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THE ADOPTION OF CRM INITIATIVE AMONG PALESTINIAN ENTERPRISES: A PROPOSED FRAMEWORK

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ABSTRACT

Aim/Purpose	This study aimed to examine the relationships among compatibility, relative advantage, complexity, IT Infrastructure, security, top Management Support, financial Support, information Policies, employee engagement, customer pressure, competitive pressure, information integrity, information sharing, attitude toward adopting technology factors, and CRM adoption
Background	Customer relationship management (CRM) refers to the use of the process, information, technology, and people for the management of the interactions between the organization and its customers. Therefore, there is a need for SMEs to implement CRM practices in their businesses for competitive advantage. However, in developing nations, the adoption rate of such practices remains low. This low rate may be attributed to the lack of important factors that guide CRM adoption, and as such, the present study attempts to investigate the factors affecting CRM adoption in Palestinian SMEs. This paper used the Diffusion of Innovation Theory (DOI), Resource-Based View (RBV), and Technology, Organization, and Environment Framework (TOE) framework to identify the determinant factors from the technological, organizational, environmental, and information culture perspectives.
Methodology	This study uses a quantitative approach to investigate the relationships between the variables. A questionnaire was designed to collect data from 420 SMEs in Palestine. 331respondents completed and returned the survey. The Partial Least Square-Structural Equation Model (PLS-SEM) approach was used to assess both the measurement and structural models.

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Contribution	This study contributes to both theory and practitioners by providing insights into factors that affect CRM adoption in Palestinian SMEs, which did not explore before. Future research suggestions are also provided.
Findings	The results of the study prove that the adoption of CRM depends on compatibility (CMP), security (SEC), top management support (TMS), information policies (INP), financial resources (FR), employee engagement (EEN), competitive pressure (COP), customers pressure (CUP), attitude toward adopting technology (ATA), information integrity (INI), and information sharing (INS). Surprisingly, complexity (CMX), IT infrastructure (ITI), and relative advantage (RLA) do not play any role in CRM adoption in Palestine.
Recommendations for Practitioners	This study provides practitioners with the important factors for CRM adoption upon its successful implementation in the context of Palestinian SMEs.
Recommendations for Researchers	Our findings may be used to conduct further studies about compatibility, security, top management support, information policies, financial resources, employee engagement, competitive pressure, customers pressure, attitude toward adopting technology, information integrity, information sharing factors, and CRM adoption by using different countries, procedure, and context.
Impact on Society	The proposed framework provides insights for SMEs which have significant effects for research and practice to help facilitate the adoption of CRM
Future Research	The findings may also be compared to other studies conducted in different contexts and provide deeper insights into the influence of the examined contexts on the employees' intention toward CRM adoption in banking and universities. It would be fruitful to test whether the results hold true in developed and developing countries.
Keywords	customer relationship management system, small and medium enterprise, CRM adoption, Palestine

INTRODUCTION

The world is experiencing an advanced stage of knowledge and scientific development that is characterized by tremendous rapid progress in all fields, especially the Information and Communication Technology (ICT). ICT provides small businesses with strategic advantages such as customer relationship management (CRM) systems, which could influence the achievement of goals to improve their competitive edge (Mohamad, Othman, Jabar, Majid, & Kamarudin, 2014).

The CRM technology generally focuses on collecting, categorizing, and storing the required data of customers and developing customer–organization relationship using the general information on customer behavior (Teo, Devadoss, & Pan, 2006). It is capable of integrating the marketing efforts of the organization and automating certain relationships between the organization and its customers (Harrigan, Ramsey, & Ibbotson, 2012). The primary aim of using CRM is to improve customer relationships, which in turn, results in increased profitability, revenues, productivity, and customer satisfaction. Companies mainly adopt CRM as a business strategy to maximize their growth (Zeynep & Toker, 2012).

Small and medium enterprises (SMEs) are categorized into classes based on some measurable quantitative indicators (Berisha & Pula, 2015). These enterprises form the heart of entrepreneurial activity and innovation as they play a key role in the economies of emerging nations through the provision of employment opportunities and increasing the development of the economy (Salah, Yusof, & Mohamed, 2018a).

In the context of Palestine, the economy runs in an environment with internal and external risks challenges. World Bank (2018) indicates a high unemployment rate at 27% as of 2017 in the Palestinian territories. For example, in Gaza, the unemployment rate has reached 44%, in comparison to the West Bank (18%). Also, in 2017, only 41% of employees between 15-29 years remained active in the labor market, indicating the employees' high pessimistic attitude towards employment opportunities (Baidoun, Lussier, Burbar, & Awashra, 2018).

Nonetheless, the Palestinian Central Bureau of Statistics (PCBS) states that the ICT application adoption among Palestinians has experienced a gradual increase and is gaining increasing acknowledgment (The Portland Trust, 2012). ICT provides SMEs with strategic advantages such as customer relationship management (CRM) systems, which could influence the achievement of goals to improve their competitive edge (AlShawi, Missi, & Irani, 2011). Palestine has a total of 14,359 enterprises where 99% of which belongs to the Palestinian SMEs and are categorized such that small enterprises have 5–19 employees and medium have 20–49 employees. These SMEs employ 82% of the total workforce in the territory (Ramadan & Ahmad, 2018a). Tax revenue collected from SMEs forms 99% of business taxpayers aids to fund the nation's growth and development (Alkhatib, Abdul-Jabbar, & Marimuthu, 2018). Despite the small market Palestine has, SMEs remain as the backbone of economic growth and offer the most job opportunities (Atout, 2015) to the people with hope could help in eradicating poverty (Alfoqahaa, 2018).

A review of literature has indicated that there is a lack of studies dedicated to the business strategies adopted by SMEs (Ramadan & Ahmad, 2018b) be it in general on specifically in Palestine. One way to leverage the capability of SMEs is to embark on the CRM initiative. Prior to the adoption of the initiative, factors that contribute to the success of adopting CRM must be made unpacked. Many studies have investigated a wide range of factors that may influence CRM adoption in SMEs in developed nations such as the U.S and the EU countries (Rahimi & Kozak, 2017; Rodriguez, Peterson, & Krishnan, 2018). Only a few studies have explored the adoption of CRM in developing countries generally (Jaber & Simkin, 2017) and in Palestine in particular. This would finally help to improve the economic situation of Palestine. Thus, this study was to assess the relationships between CRM adoption and technological, organizational, environmental, and information culture factors to provide insights into the way the adoption of CRM is realized in Palestine

Related Works on CRM Adoption

Customer relationship management (CRM) is a strategic tool for small and medium-sized enterprises (SMEs). It is evidenced that CRM practices have to be integrated into the day-to-day business process of such enterprises for competitive advantage (Mohamad et al., 2014). CRM adoption by SMEs would enable the provision of valuable information, enhanced knowledge, and relationships with its suppliers and customers, as evidenced in prior studies (Alshawi et al., 2011; P. Williams, Ashill, & Naumann, 2017). However, for successful CRM adoption, it is important to shed light and identify the challenges that come with it, and some are linked to information culture, issues in the environment, and security of CRM (Awa, Ukoha, & Emecheta, 2016; Iriana, Buttle, & Ang, 2013; Osubor & Chiemeke, 2015).

Past studies have found that SMEs can successfully adopt CRMs. Some studies focused on the related activities in the field of CRM, like selling and handling customer orders as well as the factors affecting the company's structure. Many factors are being studied by scholars, such as the barriers of technology adoption and use (AlMabhouh & Alzaza, 2015); factors that contribute to the implementation of CRM like trust, knowledge management, data quality, and CRM facilitating factors (P. Williams et al., 2017).

Other studies have reported the capability of CRM technology in integrating the company's marketing efforts and automating certain relationships between the organization and its customers (Harrigan et al., 2012). CRM system makes use of technology for coordinating and integrating aspects of

the company, including marketing, sales, outstanding orders, customer–organization interactions, service and repair, unresolved issues, and customer service. It allows system integration from the bottom to the top, entailing supply chain, internal and external customers, labor requirements, and stakeholders. Therefore, the CRM system has to be developed based on customer requirements from the onset (Salah et al., 2018a).

The majority of studies in this field concentrate on developed nations such as the US (Rodriguez et al., 2018) and EU countries (Rahimi & Kozak, 2017). These findings, however, cannot be compared or applicable to developing countries owing to the differences based on the CRM practices and the challenges faced in its implementation (Jaber & Simkin, 2017; Ramaseshan, Bejou, Jain, Mason, & Pancras, 2006). Some researchers like AbuShanab, Pearson, and Setterstrom (2010) revealed that most technology adoption theories and models fail to focus on developing nations. In the context of Palestine, there is no one single accepted theory and models that may be applied to small businesses (Baidoun et al., 2018), which, in effect, necessitates studies to do so and proposed framework would assist SMEs in Palestine to embark on the appropriate and complete CRM initiative.

