CF= customer focus; TMC= top management commitment; HRM= human resources management; CI= continuous improvement; L= leadership; TE= training and education; T= trust; KAc= knowledge acquisition; KS= knowledge sharing; KAp= knowledge application and RB=Bank Reputation

Additionally, there is an alternative method that was suggested according to the HTMT in order to evaluate the validation. Taking it into the deep consideration and its evaluation of the validation gets its own aim to make sure that the constriction gets a very strong relation with their indicators.

## 5.2 Structural model estimation

In relation to the effect of TQM on bank reputation in the first hypothesis (H1), it is revealed that the TQM has a positive and significant effect on bank reputation ( $\beta = 0.225$ ,  $t = 2.057$ ,  $p < 0.05$ ). This coefficient indicates

that for every one percent increase in TQM variable, the bank reputation increases to 22.5%. Therefore, the first hypothesis (H1) at confidence level of 95% is supported. To determine the effect of TQM on KM, the second hypothesis (H2) was presented. The results showed that at confidence intervals of 95%, TQM has a positive and significant effect on KM with a 64.3% ( $\beta = 0.643, t = 12.439, p < 0.05$ ). Thus, second hypothesis (H2) is supported.) In determining the relationship between KM and bank reputation which was tested in the third hypothesis (H3), the results showed that the coefficients are confirmed at the confidence intervals of 95%. For every one percent increase in KM, bank reputation increase 38.5%. Hence, third hypothesis (H3) showed KM has a positive and significant effect on bank reputation ( $\beta = 0.385, t = 3.577, p < 0.05$ ) and hypothesis was supported. PLS results of the structural model are depicted in Figure 2

**Analysis of Table VI Analysis of Heterotrait -Monotrait ratio**

Constructs	BR	CF	CI	HRM	KAc	KAp	KS	L	T	TE	TMC
BR											
CF	0.408										
CI	0.348	0.527									
HRM	0.246	0.614	0.543								
KAc	0.622	0.238	0.195	0.514							
KAp	0.326	0.701	0.624	0.447	0.249						
KS	0.429	0.874	0.688	0.617	0.346	0.795					
L	0.412	0.634	0.400	0.719	0.364	0.753	0.607				
T	0.289	0.733	0.520	0.864	0.120	0.699	0.676	0.861			
TE	0.544	0.245	0.176	0.210	0.780	0.284	0.293	0.279	0.176		
TMC	0.268	0.487	0.622	0.622	0.054	0.759	0.555	0.872	0.851	0.226	
BR	0.413	0.707	0.303	0.545	0.305	0.654	0.592	0.864	0.880	0.335	0.431

Notes: CF= customer focus; TMC= top management commitment; HRM= human resources management; CI= continuous improvement; L= leadership; TE= training and education; T= trust; KAc= knowledge acquisition; KS= knowledge sharing; KAp= knowledge application and RB=Bank Reputation

**Table VII Structural model analysis**

Hypotheses No.	Relationship	Path coefficients	T Value	p values	Sig. level	Results	R <sup>2</sup>
1	TQM → BR	0.225*	2.057	0.040	C	Supported	0.633
2	TQM → KM	0.643*	12.439	0.000		Supported	0.531
3	KM → BR	0.385*	3.577	0.000		Supported	0.257

Notes: p < 0.001; p < 0.01; p < 0.05; No: not significant at p > 0.05

Additionally, As the previous testing showed that have a positive significant effect between each construct and all the hypotheses is supported. Hence, there need to determine the need of present KM as mediation in this research. The continuous testing for mediation can be calculated through the bootstrapping in SmartPLS to estimate the indirect effect between variables. It can also be concluded that KM represents complementary mediation of the relationship from TQM to BR. As in Table VII.

