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CUSTOMER RELATIONSHIP MANAGEMENT (CRM) IN THE 21ST CENTURY: A REVIEW

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ABSTRACT

Customer relationship management (CRM) has drawn great attention across research areas. However, little effort has been made to reveal and evaluate new changes relating to customer relationship management (CRM) in the 21st century. Therefore, to address this gap, the paper adopts the literature analysis method to review 37 studies, published from 2010-2021. The results show that the interest of the scholars during this time focuses on the combination of information technology (IT) and customer relationship management (CRM) in terms of electronic CRM (e-CRM) or social CRM (s-CRM) to improve firms' performance in terms of marketing, finance, supply chain and so forth. The sectors of services and commerce (i.e., insurance, service, retail, and bank) also draw attention to the research of customer relationship management (CRM). However, there are few studies that focus on the theoretical perspective, relative to CRM in the 21st century as well as the attention of internal customer relationship management or the adoption of 4.0 technology in CRM. The paper is expected to provide an overview of the current stage of research on Customer relationship management (CRM). Meanwhile, it also offers recommendations for future research.

KEYWORDS: Customer relationship management, CRM, the 21st century, e-CRM, s-CRM

1. INTRODUCTION

Since its first appearance in the literature in the 1980s, customer relationship management (CRM) has made its way into practically every firm. However, the truth is that implementing successfully CRM seems not to be an easy task. According to Farhan and colleagues, 70% of all CRM implementation projects gets failed in the attempt to obtain their goals (Farhan et al., 2018). CRM is considered a holistic strategy that integrates different functions in order to deliver value to customers. This is a process of acquiring, maintaining, and interacting with specific customers to offer superior value for both the firm and the customer (Navimipour and Soltani, 2016). Further, Navimipour and Soltani, (2016) also highlight that CRM also facilitates companies to obtain competitive advantages in the market.

Due to the fact that the world has changed and technology plays an important role in lives and



relationships among people, it also affects the manner in which companies form and retain relationship with their customers. Both managers and researchers believe that the theories and strategies of CRM in the previous time has been no longer sufficient for today's business (Haenlein, 2017). As a result, it raises great demand for research about the transformation of CRM, so that companies can avoid being out of date.

The main goal of the literature review is to identify new issues – that scholars are interested in – in the research of customer relationship management in the 21st century. Further, the paper is expected to reveal the limitation of the research in this area as well as offer some future directions for scholars. To pursue these goals, in the next sections, we introduce the background of the research and the concept of customer relationship management. We provide a preliminary analysis of 37 research articles in the period from 2010 to 2021 and explain the current stage of research on customer relationship management by classifying them into subject themes. Finally, we offer recommendations for future research and conclude the paper with a discussion of theoretical implications.

2. BACKGROUND

The twenty-first century has witnessed a booming of technology and communication, that have revolutionized our way of life. The revolution started late in the 20th century with the appearance of the internet, which set up the foundation for the emergence of many other technologies in the next years. As we see, the world nowadays is popular with the technologies and tools associated with the Internet of Things (IoT), Blockchain, Artificial Intelligence, Sensor Networks, and Social Media. And these technologies themselves are mentioned as the enablers to improve capabilities and business value (Yamin, 2019). The changes in technologies also drive the changes in the marketplace and customers themselves. The competition becomes fiercer due to the spring-up of newcomers. Customers are also a different breed. They are better educated, and informed, and have more demands for products and services. Therefore, the 21st-century market addresses many issues to obtain customer satisfaction such as retaining customers, determining products that can increase customer profitability, attracting potential customers, implementing technology solutions, and so forth (Sharp, 2002).

As mentioned previously, CRM is not a new concept. It is viewed as a significant business strategic tool to achieve businesses' goals and objectives. CRM involves guidelines, procedures, processes, and strategies to merge customer interactions, and follow up on all customer-related information (Hung et al., 2010; Khan et al., 2012). From an industry perspective, the objectives of CRM include identifying valuable customers, integrating business processes, managing marketing campaigns, and creating a competitive advantage for the companies (Farhan et al., 2018; Payne and Frow, 2004). Recently, CRM is conceived as a business strategy, strongly related to relational marketing, based on the evolution of



technology and customer focus (Elena, 2016). In general, CRM basically revolves around the concept of maintaining a valuable, long-lasting relationship with customers. However, the difference among these definitions origin from the research perspectives. The previous definitions of CRM focus on the approach of CRM as a marketing concept. Whereas, later definitions consider the technological aspect as a complementary tool in CRM (Wahlberg et al., 2009).

3. METHODOLOGY

The purpose of this paper is to present a systematic review for identifying the new issues in CRM research in the 21st century. Therefore, the paper adopts the literature analyzing method to collect and analyze materials for the research purpose. The procedure is conducted in 3 stages.