Also, CRM adoption rate among SMEs in developing nations remains low as the initiative is still at infancy (Alkhazali & Hassan, 2015; Rodriguez et al., 2018), and thus, the high failure rate (70%–80%) is at times experienced (Ahearne, Rapp, Mariadoss, & Ganesan, 2012; Ghalenooie & Sarvestani, 2016). This is primarily attributed to the lack of a suitable framework that guides CRM adoption (Laketa, Sanader, Laketa, & Misic, 2015; P. Williams et al., 2017) as well as to the lack of awareness of the significant factors for CRM implementation such as security (Frygell, Hedman, & Carlsson, 2017) and employee engagement (Zerbino, Aloini, Dulmin, & Mininno, 2018). Additionally, the existing adoption theories fail to include environmental issues in the decision to adopt (Ngah, Zainuddin, & Thurasamy, 2017). As such, the present study attempts to develop a comprehensive framework that enhances the level of CRM adoption rate among Palestinian SMEs. This would provide more in-depth on how CRM can be adopted by SMEs in developing nations, particularly in Palestine.

Theoretical Background

Diffusion of innovation

Rogers (2003) developed the Diffusion of Innovation Theory (DOI) in the middle of the 20th century. This theory defines innovation as ideas, customs, or objects perceived by individuals or adopting units as something new. It was contended that several innovative products' characteristics affect their adoption. These characteristics include their relative advantage, compatibility, complexity, divisibility, and observability.

Despite the extensive use of Rogers' (2003) model to shed light on innovation adoption, there were some criticisms leveled at the model. For instance, Azadegan and Teich (2010) pointed out that Rogers' theory neglected the importance of the nature of the different industries to deal with organizational and environmental factors. This leads to the examination of another relevant model, namely the TOE framework developed by Tornatzky and Fleischer (1990).

Technology, organization and environment framework

Tornatzky and Fleischer (1990) proposed an analytical method known as the TOE framework that has since become the most widely accepted technology theory. It underpins IS studies and end-user adoption at the level of organizations (Awa et al., 2016). TOE addresses different contexts: technological, organizational, and environmental (Tornatzky & Fleischer, 1990). According to Piaralal, Nair, Yahya, and Karim (2015), the combination of the DOI theory and the TOE framework can provide a robust theoretical platform for SMEs to adopt green technology and examine innovative technology use through the consideration of the internal framework, integrated research, and external variables.

Resource-based view

Resource-Based View (RBV) describes a firm's valuable and scarce resources and capabilities that can furnish it with a competitive advantage in the market (Al-Ansari, Pervan, & Xu, 2013). Valuable resources and capabilities allow a firm to develop and implement strategies to bring about lower net costs and increase net revenues (Barney & Arikan, 2001). Similarly, the contingency RBV of the firm posits that their consistency drives the productivity of the firm's resources and capabilities to the conditions within the environment (Liu & Atuahene-Gima, 2018). Also, the resources of the firm are the basis of the RBV of a firm and are viewed as a firm's specific valuable assets (Keramati, Mehrabi, & Mojir, 2010). As mentioned, a firm's resources can be its weaknesses or strengths, and they can be tangible or intangible (Carr & Pearson, 1999).

Furthermore, the RBV theory Wernerfelt (1984) developed and proposed has been used extensively as an underlying theory for the examination of CRM dimensions–business performance relationship (Chao & Chandra, 2012; Law, Fong, Chan, & Fong, 2018). The RBV provides a framework for understanding how CRM provides economic value (Keramati et al., 2010). The RBV also enables researchers to shed light on the relationships among people, processes, and technologies and assisting in bringing about success through CRM systems (Chiles, 2015).

Technology Acceptance Model (TAM)

Davis (1989) develops the Technology Acceptance Model (TAM) for the prediction and determination of technology acceptance factors among users. According to Davis (1989), the TAM model contains two constructs, namely, perceived usefulness (PU) and perceived ease of use (PEOU). The perceived usefulness refers to the level to which an individual is convinced that a particular system use would contribute to enhancing his/her performance on the job, while the perceived ease of use refers to the level to which an individual is convinced that a particular system use would be effort-free.

The Unified Theory of Acceptance and Use of Technology (UTAUT)

The development of the Unified Theory of Acceptance and Use of Technology (UTAUT) was attributed to Venkatesh, Morris, Davis, and Davis (2003) , where the authors integrated eight dominant theories and models that have been extensive and successfully tested in prior studies dedicated to technology innovation adoption and diffusion in different fields (i.e., information systems, marketing, social psychology and management (M. D. Williams, Rana, & Dwivedi, 2015). Moreover, evidence of the use of the theory in IS and the fields mentioned above is evident in the citations of the original work that proposed the theoretical evidence (Venkatesh, Thong, & Xu, 2016).

UTAUT theory comprising of four major concepts, namely, performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). The major concepts are considered as independent variables that affect the dependent variables that take the form of behaviors and use. Furthermore, through the four major concepts, demographic characteristics of gender, age, experience, and system volunteers indirectly influence the independent variables. For instance, behavioral intention has been evidenced to predict the use of technology (Venkatesh et al., 2003).

Given the list of the theories above, only four theories of IT innovation adoption theories are related to the organizational level, namely TOE, DOI, and RBV. The remaining two theories are explaining adoption at an individual level, namely UTAUT and TAM (Oliveira & Martins, 2011).

FACTORS INFLUENCING CRM ADOPTION

The literature review shows that fourteen factors influence the adoption of CRM in SMEs. Three factors were adapted from the DOI model. One factor was from the RBV model; another ten factors were extracted from the literature, and TOE was used for factor classification. Table 1 provides the definitions and sources of the factors.

Table 1: Factors Influencing CRM Adoption

No	Factor	Definition	Source(s)	Model/Theory
1	Compatibility	The degree to which an innovation is perceived to be consistent with existing values, past experiences, and needs of potential adopters	Valmohammadi (2017)	DOI
2	Relative Advantage	The "degree to which an innovation is perceived as better than the idea it supersedes."	Vakola and Rezgui (2000)	DOI
3	Complexity	The level to which an innovation is viewed to be difficult to understand and use	Alhammadi, Stanier, and Eardley (2015)	DOI
4	IT Infrastructure	IT assets (software, hardware, and data), IT systems and their components, network, telecommunication facilities, and applications	Ghobakhloo, Tang, Sabouri, and Zulkifli, (2012)	RBV
5	Security	The ability to protect consumers' information and transaction data to ensure their privacy	M. Mukred and Yusof (2017)	Literature review
6	Top Management Support	The support provided by the top executives of the organization that facilitates the success of CRM implementation	M. Mukred and Yusof (2017)	Literature review
7	Financial Support	The financial resource that covers all financial funds of the organization	M. Mukred, Yusof, Mokhtar, and Fauzi (2018)	Literature review
8	Information Policies	A group of interconnected laws, guidelines, principles, regulations, rules, and procedures that guide the management and monitoring of the information lifecycle	Nguyen and Waring (2013)	Literature review
9	Employee Engagement	An employee who is aware of the business context is engaged and cooperate with their peers to enhance company performance	Markos and Sandhya (2010)	Literature review
10	Customer Pressure	The demands and behaviors of customers that make companies adopt new technologies	Alhammadi et al. (2015)	Literature review
11	Competitive Pressure	The level of competitiveness in the industry within which the organization operates	Salah, Yusof, & Mohamed (2018b); M. Mukred et al. (2018)	Literature review

No	Factor	Definition	Source(s)	Model/Theory
12	Information Integrity	The information used in such a manner that is trustful and principled at the levels of the individual and the organization	Choo (2013)	Literature review
13	Information Sharing	The willingness to provide information to others suitably and collaboratively. This behavior is well recognized by top management, mainly when it concerns internal information sharing.	Choo, Bergeron, Detlor, and Heaton (2008)	Literature review
14	Attitude toward Adopting Technology	The overall effective response of the individual towards system adoption and use	Venkatesh et al. (2003)	Literature review

These factors were drawn from an extensive range of frameworks in the literature. CRM practitioners then evaluate these factors in SMEs for verification and recommendation of new factors. These factors are expected to maximize the rate of CRM adoption among SMEs in developing countries, particularly Palestine.