**Table VIII Mediation Analysis Result**

Independent Constructs	Dependent Direct Effect	T-value	P-value	Indirect Effect	T-value	P-value
TQM → BR	0.218	2.057	0.031		0.250	3.416

Notes: Equation of Variance Accounted For (VAF)  $VAF = \frac{a \times b}{(a \times b) + c}$

a = path coefficient,  $\beta$  of TQM → KM

b = path coefficient,  $\beta$  of KM → BR

c = path coefficient,  $\beta$  of TQM → BR

## 6. Discussion

In previous chapter analysis, Partial Least Squares structural equation modelling (PLS-SEM) was used to test the hypotheses. The first research objective is to investigate the relationship between TQM and bank reputation. As there is no previous research to direct examine the relationship between TQM and bank reputation but author found that there have correlation between TQM elements and scale of reputation. Hence the author decides to propose and place it as the first objective. The coefficient table showed that TQM has a positive and significant effect on bank reputation ( $\beta = 0.225$ ,  $t = 2.057$ ,  $p < 0.05$ ). This result had answered the first research objective (RO1) and also the first hypothesis (H1). In this study, the author proved that TQM have a positive significant relationship with bank reputation. Thus, RO1 and H1 is achieved and accepted. growth in SDGs.

The second research objective determine the relationship between KM and bank reputation. The same situation as before, there have no research describe the relationship between KM and bank reputation. However, there have findings showed that KM is needed in bank industry (Ugurlu and Kizildag, 2013). The author proposed that KM is also needed in digital banking services. The result showed that KM has a positive and significant effect bank reputation with 38.5% reputation ( $\beta = 0.385$ ,  $t = 3.577$ ,  $p < 0.05$ ). Based on this result, the second research objective (RO2) have been achieved and prove that there has a relationship between KM and bank reputation. The third hypothesis (H3) is also accepted, the KM have positive and significant effect on bank reputation.

Third research objective is to find out structural relationship between TQM and bank reputation through the presence of KM. There have two pathways in structural model of this research, one is TQM direct to bank

reputation while another is TQM pass through the KM mediation to bank reputation. The presence of KM was tested whether the mediation is needed or not. The main qualification to test mediation is the path coefficient between variables must be positive and significant. The path coefficient of TQM to bank reputation is 0.225 ( $\beta = 0.225, p < 0.05$ ), TQM to KM is 0.643 ( $\beta = 0.643, p < 0.05$ ) and KM to bank reputation is 0.385 reputation ( $\beta = 0.385, p < 0.05$ ). Then, the test of mediation through direct and indirect effect also proved that there has a mediation between the pathway from TQM to bank reputation. Thus, the result show that KM is partial mediation between TQM and bank reputation. This result had achieved third research objective (RO3). The analysis result of coefficient showed that the second hypothesis (H2) is accepted as the TQM have positive and significant effect on KM.

#### 7. Practical implications

Based on the research findings, all the hypotheses and research question in this research is achieved. This research has made two theoretical contributions to academic. First is added the trust as one of the TQM practices. Trust considered as a new element of TQM that proposed by Marek Bugdol in 2013 and it still fewer research to support his suggestion. In this research, the author had analyzed and confirmed that trust can be categorized in TQM elements which can helped to strengthen or enhance the suggestion. The second is to determine the relationship between TQM, KM and bank reputation in digital banking services. There has related research showed the relationship between TQM and bank (Sit et al., 2011), relationship between TQM, KM and organizational performance (Qasrawi et al., 2017), but TQM linked to bank reputation with KM as mediator is not discussed in other research yet. Hence, the author may be considered as the first to proposed this model and proved that there have positive and significant relationship between each other.

Moreover, this research is in focus on digital banking services that considered as new technology service launch in Malaysia. Digital banking is also new and hot topic in current research world. Through the findings result, it showed that TQM can be used as a tool to control the quality in digital banking services and the mediator role of KM is play as crucial in digital banking services as this service need a certain level of knowledge and skills to control it. Through implement TQM and KM in digital banking service, the bank reputation is able to shield. Bank reputation will be affected if the digital banking services occurred some fraud or issues that

might lose the confidence and trust from customers. Therefore, a banker can consider to use this model in their operation of digital banking service as prevention or protection before a mishap happened. The finding of research is useful to a researcher for future research and a banker to enhance their management.