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

There are various information system (IS) theories/models developed to study the acceptance of new technology. This study uses DOI, TOE, and RBV theories, which comprise of Technological context, Organizational context, Environmental context, and Information Culture context. The proposed framework is depicted in Figure 1.

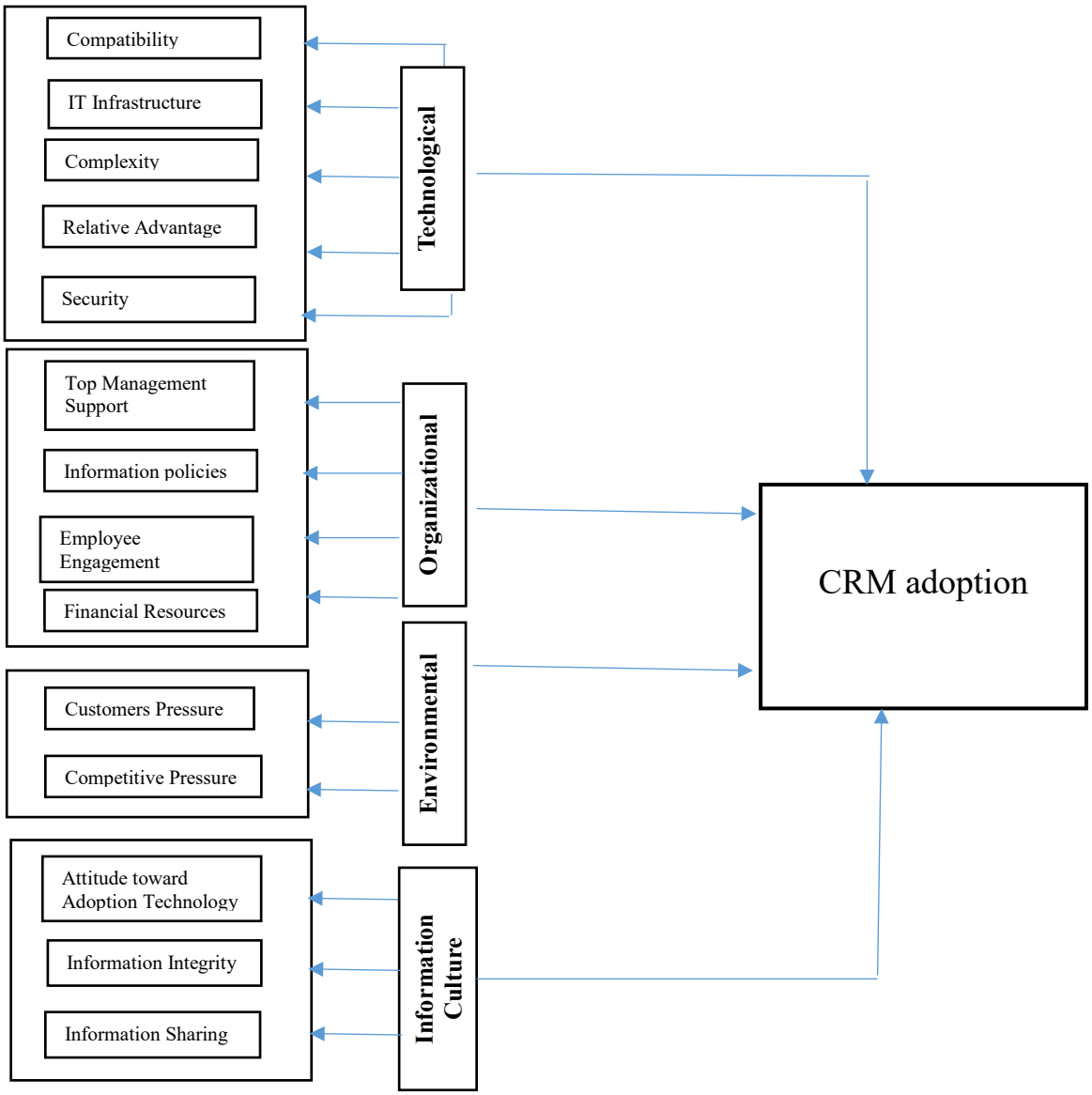

Figure 1: Proposed Conceptual framework for CRM Adoption

Technological Context

In the technological context, internal and external technologies are essential to enhance the productivity of the organization (Hoti, 2015). Small and medium-sized enterprises (SMEs) engaged in technology to boost their efficacy and efficiency productivity. The literature reveals that perceived usefulness, relative advantage, cost, security, compatibility, complexity, and observability (Ramayah, Ling, Taghizadeh, & Rahman, 2016) are among the technical characteristic that should be taken into consideration. Several studies emphasized that IT infrastructure has increasingly become the core of business operations, such as CRM (Alshamaila, Papagiannidis, & Li, 2013). However, previous studies indicate the three most essential characteristics of technology and innovation are relative advantage, compatibility, and complexity. On the other hand, security is a factor hindering the adoption of e-commerce (Ramayah et al., 2016). In light of this, this study considers compatibility, IT infrastructure, complexity, relative advantage, and security are the main determinants in the technological context.

Compatibility

Several studies revealed that compatibility has a positive relationship with CRM adoption (Ahani, Rahim, & Nilashi, 2017; Šebjan, Bobek, & Tominc, 2014). Compatibility refers to the extent to which CRM is aligned with an organization's current experience and requirements. Compatibility is also considered to be a barrier when the SMEs are not ready technologically (Abou-Shouk, Lim, & Megicks, 2016). Thus, in this study, the following hypothesis is proposed:

H1: Compatibility has a positive effect on CRM adoption by Palestinian SMEs.

IT infrastructure

Researchers have proposed various definitions of IT infrastructure over the years. For example, infrastructure in IT is the collection of hardware, software, networks, data centers, facilities, and associated equipment used for the development, testing, monitoring, management, and support of IS in an enterprise (Laan, 2013). New software system adoption may call for the enhancement or the addition of IT infrastructure to install new CRM software (Lee, Tang, & Sugumaran, 2014). CRM failures could be avoided if CRM strategies are linked with IT infrastructure and the firm's stakeholders (employees, customers, channels) and infrastructure (Sen & Sinha, 2011). Thus, the following hypothesis is proposed:

H2: IT infrastructure has a positive effect on CRM adoption by Palestinian SMEs.

Complexity

Most related studies reveal a significant relationship between complexity and the adoption of various technologies such as e-commerce adoption (Ahmad, Abu, Faziharudean, & Mohamad, 2015), electronic records management (M. Mukred et al., 2018), cloud computing (Alshamaila et al., 2013), halal transportation services (Ngah, Zainuddin, & Thurasamy, 2014), and CRM adoption (Steel, Dubelaar, & Ewing, 2013). In contrast to other characteristics of innovation, complexity is negatively related to adoption probability (Vasseur & Kemp, 2015). Although complexity may not be significant as relative advantage, it has been shown to prevent the adoption of technology (Rogers 2003). As such, the study proposes to test the undermentioned:

H3: Complexity has a negative effect on CRM adoption by Palestinian SMEs.

Relative advantage

Chavoshi, Sim, and Hee (2015) define relative advantage as the extent to which a CRM develops customer information that could enable a company to provide excellent customer service compared to traditional methods of meeting customer needs. Ahani et al. (2017) and Raut, Gardas, Jha, and Priyadarshinee (2017) consider a relative advantage, complexity, and compatibility as the most significant technological factors in examining the adoption of CRM. Therefore, the study proposes the following hypothesis for testing:

H4: Relative Advantage has a positive effect on CRM adoption by Palestinian SMEs.

Security

Security refers to the ability to protect customer information concerning their transaction details during transmission (Awa et al., 2016). Many studies have also identified security as a significant factor that influences the adoption of ICT (Awa et al., 2016). T. K. Sin, Choy, Lin, and Cyril (2009) revealed the security threat to be the most critical adoption barrier in various fields such as health information systems (A. Mukred, Singh, & Safie, 2013) and electronic commerce (Ramayah et al., 2016). Therefore, the following hypothesis is proposed:

H5: Security has a positive effect on CRM adoption by Palestinian SMEs.

Organizational Context

The organizational context describes the organizational characteristics that are capable of facilitating or hindering the adoption of CRM systems. These characteristics include structures, resources, and processes (Ngah, Zainuddin, & Thurasamy, 2017). According to Chavoshi et al., (2015), organizational characteristics refer to parameters influencing the adoption decision of the innovation and have the most significant impact on the adoption of CRM.