#### 8. Limitations and future research directions

Although there has been some limitation in this research, but those limitations can be considered as the opportunity topic for further studies. First, the study is only focusing on the digital banking service in Malaysia. There are digital banks which are different with digital banking and also digital banking service in Malaysia might have some differences compared to other countries. Hence, there is no standardization of digital banking to be measured.

Secondly, the time constraints of data collection may also limit the generalizability of the findings. From the demographic part, the majority of respondents are female which cannot represent the bank employees in Malaysia. The respondents also from six banks in Malaysia only which the total banks in Malaysia are more than twenty. Hence the sample may not be considered to cover the whole Malaysia banks.

Thirdly, the majority of respondents are from executive management and fewer from top management. Usually, top management are the one who plan and control the whole company worked. Therefore, there might be some differences to the perspective of bank employees from executive and top management. This survey also based on the perception of employees which could exist some bias on their answer.

Fourthly, this research only used quantitative method to survey. For the further research, qualitative method or mixed method is suggested to use in order to make the result more reliability and validity. Besides using the primary data, the secondary data also can be used for testing the efficiency of digital banking compared to traditional bank employees service.

Fifthly, this research has a variety of elements in TQM construct. The elements of TQM are selected in this research due to the supportive statement mentioned by the author. A researcher might gain different results by using the same model or different model. The further research can test it with different TQM practices to determine the result will be the same or different with this result finding.

Last but not least, there are a variety of model frameworks that can help to improve the bank reputation. Total quality management (TQM)

and knowledge management (KM) are the only two suggested from this research. There still have others framework that may impact on bank reputation. Hence, the model in this research could not be generalized to all bank reputation in world.

## 9. Conclusion

This research presents a detailed examination on the integrated model of TQM and KM for improving bank reputation in digital banking service Malaysia. Digital banking services has been widely in western countries but Malaysia still in the adopting stages. The research related to TQM and KM is quite common linked with organisational performance in previous research, but fewer relate them with bank reputation in digital banking. TQM and KM play as precautionary measures on digital banking and even help to improve bank reputation. As bank reputation have been improved, it will retain the customer and attract new customer even increase their organisational performance at the same time. Once the bank managed to increase their financial performance that will lead to greater performance of economic Malaysia. The improvement of GDP is able to achieve the target of re-engineered economic growth for increasing prosperity in Malaysia even increase the decent work and economic growth in SDGs.

This research has provided some clarification of the relationship between TQM, KM and bank reputation in digital banking services. This research had made some significant contribution to the literature on digital banking service especially in Asia county. Moreover, this study provided a pioneer study by proposing a new model that empirically determine the integrated TQM and KM on improving bank reputation in digital banking service Malaysia. This model also provides a deeper understanding on the relationship between TQM and bank reputation with KM as the mediator. The result showed that through TQM and KM, the bank reputation can be improved. This research is using the SmartPLS software that suit for exploratory research. (Hair, 2011). To conclude, the research objective and hypotheses are achieved. The results finding can help Malaysia's banks make a precaution to prevent any financial crime issues occurred that could affect the bank reputation in future. Therefore, this model could treat as a valuable model to venture into future research regarding bank reputation in digital banking service.

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## References

11th Malaysia Plan (2018) Highlights of 11th Malaysia Plan mid-term review, Star Media Group Berhad. Available at: <https://www.thestar.com.my/business/business-news/2018/10/18/highlights-of-11th-malaysia-plan-mid-term-review> (Accessed: 8 July 2019).