In a related study, successful innovation implementation was found to be significantly associated with the organization and environmental contexts (Wu & Wu, 2005). Meanwhile, Garrido-Moreno and Padilla-Meléndez (2011) argue that the main reason for the failure of CRM projects is due to considering CRM as a technological tool and not addressing the various organizational and cultural changes involved. In this study, the organizational context represents top management support, information policies, social influence, and financial resources.

Top management support

Top management support is described as the level of support and understanding of top management concerning the functioning of IS and its contribution to its activities (Ragu-Nathan, Apigian, Ragu-Nathan, & Tu, 2004). In a related study on Social Customer Relationship Management, Ahani et al. (2017) revealed that top management support is a significant driver for CRM adoption. Frygell et al. (2017) indicate that top management support is the top critical factor required for CRM systems. Some other studies in the literature (M. Mukred et al., 2018) revealed that top management support has a significant influence on the adoption of technology. Hence, the following hypothesis is suggested:

H6: Top management support has a positive effect on CRM adoption by Palestinian SMEs.

Information policies

The policy is founded on the overall objectives and priorities of the organization. These organizational objectives inform the objectives of the information used in the organization. As a result, information refers to the context of whatever information is used in business and the principles the company will use to manage information, human resources employment, and technology use (Orna, 2008).

Few studies examined the relationship between organizational policies/processes and their influence on CRM performance (Peltier, Zahay, & Lehmann, 2013). In order to successfully implement CRM, organizations have to demonstrate commitment and resource allocation and investment in culture, structure, and policies of the organization (Mohammed, Rashid, & Tahir, 2017). Thus, this study proposes the following hypothesis for testing:

H7: Information policies have a positive effect on CRM adoption by Palestinian SMEs.

Financial resources

The adoption of new technology requires financial investment as technology needs to be installed, enhanced, and customized (C. Kim, Lee, Wang, & Mirusmonov, 2015). Limited financial resources force owners/managers to be careful when investing appropriating capital on the technology, and, as such, small businesses are the only firms that have sufficient funds for IS adoption (Ghobakhloo & Tang, 2013). This is because SMEs are generally characterized as having limited access to financial resources when compared to major firms (Ghobakhloo, Sabouri, Tang, & Zulkifli, 2011), and such

limited resources are common among small companies. This is a barrier to adopt new technologies (Hasani, Bojei, & Dehghantanha, 2017).

Furthermore, Nguyen and Waring (2013) described CRM as being a sophisticated concept that requires vast financial resources to implement, along with a high level of company commitment. In this regard, the financial cost has a significant effect on the employees' intention to use CRM solutions (Šebjan et al., 2014). Thus, the following hypothesis is suggested:

H8: Financial resources have a positive effect on CRM adoption by Palestinian SMEs.

Employee engagement

Employee engagement is described as the involvement and satisfaction of the employees as well as their enthusiasm towards their work achievements (Harter, Schmidt, & Hayes, 2002). According to Ncube and Jerie (2012), employee engagement is the harnessing of organization members to their work roles and encouraging their involvement (physical and emotional) in their role performances.

It is essential for project managers to comprehend and determine CRM key success factors along with the related variables (e.g., employee engagement) (Izogo & Ogba, 2015). Employee engagement plays a crucial role in CRM success (Sultan, Hamza, & Altawalbeh, 2018; Zerbino et al., 2018). Thus, the following hypothesis is suggested:

H9: Employee engagement has a positive effect on CRM adoption by Palestinian SMEs.

Environmental Context

The business environment is a significant force that can motivate or prevent the adoption of innovation among firms (Rogers, 2003). The environmental context is the area within which firms conduct their business, as well as its industry and government dealings (Y. H. Li, 2008). It involves the issues that could exist in business involving competitors and business partners (Chiu, Chen, & Chen, 2017). In this study, the environmental context represents customer pressure and competitive pressure.

Competitive pressure

Raut et al. (2017), defined competitive pressure as the level of pressure that is placed on an organization from the sector rivals. It is the pressure from the competitors that drive cloud computing adoption, primarily when technology directly affects competition. It is a strategic requirement to adopt new technologies to compete in the market (Saedi & Iahad, 2013). Competition in the marketplace has a direct impact on the adoption of CRM systems (Alshawi et al. 2011). Competitive pressure from other Social CRM adopters may urge start-up firms to adopt and use SCRM technologies (Hasani et al., 2017; Wagner & Wagner, 2013). Therefore, this study proposes that the following hypothesis be tested.

H10: Competitive Pressure has a positive effect on CRM adoption by Palestinian SMEs.

Customers pressure

"The customer is always right," is a common cliché used as a marketing strategy to ensure that customer satisfaction is achieved with the services that the company provides (Ngah et al., 2017). Customer pressure (CP) is the end consumers' (primary stakeholder group) requests and requirements for the firm to enhance its environmental and social performance (Ueki, 2016). Customer pressure has been ranked in third place as a top variable when it comes to e-customer relationship management solutions adoption (Sophonthummapharn, 2009). Similarly, Ahani et al. (2017) showed customer pressure and competitive pressure to be top drivers of social CRM adoption. Hence, the next hypothesis is as follows:

H11: Customers pressure has a positive effect on CRM adoption by Palestinian SMEs.

Information Culture Context

Information culture is a significant aspect of the adoption of innovation in every organization (Grassian, Mizrachi, Roy, & Kos, 2015; Oliver, 2011). Garrido-Moreno & Padilla-Meléndez (2011) asset that the primary root cause behind CRM project failures does not lie in the strategy of the firm. Perhaps, failure ensues if CRMs are treated exclusively as technological tools. It is an information culture that plays a major role in determining the success of futures of CRM initiatives. In this study, the information culture context represents information integrity, information sharing, and attitude towards the adoption of technology.

Attitude towards adopting technology

Attitude toward technology use refers to the overall effective response of individuals towards system use (Venkatesh et al., 2003). In IT adoption, attitude towards use is deemed to be one of the significant predictors of technology adoption and extension in organizations (Ramayah et al., 2016). Also, attitude towards using technology is a significant factor when it comes to IS adoption (A. Mukred et al., 2013).

Besides, having positive attitudes towards IT use directly impacts the adoption of digital and computerized innovations throughout the globe (Chuang, Nakatani, & Zhou, 2009). Researchers showed that individuals and organizations that generally have an open attitude towards change are more creative. They are more inclined to take risks and adopt innovations. They are also more likely to adopt (CRM) technology (Chavoshi et al., 2015). Therefore, this study developed the following hypothesis for testing:

H12: Attitude toward adopting technology has a positive effect on CRM adoption by Palestinian SMEs.

Information integrity

Information integrity is defined as the information used in such a manner that is trustworthy and principled at the levels of the individual and the organization (Choo, 2013). It is represented as the extent to which individuals use the information for their benefit (exercise of power or influence) (Furness, 2010). It is among the information behaviors that are used to characterize the information culture of an organization (Choo et al., 2008). More importantly, information integrity is a necessity in information management programs that affect information control. They must have accurate and formal information concerning individual and organizational performance (Furness, 2010). Hence, the next hypothesis is:

H13: Information integrity has a positive effect on CRM adoption by Palestinian SMEs.

Information sharing

Information sharing reflects the willingness to provide information to others suitably and collaboratively. This behavior is well recognized by top management, mainly when it concerns internal information sharing (Choo et al., 2008). Researchers in MIS revealed a strong positive influence of information sharing on the adaption of IS development and performance of organizations' (Al-Duwailah & Ali, 2013; Peltier et al., 2013).

Previous studies indicate that information sharing is the fundamental function of CRM (Chien, Ma, & Hou, 2015; L. Li & Mao, 2012). Meanwhile, Brockman, Park, and Morgan, (2017) explain that CRM suppliers play a crucial role in their purchasing firms' success with information sharing coupled and trust as both influence the interpretation of information and its access to the purchasing firm. Based on the above discussion, this study proposes the following hypothesis:

H14: Information sharing has a positive effect on CRM adoption by Palestinian SMEs.

METHOD

QUESTIONNAIRE DESIGN

From the literature review and email interviews, an instrument was developed to examine the factors that impact CRM adoption among Palestinian SMEs. Data was collected using a structured questionnaire. The questionnaire was divided into two parts. The first part enquired about the demographics of the respondents (i.e., gender, education level, position, type of company, position, years of experience), and the second part examined the selected variables, namely, Technological, organizational, environmental, and information culture context, in which the items were measured by a five-point Likert scale with the following ratings: 1: strongly disagree, 2: disagree, 3: slightly agree, 4: agree, and 5: strongly agree.

Overall, the questionnaire comprised of 76 measurement questions, which were grouped by the conceptual framework constructs. The measurement questions were developed through an extensive literature review. Minor modifications were made on these items to fit the SMEs in Palestine. Table 2 lists the sources of the items that were adopted from the literature.

Table 2: Measurement items references

Variable	No. of questions	References
Compatibility	5	Alrousan and Jones (2016)
IT Infrastructure	5	Mishra, Anderson, Angst, and Agarwal (2012)
complexity	5	Ching and Ellis (2004); Alrousan and Jones (2016)
Relative advantage	5	Son, Narasimhan, and Riggins (2005)
Security	6	Shergill and Chen (2005)
Top Management Support	6	Grover and Goslar (1993); Eid and El-Gohary (2014)
Information Policies	6	E. Y. Li and Shani (1991); Abrahamson and Goodman-Delahunty (2013)
Financial Resources	7	Tung, Chang, and Chou (2008); Lai, Lin, and Tseng (2014)
Employee Engagement	5	Custom Insight (2019)
Customer Pressure	3	Ngah et al.(2014)
Competitive Pressure	4	Ngah et al. (2014)
Attitude Towards Adoption Technology	4	Ramayah et al. (2016)
Information Integrity	5	Teo et al., (2006)
Information Sharing	5	Sinitsyna (2014)
CRM Adoption	5	Venkateshn and Bala (2008); Chen (2012)

Data collection procedure and sample data

Data for this study was gathered from employees working in SMEs in Palestine. This includes general managers, heads of department, operational employees' technology who are involved in activities

related to CRM technology, and the adoption decision. The e-version of the questionnaire was uploaded to the survey website, coupled with an introduction page that provided the definitions of CRM and SMEs. An invitation letter was then followed, and the survey link to the SME employees.

From a total of 420 respondents who received the link, 331 (79%) filled and returned the survey. This response rate was achieved after countless efforts to encourage the participation of respondents in the study. According to Kangu (2017), a response rate of 50% or more is sufficient and acceptable for analysis, 60% and over is good, and over 70% is excellent. Thus, the rate of response to this internet survey is acceptable in this study.

Sample profile

The demographic data collected include age, gender, educational level, job level, department, and organizational tenure. This is suggested even if the theoretical framework does not need the variables as the obtained data will shed insight into the sample characteristics in the report following data analysis (Sekaran, 2009). These demographic variables, along with their frequencies, percentages, and background information, are shown in Table 3.

Table 3: Summary of Descriptive Demographic Factors

	Description	Frequency	Percentage
Gender	Male	269	81.3
	Female	62	18.7
Level of education	Diploma	30	9.1
	Bachelor's Degree	189	57.1
	Master's Degree	85	25.7
	Doctorate Degree	27	8.1
Type of company	Information and Communi-	95	28.7
	cations Technology (ICT)	47	14.2
	Product company	92	27.8
	Service company	97	29.3
	Sales company		
Position in organization	General manager	102	30.8
	Head of the department	155	46.8
	Operational employees	74	22.4
Number of employees in an organization	5–19	199	60.1
	20–49	132	39.9
Years of experience	<1 year	8	2.4
	1–5 years	72	21.8
	5–10 years	52	15.7
	>10 years	199	60.1
Age	20–30 years old	64	19.3
	31–40 years old	98	29.6
	41–50 years old	66	20
	51 and above	103	31.1

The demographic information reveals a few female respondents. This shows that there are more males work in SMEs in Palestine. This is related to the Palestinian culture where male-dominated the

IT technology fields than the female. Such a scenario is also applicable to the other fields of works in Palestine (Alfoqahaa, 2018).

In this study, the researcher used the software packages SmartPLS 2.0. It provides results for several types of variables regardless of which metric, quasi-metric, ordinal, or categorical scales they use (Hair, Ringle, & Sarstedt, 2013). For prediction and explanation, when the phenomenon under study is relatively new, or when the theoretical model is complex with a large number of variables and indicator variables, a PLS approach is often more suitable (Chin & Newsted, 1999; Vinzi, Chin, Henseler, & Wang, 2010). Yoo and Alavi (2001) and Urbach and Ahlemann (2010) that they chose PLS in preference to several other SEM tools, including EQS, AMOS, and LISREL, because, unlike other tools, PLS does not require a large sample size. Also, PLS is more suitable when the objective of the study is causal predictive testing, rather than the testing of an entire theory.

Sampling Technique and Design

The sampling technique can divide the population into two types: probability sampling and nonprobability sampling. Probability sampling is the type of sampling where the possibility of selecting each case from the population is equal for all cases, while non-probability sampling is where the chance of being selected is unknown and is not the same for each case. Probability sampling is mostly used in survey-based research strategies, where inferences need to make from the sample concerning the population to determine the answer to the research questions and to meet the research objectives (Saunders, Lewis, & Thornhill 2009). In the probability sampling design, more commonly known as simple random sampling. Random sampling design is the most efficient as for the same sample subjects number; it provides accurate and detailed information (Sekaran, 2009), More importantly, probability sampling designs are adopted when the sample representativeness is of significance to generalization to the wider population. In this study, the probability random sampling method is adopted for collecting data.

ANALYSIS OF DATA AND PRESENTING RESULTS

The evaluation process in PLS-SEM consists of two main phases: (1) assessing the measurement model and (2) assessing the structural model (Soltani, Zareie, Milani, & Navimipour, 2018). The combination of the structural model with the measurement model can lead to a complete structural equation model (Urbach & Ahlemann, 2010). The examination of the measurement model was done in the first stage to identify the relationship between indicators and their items (Henseler, Ringle, & Sinkovics, 2009). The structural model evaluation of hypothesis testing was done in the second stage.

MEASUREMENT MODEL

The present study is guided by the roadmap of PLS-SEM assessment from Hair, Sarstedt, Hopkins, and Kuppelwieser (2014). Since the study measures reflect the relationships of the constructs, it is crucial to apply the reliability and validity assessment methods, including: (i) indicator reliability (ii) internal consistency reliability (iii) convergent validity (iv) discriminant validity assessment.

Indicator reliability

Reliability refers to the assessment of response consistency, or, "the degree to which an instrument measures, in the same way, each time under the same conditions" (Kangu, 2017). The outer loading is one of the assessment methods used to confirm indicator reliability. The assessment of the outer loading is carried out for each variable to guarantee that each item measuring the variable adequately loads on it with 0.70 or more (Hair, Sarstedt, et al., 2014).

Based on the results presented in Table 4, nine indicators were deleted since their outer loading values were under the acceptable level of 0.7 suggested by, leaving 72 out of 81 indicators are retained after the data process.

Internal consistency reliability

For internal consistency reliability, two assessment methods were used. These are Cronbach's alpha and composite reliability. For the confirmation of the consistency of the items measuring the same construct, it is vital for the composite reliability to be 0.7 or over (Hair, Sarstedt, et al., 2014). Both tests ensure the items internal consistency in the same variable, which indicates that the construct items are grouped with sufficient consistency, i.e., over 0.*7. (See Table 4)

Convergent validity

In the convergent validity test, the level to which the two measures of a single concept are correlated is measured. An alternative measure of a concept may be identified, and they can be correlated with the summated scale (Hair, Black, Babin, & Anderson, 2014). There are three ways in which the relative convergent validity among item measures can be estimated: factor loadings (outer loading), construct reliability which has been explained earlier, and average variance extracted (Hair, Black, et al., 2014). Average Variance Extracted (AVE). AVE value is obtained through the mean-variance extracted for the items loading on a construct and is a summarized version of the convergence indicator. An AVE value of 0.5 or over indicates adequate convergence (Hair, Black, et al., 2014). Table 4 shows the AVE for all the constructs ranged between 0.651 and 0.73, which means that convergent validity was confirmed for all the variables, and no construct had to remove.