Abdallah, A. & Matsui, Y. (2008) 'Customer involvement, modularization of products, and mass customization: their relationship and impact on value to customer and competitiveness', in *The Third World Conference on Production and Operations Management Proceedings*, Tokyo, August, pp. 1–19.

Ahire, S. L., G. (1996) 'Development and Validation of TQM Implementation Constructs.', *Decision Sciences*, 27(1), pp. 23–56.

Al-Mukyad, A. (2006) *The reality of supervisory practices for educational supervisors in relief agency in Gaza in the light of the principles of total quality and ways of its development*. Islamic University.

Andrew H. Gold, Arvind Malhotra, A. H. S. (2001) 'Knowledge Management: An Organizational Capabilities Perspective', *Journal of Management Information Systems*, 18(1), pp. 185–214.

Arturo Calvo-Mora, Araceli Pico'n, C. R. and L. C. (2014) 'The relationships between soft-hard TQM factors and key business results', *International Journal of Operations & Production Management*, 34(1), pp. 115–143. doi: 10.1108/IJOPM-09-2012-0355.

Assistant, W. N. (2011) 'Factors Influencing the Adoption of Internet Banking in Tunisia', *International Journal of Business and Management*, 6(8), pp. 143–160. doi: 10.5539/ijbm.v6n8p143.

belan Juan, A. G. A. J. R. (2016) 'Antecedents and consequences of bank reputation: A comparison of the United Kingdom and Spain', *International Marketing Review*, 33(6), pp. 1–37. doi: 10.1108/IMR-06-2015-0147.

Birasnav, M. (2014) 'Knowledge management and organizational performance in the service industry: The role of transformational leadership beyond the effects of transactional leadership', *Journal of Business Research*. Elsevier B.V., 67(8), pp. 1622–1629. doi: 10.1016/j.jbusres.2013.09.006.

Bliese, P.D. and Jex, S. (2002) 'Incorporating a multilevel perspective into occupational stress research: theoretical, methodological, and practical implications', *Journal of Occupational Health Psychology*, 7(3), pp. 254–265.

Bona, A. T. and Mustafa, E. M. A. (2013) 'Impact of Total Quality Management on Innovation in Service Organizations: Literature review and New Conceptual Framework', *Procedia Engineering*. Elsevier B.V., 53, pp. 516–529. doi: 10.1016/j.proeng.2013.02.067.

Bugdol, M. (2013) 'Selected proposals and possibilities of trust development within the TQM concept', *The TQM Journal*, 25(1), pp. 75–88. doi: 10.1108/17542731311286441.

Chapra, M. U. (2000) 'Why has Islam prohibited interest? rationale behind the prohibition of interest', *Review of Islamic Economics*, 9(1), pp. 5–20.

Conner, K. R., & Prahalad, C. K. (1996) 'A resource-based theory of the firm: Knowledge versus opportunism', *Organization Science*, 5(7), pp. 477–501.

Dale, B.G. & Lascelles, D. (1997) 'Total quality management adoption: revisiting the levels', *The TQM Magazine*, 9(6), pp. 418–28.

Dart, T. (2016) Families of Americans killed by Mexican cartels sue HSBC for laundering billions, *The Guardian News*. Available at: <https://www.theguardian.com/business/2016/feb/11/families-of-americans-killed-by-mexican-cartels-sue-hsbc> (Accessed: 8 July 2019).

Deli, M., Radlova, V. and Kamberovi, B. (2014) 'Examining relationships between quality management and organisational performance in transitional economies', *Total Quality Management*, 25(4), pp. 367–382. doi: 10.1080/14783363.2013.799331.

Deming, W. E. (1986) *Out of the Crisis*. Edited by C. for A. E. Study. Cambridge, MA: MA Institute of Technology.

Demirbag, M., Tatoglu, E. and Zaim, S. (2006) ‘An analysis of the relationship between TQM implementation and organizational performance Evidence from Turkish SMEs’, *Journal of Manufacturing Technology Management*, 17(6), pp. 829–847. doi: 10.1108/17410380610678828.

Deros, B.M., Yusof, S.M. and Salleh, A. (2006) ‘A benchmarking implementation framework for automotive manufacturing SMEs’, *Benchmarking: An International Journal*, 13, pp. 396–430.

Dhesi. (2018) CIMB’s digital push, *The Star Online News*. Available at: <https://www.thestar.com.my/business/business-news/2018/03/31/cimbs-digital-push/> (Accessed: 1 September 2019).

Dootson, P., Beatson, A. and Drennan, J. (2016) ‘Financial institutions using social media – do consumers perceive value?’, *International Journal of Bank Marketing*, 34(1), pp. 9–36. doi: 10.1108/IJBM-06-2014-0079.

Fathi, N. and Easa, H. (2012) *Knowledge Management and the Seci Model: A Study of Innovation in the Egyptian Banking Sector*. University of Stirling. Available at: [https://dspace.stir.ac.uk/bitstream/1893/5053/1/Easa\\_Thesis.pdf](https://dspace.stir.ac.uk/bitstream/1893/5053/1/Easa_Thesis.pdf).

Fombrun, C.J., Gardberg, N.A. and Sever, J. (2000) ‘The reputation quotient sm: a multi-stakeholder measure of corporate reputation’, *The Journal of Brand Management*, 7(4), pp. 241–255.

Forder, J. (2005) ‘Why is central bank independence so widely approved?’, *Journal of Economic*, 2(39), pp. 843–865.

Galeazzo, A. and Furlan, A. (2019) ‘Good problem solvers? Leveraging knowledge sharing mechanisms and management support’, *Journal of Knowledge Management*, 23(6), pp. 1017–1038. doi: 10.1108/JKM-05-2018-0290.

Ganguly, A., Talukdar, A. and Chatterjee, D. (2019) Evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity

in determining innovation capability of an organization, *Journal of Knowledge Management*. doi: 10.1108/JKM-03-2018-0190.

Gharakhani, D. (2012) 'Knowledge management capabilities and SMEs' organizational performance', *Journal of Chinese Entrepreneurship*, 4(1), pp. 35–49. doi: 10.1108/17561391211200920

Girard, J., Georgia, M. and College, S. (2015) 'Defining knowledge management: Toward an applied compendium', *Online Journal of Applied Knowledge Management*, 3(1), pp. 1–20.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R (2006) 'SEM: confirmatory factor Analysis-Multivariate Data Analysis, Pearson Prentice Hall', Upper Saddle River, NJ, 6, pp. 770–742.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011) 'PLS-SEM: indeed, a silver bullet', *Journal of Marketing Theory and Practice*, 19(2), pp. 139–152.

Hing, J., Tsang, Y. and Antony, J. (2001) 'Total quality management in UK service organisations : some key findings from a survey', *Managing Service Quality: An International Journal*, 11(2), pp. 132–141.

Hoang, D. T. and Laosirihongthong, T. (2010) 'Total quality management (TQM) strategy and organisational characteristics: Evidence from a recent WTO member', *Total Quality Management*, 21(9), pp. 931–951. doi: 10.1080/14783363.2010.487680.

Honarpour, A., Jusoh, A. and nor, K. (2017) 'Total Quality Management & Business Excellence Total quality management, knowledge management, and innovation: an empirical study in R & D units', *Total Quality Management & Business Excellence* ISSN: 3363(January). doi: 10.1080/14783363.2016.1238760.

Hsiao, Y. and Chen, C. (2011) 'Knowledge management capacity and organizational performance: the social interaction view', *International Journal of Manpower*, 32(5/6), pp. 645–660. doi: 10.1108/01437721111158242.

Hung, R. Y. Y. et al. (2010) 'Knowledge as a facilitator for enhancing innovation performance through total quality management', *Total Qual-*

ity Management and Business Excellence, 21(4), pp. 425–438. doi: 10.1080/14783361003606795.