Table 4: Factor Loading

Factor	Item	Outer Loading (Before)	Outer Loading (After)	Composite Reliability	Cronbach's Alpha	AVE
Compatibility (CMP)	CMP1	~~0.624~~		0.913	0.873	0.725
	CMP2	0.838	0.852			
	CMP3	0.774	0.797			
	CMP4	0.910	0.926			
	CMP5	0.819	0.825			
IT Infrastructure (ITI)	ITI1	0.825	0.831	0.898	0.848	0.689
	ITI2	0.894	0.910			
	ITI3	0.843	0.859			
	ITI4	0.703	0.708			
	ITI5	~~0.334~~				
Complexity (CMX)	CMX1	0.858	0.858	0.930	0.905	0.726
	CMX2	0.897	0.897			
	CMX3	0.809	0.808			
	CMX4	0.866	0.867			
	CMX5	0.826	0.826			
Relative advantage (RLA)	RLA1	0.808	0.823	0.885	0.822	0.652
	RLA2	0.851	0.849			
	RLA3	0.752	0.778			
	RLA4	0.754	0.776			
	RLA5	~~0.458~~				

Factor	Item	Outer Loading (Before)	Outer Loading (After)	Composite Reliability	Cronbach's Alpha	AVE
Security (SEC)	SEC1	0.805	0.811	0.908	0.874	0.664
	SEC2	0.772	0.769			
	SEC3	~~0.458~~				
	SEC4	0.898	0.904			
	SEC5	0.806	0.817			
	SEC6	0.768	0.765	0.940	0.923	0.723
Top management support (TMS)	TMS1	0.796	0.796			
	TMS2	0.846	0.845			
	TMS3	0.857	0.857			
	TMS4	0.849	0.849			
	TMS5	0.850	0.850			
	TMS6	0.796	0.901			
Employee Engagement (EEN)	EEN1	0.794	0.796	0.902	0.870	0.605
	EEN2	0.745	0.745			
	EEN3	0.752	0.751			
	EEN4	0.810	0.810			
	EEN5	0.787	0.786			
	EEN6	0.779	0.778			
Information policies (INP)	INP1	0.729	0.707	0.900	0.866	0.601
	INP2	0.757	0.739			
	INP3	~~0.629~~				
	INP4	0.755	0.774			
	INP5	0.704	0.725			
	INP6	0.850	0.889			
	INP7	0.781	0.803			
Financial resource (FR)	FR1	0.856	0.855	0.915	0.884	0.685
	FR2	0.816	0.813			
	FR3	0.880	0.880			
	FR4	0.816	0.818			
	FR5	0.765	0.767			
Customers Pressure (CUP)	CUP1	0.901	0.902	0.893	0.819	0.738
	CUP2	0.909	0.909			
	CUP3	0.759	0.757			
Competitive pressure (COP)	COP1	0.865	0.868	0.908	0.865	0.711
	COP2	0.834	0.832			
	COP3	0.822	0.821			
	COP4	0.849	0.850			

Factor	Item	Outer Loading (Before)	Outer Loading (After)	Composite Reliability	Cronbach's Alpha	AVE
Attitude toward adoption technology (ATA)	ATA1	0.864	0.893	0.869	0.783	0.689
	ATA2	0.847	0.835			
	ATA3	0.754	0.758			
	ATA4	~~0.634~~				
Information sharing (INS)	INS1	0.824	0.849	0.902	0.855	0.697
	INS2	0.891	0.903			
	INS3	~~0.45601~~				
	INS4	0.776	0.768			
	INS5	0.795	0.812			
Information integrity (INI)	INI1	0.843	0.855	0.915	0.879	0.729
	INI2	0.897	0.905			
	INI3	0.841	0.843			
	INI4	~~0.571~~				
	INI5	0.808	0.810			
CRM Adoption (CAD)	CAD1	0.844	0.860	0.911	0.869	0.719
	CAD2	0.882	0.879			
	CAD3	0.835	0.850			
	CAD4	0.773	0.800			
	CAD5	~~0.638~~				

Discriminant validity

This type of validity tests whether different items not associated with measuring the variable are measuring some other variable. The test is also known as Fornell and Larcker criterion, and the technique calls for the construction of a matrix of latent variables correlating with the entire diagonal values replaced by the square root of the variable's AVE values (Fornell & Larcker, 1981; Hair et al., 2013). Based on the rule of thumb, the diagonal cell value has to be higher compared to the values in the whole column and row. Table 5 shows the Fornell and Larcker criterion matrix for the sixteen research variables. The results show that the values in the diagonal cell are always higher than their associated row and column values.

Assessment of Structure Model

The structural model contains one or more dependency relationships that relate the model's constructs to each other. This study employed the bootstrapping method with 5000 re-samples to conduct an estimation of the statistical significance of the hypothesized model (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017). In addition to providing a description of the significance of the relationships, Hair, Black, et al. (2014) explained that researchers have to present the coefficient of determination (R2), predictive relevance (Q2), and effect size (F2) with path significance to shed light on the variance of the endogenous variable. In this regard, Table 6 shows the assessments in structural model analysis and the value of the threshold limit that used in this study.

For CRM adoption, the endogenous latent construct, R2 value, was found to be 0.813, with Q2 value of 0.545. The values indicate the strong predictive power of the exogenous (independent) constructs, with a large proportion of CRM adoption predictive relevance, as shown in Figure 2.

Table 5: Discriminant Validity

	ATA	CAD	CMP	CMX	COP	CUP	EEN	FR	INI	INP	INS	ITI	OP	RLA	SEC	TMS
ATA	0.8303															
CAD	0.6772	0.8479														
CMP	0.4752	0.6170	0.8513													
CMX	0.3546	0.5331	0.4418	0.8517												
COP	0.4746	0.6338	0.4680	0.3680	0.8429											
CUP	0.4892	0.6714	0.4399	0.4485	0.5043	0.8589										
EEN	0.2991	0.5311	0.3059	0.3111	0.3521	0.3619	0.7781									
FR	0.2878	0.4573	0.2436	0.2386	0.3399	0.3650	0.3827	0.8273								
INI	0.5060	0.6912	0.4701	0.6688	0.4281	0.5253	0.3781	0.3260	0.8540							
INP	0.3806	0.45474	0.3064	0.4157	0.3330	0.2995	0.2470	0.2150	0.4252	0.7754						
INS	0.5022	0.6381	0.4280	0.4996	0.4505	0.4788	0.3175	0.3117	0.6382	0.3814	0.8346					
ITI	0.3227	0.4296	0.3656	0.5483	0.2606	0.3040	0.2809	0.2150	0.5267	0.2787	0.3780	0.8301				
OP	0.4789	0.6743	0.4946	0.7314	0.4413	0.5267	0.3961	0.3180	0.8208	0.4320	0.6735	0.5519	0.8283			
RLA	0.2355	0.3528	0.1925	0.4803	0.2675	0.3259	0.2029	0.1716	0.5060	0.2740	0.4308	0.3936	0.4868	0.8071		
SEC	0.503	0.6804	0.4821	0.4175	0.4904	0.5113	0.3171	0.3011 9	0.4954	0.3272	0.4939	0.2671	0.4715	0.2615	0.8149	
TMS	0.3997	0.5893	0.4131	0.3598	0.4238	0.4912	0.4605	0.3389	0.4275	0.2029	0.4094	0.2595	0.4519	0.2722	0.4106	0.8502

Table 6: Structural model assessment

Structural Model Assessment	Threshold Limit
Coefficient of the determinant (R2)	R2 value around 0.75 is strong, around (0.5-.75) is moderate, around (0.2-0.5) is weak
Predictive Relevance (Q2)	Q2 value around 0.35 is large, around (0.15-0.35), is medium, around (0.02-0.15), is small
Effect size (F2)	F2 value around 0.35 is large, around 0.15 is medium, around 0.02 and below is small
path coefficients (β)	Accept if t-value >1.65 and p-value < 0.05, reject if t- value <1.65 and p-value > 0.05

Source: Hair et al. (2014 b)

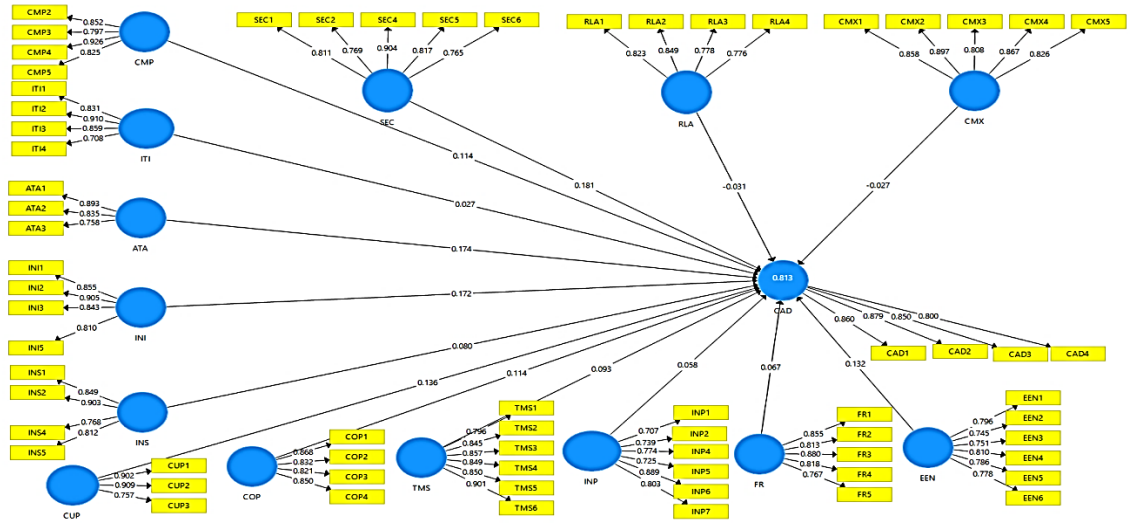

Figure 2: Structural model for testing the direct effects of the variables

In particular, Effect size (F2) represents the relative effect of a particular exogenous latent variable on the endogenous latent variable through a change in R2. F2 value is obtained by calculating the increased R2 of the latent variable towards the connected path, relative to the proportion of unexpected variance of the latent variable (Hair, Hult, Ringle, Sarstedt, 2016). Table 7 shows that all the effect size was found to be within the recommended values.