Hyland, P., Mellor, R. and Donepadi, R. (2000) ‘A comparison of Australian firms and their use of continuous improvement tools’, *The TQM Magazine*, 12(2), pp. 117–124.

James, L.R., Demaree, R.G. and Wolf, G. (1984) (1984) ‘Estimating within-group interrater reliability with and without response bias’, *Journal of Applied Psychology*, 69(1), pp. 45–55.

Jayant V. Saraph, P. George Benson, R. G. S. (1989) ‘An Instrument for Measuring the Critical Factors of Quality Management.’, *Decision Sciences*, 20(4), pp. 810–829.

Jean-Baptiste P.L. Faucher, A. M. E. and R. L. (2008) ‘Reconstituting knowledge management’, *Journal of Knowledge Management*, 12(3), pp. 3–16. doi: 10.1108/13673270810875822.

Jill (2016) New regulatory breach revealed as HSBC profits slide 29%, *The Guardian*. Available at: <https://www.theguardian.com/business/2016/aug/03/hsbc-records-29-profit-slump-and-admits-compliance-issues-in-us> (Accessed: 1 September 2019).

Kauffman, R. J., Kauffman, R. J. and Weber, B. W. (2018) ‘On the Fintech revolution: Interpreting the forces of innovation, disruption and transformation in financial services’, *Journal of Management Information Systems*, 35(1), pp. 220–265.

Keh, H. and Xie, Y. (2009) ‘Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment’, *Industrial Marketing Management*, 38(1), pp. 732–742.

Kellogg, K.C., Gainer, L.A., Allen, A.S., O’Sullivan, T. and Singer, S. (2017) ‘An intraorganizational model for developing and spreading quality improvement innovations’, *Health Care Management Review*, 42(4), pp. 280–292.

Kim, Y. M., Newby-Bennett, D. and Song, H. J. (2012) ‘Knowledge shar-

ing and institutionalism in the healthcare industry’, *Journal of Knowledge Management*, 16(3), pp. 480–494. doi: 10.1108/13673271211238788.

Kumawat, Y. (2014) ‘Customers Attitude towards E-Banking System in Rajasthan’, *Journal of Business and Management (IOSR-JBM)*, 16(9), pp. 8–14.

Lewis, B.R. and Soureli, M. (2006) ‘The antecedents of consumer loyalty in retail banking’, *Journal of Consumer Behaviour*, 5(1), pp. 15–31.

Liao, C. et al. (2010) ‘Enhancing knowledge management for R & D innovation and firm performance: An integrative view’, *frican Journal of Business Management*, 4(14), pp. 3026–3038.

Likert, R. (1932) ‘A technique for the measurement of attitudes’, *Archives of Psychology*, 22(140), pp. 40–55.

Loay Salhieh Jamal Abu-Doleh (2015) ‘TQM: a facilitator to enhance knowledge management? A structural analysis’, *International Journal of Commerce and Management*, 25(2), pp. 43–56.

Maccoby, M. (1994) ‘Creating quality cultures in the east and west’, *Research Technology Management*, 37(1), pp. 34–43.

Martins, C., Oliveira, T. and Popovic, A. (2014) ‘Understanding the internet banking adoption: a unified theory of acceptance and use of technology and perceived risk application’, *International Journal of Information Management*, 34(1), pp. 1–13.

MBAMA, C. (2017) ‘Digital banking, customer experience and bank financial performance: UK customers’ perceptions’, *International Journal of Bank Marketing*, 1(12), pp. 2–50.

McGoldrick, B. S. & M. (2018) ‘Financial intelligence and financial investigation: opportunities and challenges’, 13(3), pp. 301–315. Available at: <https://www.tandfonline.com/doi/abs/10.1080/18335330.2018.1482563>.

Meihami, B. and Meihami, H. (2014) ‘Knowledge Management a way to gain a competitive advantage in firms (evidence of manufacturing com-

panies)', *International Letters of Social and Humanistic Sciences*, 14, pp. 80–91. doi: 10.18052/www.scipress.com/ILSHS.14.80.

Molina, L. M., Javier, F. and Montes, L. (2007) 'Relationship Between Quality Management Practices and Knowledge Transfer Relationship between quality management practices and knowledge transfer', *Journal Operation Management*, 25, pp. 682–701. doi: 10.1016/j.jom.2006.04.007.

Nawab, S. et al. (2015) 'Knowledge Management, Innovation and Organizational Performance', *International Journal of Knowledge Engineering-IACSIT*, 1(1), pp. 43–48. doi: 10.7763/IJKE. 2015.V1.7.

Nguyen, N. and LeBlanc, G. (2001) 'Corporate image and corporate reputation in customers' retention decisions in services', *Journal of Retailing and Consumer Services*, 8(4), pp. 227–236.

Nonaka, I. (1994) 'A dynamic theory of organizational knowledge creation', *Organization Science*, 5(2), pp. 14–37.

Ooi, K. (2013) 'TQM and knowledge management: Literature review and proposed framework', *African Journal of Business Management*, 3(11), pp. 633–643. doi: 10.5897/AJBM09.196.

Ooi, K. B. (2015) 'TQM practices and knowledge management: a multi-group analysis of constructs and structural invariance between the manufacturing and service sectors', *Total Quality Management and Business Excellence*, 26(11–12), pp. 1131–1145. doi: 10.1080/14783363.2014.914642.

Porter, M. and P. (1993) 'Total quality management, the critical success factors', *Total Quality Management & Business Excellence*, 4(1), pp. 13–22.

Prasad, P. (2017) Grippped by panic, people rush to banks to withdraw money, *The Hans India*. Available at: <http://www.thehansindia.com/posts/index/Andhra-Pradesh/2017-12-26/Grippped-by-panic-people-rush-to-banks-to-withdraw-money/348087> (Accessed: 1 August 2019).

Raithel, S., Wilczynski, P., Schloderer, M.P. and Schwaiger, M. (2010) 'The value-relevance of corporate reputation during the financial crisis',

Journal of Product & Brand Management, 19(6), pp. 389–400.

Reid, F. (2003) ‘Creating a knowledge sharing culture among diverse business units’, *Employment Relations Today*, 30(3), pp. 43–59.

Samat, N., Ramayah, T. and Saad, N. M. (2006) ‘TQM practices, service quality, and market orientation developing country’, *Management Research News*, 29(11), pp. 713–728. doi: 10.1108/01409170610716025.

Sanuri, S. and Mokhtar, M. (2013) ‘The effects of customer focus on new product performance’, *Business Strategy Series*, 14(2/3), pp. 67–71.

Sarin, S. and McDermott, C. (2003) ‘The effect of team leader characteristics on learning, knowledge application, and performance of cross-functional new product development teams’, *Decision Science*, 34(4), pp. 707–721.

SDGS (2017) Sustainable development goals (SDGS), NATIONAL COUNCIL of WOMEN’S ORGANISATIONS (NCWO). Available at: [https://ncwomalaysia.org/ncwo\\_wp/causes/sdgs/](https://ncwomalaysia.org/ncwo_wp/causes/sdgs/) (Accessed: 17 August 2019).

Shih, Y. (2004) ‘The use of a decomposed theory of planned behavior to study Internet banking in Taiwan’, *Internet Research*, 14(3), pp. 213–223. doi: 10.1108/10662240410542643.

Sila, I. (2018) ‘Investigating changes in TQM’s effects on corporate social performance and financial performance over time’, *Total Quality Management and Business Excellence*. Taylor & Francis, 2(1), pp. 1–20. doi: 10.1080/14783363.2018.1458609.