Table 7: Effect Size

ATA	CMP	CMX	COP	CUP	EEN	FR	INI	INP	INS	ITI	RLA	SEC	TMS
0.090	0.02	0.002	0.041	0.053	0.063	0.18	0.057	0.13	0.17	0.041	0.003	0.097	0.028

Next, the significance of direct relationships is evaluated by applying 5,000 bootstrap subsamples and critical t-values greater than ±1.65 (one-tailed test). Findings of the analysis suggest that 11 (H1, H2, H4, H5, H6, H7, H8, H9, H10, H13, and H14) out of 14 hypotheses were supported and significant at p ⬍ 0.05, with the beta values of H3, H11, and H12 were not supported (see Table 8 for all results).

Table 8: Hypothesized Direct Effects of the Variables

Hypotheses		Path Coefficient	t Statistics	p-Value	
H1	CMP→ CAD	0.114	3.146	0.001	Supported
H2	ITI →CAD	0.027	0.869	0.193	Unsupported
H3	CMX → CAD	-0.027	0.732	0.232	Unsupported
H4	RLA → CAD	-0.031	1.073	0.142	Unsupported
H5	SEC → CAD	0.180	4.557	0.000	Supported
H6	TMS → CAD	0.093	2.954	0.002	Supported
H7	INP → CAD	0.058	1.920	0.028	Supported
H8	FR →CAD	0.067	2.440	0.008	Supported
H9	EEN → CAD	0.132	4.292	0.000	Supported
H10	COP → CAD	0.114	3.595	0.000	Supported
H11	CUP → CAD	0.136	4.032	0.000	Supported
H12	ATA → CAD	0.174	4.571	0.000	Supported
H13	INI → CAD	0.172	4.328	0.000	Supported
H14	INS → CAD	0.080	2.059	0.020	Supported

FINDINGS AND DISCUSSION

This study primarily aims to determine the impact of technological, organizational, environmental, and information culture factors on CRM adoption among Palestinian SMEs. The study findings provided descriptions of the exogenous variables-endogenous variables relationship, using the TOE framework, DOI, and RBV theories. Table 9 lists the tested hypotheses and the results.

Table 9: Summary of the Tested Hypothesis

Hypothesis		Results and is consistent with previous research findings
H1	Compatibility→ CRM adoption	The hypothesis is supported (β= 0.114, t= 3.146, p= 0.001). These results are in line with (Chavoshi et al., 2015; Meyliana & Budiardjo, 2016; Ahani et al., 2017).
H2	IT infrastructure→ CRM adoption	The hypothesis is not supported (β= 0.027, t= 0.869, p= 0.193). These results are in line with (Coltman, Devinney, & Midgley, 2011)

Hypothesis		Results and is consistent with previous research findings
H3	Complexity→ CRM adoption	The hypothesis is not supported (β= -0.027 t= 0.732, p= 0.232). These results are in line with (Alhammadi et al., 2015; Ngah et al., 2014)
H4	Relative advantage→ CRM adoption	The hypothesis is not supported (β= -0.031 t= 1.073, p= 0.142). These results are in line with (El-Gohary, 2012; Alhammadi et al., 2015)
H5	Security→ CRM adoption	The hypothesis is supported (β= 0.180, t= 4.557, p= 0.000). These results are in line with (Koong, Liu, Bai, & Lin, 2008; T. K. Sin et al., 2009; Hua, 2008)
H6	Top management support→ CRM adoption	The hypothesis is supported (β= 0.093, t= 2.954, p= 0.002). These results are in line with (M. Mukred et al., 2018)
H7	Information Policies→ CRM adoption	The hypothesis is supported (β= 0.0058, t= 1.920, p= 0.028). These results are in line with (Mallett, Nye, & Sorrell, 2011; Raut et al., 2017)
H8	Financial resources→ CRM adoption	The hypothesis is supported (β= 0.067, t= 2.440, p= 0.008). These results are in line with (Ghobakhloo et al., 2011; Sanjay, Mohapatra, & Anusree, 2013)
H9	Employee engagement→ CRM adoption	The hypothesis is supported (β= 0.131, t= 4.292, p= 0.000). These results are in line with (Ernst, Hoyer, Krafft, & Krieger, 2011; Sultan et al., 2018)
H10	Competitive pressure→ CRM adoption	The hypothesis is supported (β= 0.114, t= 3.595, p= 0.000). These results are in line with (Oliveira & Martins, 2010; K. Y. Sin et al., 2016; Wang, Li, Li, & Zhang, 2016)
H11	Customers pressure→ CRM adoption	The hypothesis is supported (β= 0.136, t= 4.032, p= 0.000). These results are in line (Sophonthummapharn, 2009; Maduku et al., 2016)
H12	Attitude toward adoption tech→ CRM adoption	The hypothesis is supported (β= 0.174, t= 4.571, p= 0.000). These results are in line with (Ramayah et al., 2016; Alharbi, Atkins, & Stanier, 2016)
H13	information integrity→ CRM adoption	The hypothesis is supported by β= 0.172, t= 4.328, p= 0.000). These results are in line with (Furness, 2010; Choo, 2013)
H14	Information sharing→ CRM adoption	The hypothesis is supported (β= 0.080, t= 2.059, p= 0.020). These results are in line with (Choo et al., 2008; Brockman et al., 2017)

Compatibility

The results confirmed H1, which stated that compatibility has a positive effect on CRM adoption by Palestinian SMEs. Compatibility is the top significant direct effect on behavioral intention towards

using CRM technology (Alweshah, Almanasrah, & Alqatawneh, 2018). Several studies have been describing the role of compatibility in determining the adoption of IT innovation (Ahani et al., 2017). Compatibility reflects the level to which CRM has aligned with the organization's past experiences and current needs (Chavoshi et al., 2015). Consequently, it is essential for SMEs that the new innovation is consistent with their existing values and needs (Alshamaila et al., 2013).

Security

The results confirmed H5, which stated that security has a positive effect on CRM adoption by Palestinian SMEs. This empirical finding is aligned with the findings reported by other scholars who found the lack of security as one of the several barriers to the IS system (Awa et al., 2016; T. K. Sin et al., 2009). Security is challenging research areas that have been largely ignored in the majority of CRM techniques (Soltani & Navimipour, 2016). Moreover, lack of security perceived by e-commerce customers is a topmost barrier in developing countries (Ghobakhloo & Tang, 2013). In a related study, AlMabhouh and Alzaza (2015) revealed that security is the most obstacles in Palestinian organizations and should take into consideration.

Top management support

Hypotonia 6, that top management support has a positive effect on CRM adoption by Palestinian SMEs. This was also indicated by other studies that examined the effect of top management support as among the critical factors influencing new technologies adoption (M. Mukred et al., 2018); Ahani et al., 2017). The higher the top management support, the smoother will be the adoption and the overcoming of difficulties faced during such adoption (Salah, 2018b). This finding is in line with Herzallah & Mukhtar (2015) who revealed that top management support has a positive effect on the success of EC adoption within SMEs in Palestine. Top management support has a crucial role in decision making and in setting a bar for training staff to enhance their skills, which in turn affects the company successes. Without management support, CRM adoption efforts will be for nothing.

Information policies

The results confirmed H7, which stated that Information Policies have a positive effect on CRM adoption by Palestinian SMEs. Lack of information or inaccurate information is one of the most critical hindrances in adopting technology in developing nations (Mallett et al., 2011). The 'information policies' control communication technologies regulation, and as such, policies are significant elements in the discussion of information culture (Riyaz, 2009). Respondents to the survey considered Information Policies as one of the factors that work towards improving the adoption of CRM among SMEs. Lack of information or inaccurate information is one of the hindrances of adopting CRM technology in SMEs.