Suliman, I.S.A., & Amr, A. (2013) ‘The impact of TQM practices on service quality in cellular communication companies in Jordan’, *Int. J. Productivity and Quality Management*, 11(4).

Talib, F., Rahman, Z. and Qureshi, M. N. (2013) An empirical investigation of relationship between total quality management practices and quality performance in Indian service companies, *International Journal of Quality & Reliability Management*. doi: 10.1108/02656711311299.



Tan, Margaret, T. S. H. T. (2000) 'Factors Influencing the Adoption of Internet Banking', *Journal of the Association for Information Systems*, 1, pp. 1–43.

Teh, P., Ooi, K. and Yong, C. (2008) 'Does TQM impact on role stressors? A conceptual model', *Industrial Management & Data Systems*, 108(8), pp. 1029–1044. doi: 10.1108/02635570810904596.

Tim, W. (2016) HSBC boss: Customers won't trust banks for a generation, *The Telegraph*. Available at: <https://www.telegraph.co.uk/business/2016/03/08/hsbc-boss-customers-wont-trust-banks-for-a-generation> (Accessed: 7 July 2019).

Torabi, F. and El-Den, J. (2017) 'The impact of Knowledge Management on Organizational Productivity: A Case Study on Koosar Bank of Iran', *Procedia Computer Science*. Elsevier B.V., 124, pp. 300–310. doi: 10.1016/j.procs.2017.12.159.

Triona (2018) Aunties arrested for helping criminal in Malaysia! But what did they actually do? *Current Issues Tambah Pedas*. Available at: <https://cilisos.my/wah-aunties-strike-again-this-time-helping-criminals-in-malaysia/> (Accessed: 18 July 2018).

Ugurlyu, O.Y., K. (2013) 'A Comparative Analysis of Knowledge Management in banking sector: An empirical Research', *European Journal of Business and Management*, 5(16), pp. 1–13.

Vincent (2018) 'Integrating Total Quality Management and Knowledge Management', *Journal of Management Systems*, XVI (1).

Walker, D. (2010) 'A Systematic review of the corporate reputation literature: definition, measurement, and theory', *Corporate Reputation Review*, 12(4), pp. 357–387.

Walsh, G., Bartikowski, B. Beatty, S. (2014) 'Impact of customer-based corporate reputation on nonmonetary and monetary outcomes: the roles of commitment and service context risk', *British Journal of Management*, 25(2), pp. 166–185.

Walsh, G., Beatty S.E. and Shiu (2009) 'The customer-based corporate reputation scale: replication and short form', *Journal of Business Research*, 62(10), pp. 924–930.

Walsh, G., Mitchell V-W., Jackson P.R. and Beatty, S. (2009) 'Examining the antecedents and consequences of corporate reputation: a customer perspective', *British Journal of Management*, 20(2), pp. 187–200.

Walsh, G. and Beatty, S. (2007) 'Customer-based corporate reputation of a service firm: scale development and validation', *Journal of the Academic Marketing Science*, 34(1), pp. 127–144.

Wang, Y. S. et al. (2003) 'Determinants of user acceptance of Internet banking: an empirical study', *International Journal of Service Industry Management*, 14(5), pp. 501–519. doi: 10.1108/09564230310500192.

Wen-Yi Sit, Keng-Boon Ooi, Siew-Phaik Loke, G. T. W. H. (2011) 'TQM and service quality: a survey of commercial banking industry in Malaysia', *International Journal of Services, Economics and Management*, 3(1), pp. 78–91.

Wernerfelt, B. (1984) 'A Resource-based View of the Firm', *Strategic Management Journal*, 5(2), pp. 171–180.

Yusuf, Y. Y. (2014) 'Implementation of TQM in China and Organization Performance: An Empirical Investigation', *Total Quality Management*, 18(5), pp. 509–530. doi: 10.1080/14783360701239982.



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