Financial resources

In regard to H8, this study showed that financial resources have a positive effect on CRM adoption by Palestinian SMEs. The successful adoption of new technology requires financial investments for installment, training, enhancement, and customization (Hasani et al., 2017). On the other hand, lack of financial resources may consequently result in ineffective business research (Sanjay et al., 2013). Limited financial resources force owners/managers to be careful when adopting technology, and as such, this is the reason why small businesses mostly lack funds to adopt IS (Ghobakhloo & Tang, 2013). In the context of Egypt, university libraries face barriers relating to lack of 'financial resources' for CRM and lack of software and technologies that facilitate CRM management (Fouad & Al-Goblan, 2017). In Palestinian context, financial cost influences the behavioral intention of Higher Educational Institutions to adopt CRM technology (Badwan, Al-Shobaki, Abu Naser, & Abu Amuna, 2017).

Employee engagement

Hypothesis 9, this study showed employee engagement has a positive effect on CRM adoption by Palestinian SMEs. CRM adoption initiative may fail when there are only a few committed employees to it, and thus, employee engagement has become essential issues in CRM (Sultan et al., 2018). Employee engagement is a significant predictor of positive organization performance; evidence has shown that a two-way relationship between employer and employee, even stronger than job satisfaction and employee commitment (Markos & Sandhya, 2010). This finding is in line with prior research Sultan et al. (2018) and Ernst et al. (2011), who revealed that potential CRM failure arises when there are only a few committed employees to the initiative. Employee engagement facilitates the discussion and addressing of CRM issues. This is in line with the respondents, who indicate that employee engagement affects business results and, eventually, increases the possibility of acquiring a competitive advantage. They stressed that CRM technology initiatives might fail if only a few employees are committed to it.

Competitive pressure

The results confirmed H10, which stated that competitive pressure has a positive effect on CRM adoption by Palestinian SMEs. This finding is consistent with Alshawi et al., (2011). 'Competitive pressure' is one of the main reasons for investing in CRM, and this is particularly true if CRM is viewed as an asset that allows organizations to increasingly focus on their customers (Iriana et al., 2013). Competitive put pressure on the organization to be more creative and forces its leaders to adopt strategies to increase market share (Beglari, 2017). In the Palestinian context, if a competitor begins using any innovation, the company should find a strong push towards the adoption of this innovation in order to achieve competitive advantages (Qashou & Saleh, 2018).

Customer pressure

The results confirmed H10, which stated that customer pressure has a positive effect on CRM adoption by Palestinian SMEs. Studies have evidenced the customer pressure-adoption decision relationship among firms (Alrousan & Jones, 2016; Hoti, 2015; Ngah et al., 2014). In the context of Palestine. SMEs should adopt a specific IT because of the pressure from its customers in different fields, such as E-marketing acceptance and implementation (Qashou & Saleh, 2018). This is proven when Gualandris and Kalchschmidt (2014) revealed that 'customer pressure' is a top determinant of the Firm's Environmental Performance. It even has a significant effect on green innovation adoption among SMEs (Piaralal et al., 2015; Ngah et al., 2017).

Attitude toward technology adoption

The results confirmed H12, which stated that Attitude toward technology adoption has a positive effect on CRM adoption by Palestinian SMEs. In related studies, attitude toward IT adoption is one of the top drivers of technology adoption and organization extension (Ramayah et al., 2016; Alharbi et al., 2016). Moreover, CRM system effectiveness needs employees to have the right attitude and behavior; otherwise, Failed CRM adoption, which can be of immediacy (Chavoshi et al., 2015).

Newby, Nguyen, and Waring (2014) indicate that managers who have a positive attitude towards IT are more likely to be successful in adopting new technology. In SME, employees attitude towards adopting IT has a significant effect on Technology Acceptance and a successful adoption (Ghobakhloo et al., 2011). This was supported by Shraim and Crompton (2015) who stated that displaying a positive attitude towards using IT has a direct effect towards mobile technology in higher education in Palestine.

Information integrity

The results confirmed H13, which stated that Information integrity has a positive effect on CRM adoption by Palestinian SMEs. In relation to this, information integrity is a necessity for organization

managers and leaders (Furness, 2010) as it sets up boundaries for workers and establishes how they can use information in a suitable and sanctioned manner (Choo, 2013). In the context of Palestine, Herzallah and Mukhtar (2015) information integrity implying that it is a desired trait in managers and people in decision- making positions. Information Integrity in the initiative of information management as it facilitates accurate and formal information about the performance (individual and enterprise) of employees.

Information sharing

The results confirmed H14, which stated that Information sharing has a positive effect on CRM adoption by Palestinian SMEs. In a small organizational unit, information sharing is significant in light of job satisfaction and higher self-reported performance compared to frequent and general contacts with environments characterized by rich information (Lauri et al., 2016). Within the CRM context, communication sharing is entailed between business and customers (Trainor, 2012). It forms one of the fundamental CRM functions, but the roles and expectations specified in the contract may limit the sharing of in-depth information in supplier-customer relationships (P. Williams et al., 2017). Respondents' opinions supported the result and revealed that having positive Information Sharing affects the adoption of CRM technology directly.

There are also other variables that have an insignificant relationship with the intention of CRM adoption among Palestinian SMEs. For instance, complexity (H3) has an insignificant positive effect on CRM adoption, a result that is consistent with those reported by Alhammadi et al. (2015) and Ngah et al. (2014), but is inconsistent with that by Ahmad et al. (2015), who found a significant relationship between complexity in different fields (e.g., e-commerce adoption). Relative advantage (H4) also has an insignificant direct effect on the adoption of CRM, a result which is consistent with those reported by some studies (Alhammadi et al., 2015; El-Gohary, 2012) but inconsistent with others like that of Alshamaila et al. (2013) who found relative advantage to have top effect on innovation adoption. This also held true for the findings of Chiu et al. (2017). Moreover, many studies emphasize that the IT infrastructure (H2) forms the core of business operations such as CRM (Alshamaila et al., 2013; Kumar & Reinarzt, 2012; G. Kim, Shin, Kim, & Lee, 2011). In this study, the results support the insignificant influence of IT infrastructure, and this is line with the findings of Coltman et al. (2011) that revealed no significant direct effect of IT infrastructure on optimum CRM capability. The insignificant relationship may be attributed to the respondents in this study, who had technical backgrounds and may have had self-efficacy when using technology and thus the IT infrastructure, complexity, and relative advantage level in determining their behavioral intention have been mitigated

To sum up, In the present study, the insignificant relationship between may be attributed to the respondents in this study, who had technical backgrounds and may have had self-efficacy when using technology and thus the complexity level in determining their behavioral intention has been mitigated (Alhammadi et al., 2015). The recommendation from Palestinian SMEs confirmed the extensive accuracy of the proposed framework based on four major contexts (technological, organizational, environmental, and information culture) that drive the adoption and intention to adopt CRM among SMEs employees. The Palestinian SMEs also confirmed that the framework contains the top significant factors that influence such adoption, as evidenced by frequent attempts of enterprises to acquire competitive advantage through customer relationships. This calls for effective planning and communication via CRM to adapt to the changes in the market.

CONCLUSION

CRM technology has become invaluable for businesses in seeking increased revenues and maintaining performance. It allows firms to keep abreast of issues faced by customers, oversee service response, and respond to customer inquiries appropriately. Although CRM has gained significant attention, it still suffers from conceptual and methodological flaws. Moreover, studies dedicated to the relationship of CRM in this context are still scarce. CRM studies have been carried out focusing on

major firms, with only a few tackling CRM adoption among SMEs. Thus, this study attempted to examine the success factors affecting CRM adoption among SMEs in Palestine and the interconnections among them. The findings show that compatibility, security, top management support, employee engagement, information policies, financial resource, customer pressure, competitive pressure, attitude toward technology adoption, information sharing, and information integrity are all significantly related to intention toward CRM adoption, while IT infrastructure, complexity, and relative advantage have no significant relation. Moreover, this study contributes to both academics and business practitioners by providing insights into factors that affect CRM adoption in Palestinian SMEs, which did not explore before. This is the first study in Palestine, which will provide policymakers and top-level managers of SMEs to structure their activities in relation to CRM adoption based on the level of the factors examined. The findings of this study are limited to generalization toward Palestinian SMEs, and those neighboring countries similar to Palestine in culture and situation. The study, however, fell short of covering all the SME industry groups in Palestine. Thus, Future studies may examine the effect of CRM technology in different industries, sectors, and economies.

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