In the first stage, the list of journals is constructed. There are two groups of journals used in this paper. The first group includes the journals listed in the ABS ranking of the Chartered association of business schools. These journals mainly belong to the Information Management and Marketing areas. The second group comprises the journals randomly collected in databases according to search keywords. Meanwhile, the list of databases is developed (Table 1). They are popular for searching research articles and offer free access permissions.

In the second stage, the search validation starts by searching for all published articles with the keywords “customer relationship management” and “CRM”. The preliminary search offers thousands of findings. To be more specific, I refine the search by finding the terms “customer relationship management in the 21st century” or “CRM in the 21st century”. I also put the date boundaries “from 2010 to now”. As a result, there are 46 articles, relevant.

In the third stage – research screening, we screen the relevant research and select 37 articles from 23 journals (Table 2). The articles are then classified (i.e., article types, data collection, and research methods); and under the review process to reveal the findings (table 3)

4. RESULTS AND ANALYSIS

4.1. Distribution of articles by year of publication

The distribution of articles by year of publication from 2010 to 2021 is presented in figure 1. The diagram shows that the interest of researchers in the research topic associated with CRM in the 21st century increased in the period time from 2013 to 2016. The highest number of papers were published in 2016 (6 articles). This interest was fainter in the next two years before a significant coming-back after 2019.

4.2. Distribution of articles by industries



An industry analysis of the review shows that there are four popular industries mentioned in the list of articles including insurance, service, retail, and bank (fig.2). Obviously, scholars of CRM seem to prefer setting up their studies in the service industry (8 studies). The service industry comprises many sectors such as Telecommunication, Hotel, Travel, and Financial Services. Retail and electronic retail (e-retail) industries are also mentioned in 3 studies. The insurance and Bank industries are also focused. In general, there are industries where CRM plays an essential role due to the fact that the factor of the customer is the heart of these industries.

4.3. Distribution of articles by approaches

As shown in figure 3, most studies, collected, use a mixed approach both theoretical and empirical approach accounting for 67%. These articles focus on developing new conceptual research models and adopting qualitative or quantitative methods to examine those models. 22% of total articles focus on offering new theories and only 11% of total articles is to examine the existing theories.

4.4. Distribution of articles by data collection

The majority of the papers use (41% - 15 articles) use primary data as their data collection (Fig.4). The primary data are collected by way of a questionnaire, interview, or a mixed method. Around 24% of total papers use secondary data as their data collection. The secondary data are used mainly for theoretical papers (9 studies), or empirical studies using case study methods and data collection from third parties (5 studies). The rest of the total studies mainly combines two types of data (24%).

4.5. Distribution of articles by popular research methods

There are many different research methods adopted in these articles such as case study method, survey, interview, expert interview, statistical analytic, document analytic, and so forth. However, three popular research methods comprise case studies, surveys, and dept-interview (Fig.5). Most of the studies prefer conducting a survey by questionnaires to collect primary data (43.24% - 16 studies). Whereas, the case study is also preferable with 13,51% (5 studies). And over 8% (3 studies) use dept-interview to collect data.

4.6. Distribution of articles by subject themes

4.6.1. Classifications of CRM

In terms of CRM classification, the studies from 2010 to 2021 mainly focus on the concepts of electronic CRM (e-CRM), and social CRM (s-CRM) to highlight the difference from the traditional CRM (Table 4).

E-CRM stands for electronic customer relationship management. It is defined as an integrated strategy based on technology to maximize the customer value (Vasista and AlAbdullatif, 2017). E-CRM



involves any form of managing relationships with customers under the support of the information technology (IT) (Bishnoi, 2014). So, e-CRM maintains the principles of traditional CRM. However, it is updated with the support of internet-based technology to maximize the CRM objectives (Herman et al., 2021). According to Bahrami and colleagues e-CRM relates to the real value of the electronic business. The reason is that apart from facilitating interactions with customers, e-CRM individualizes these interactions. Accordingly, analytical e-CRM comprises two procedures preprocessing data, and constructing customer profiles from this and other data (Bahrami et al., 2012). Other scholars seem to be agreeable to these benefits of e-CRM. They highlight that e-CRM can leverage customer retention and loyalty. In addition, it also attracts new potential customers to deal with competition in the industry. Furthermore, they reveal that the higher the e-CRM capability, the higher the product innovative development (Herman et al., 2021; Joju et al., 2015).

According to Greenberg, (2010), there is a change like customers in the 21st century. Customers become a social customer. This type of customer can share information with peers who are “someone like them” or whom they might have never met. For this reason, CRM must adapt and utilize this change by shifting to a new model, also called S-CRM. S-CRM stands for social customer relationship management. In some studies, s-CRM is also called CRM 2.0 (Greenberg, 2010; Hoong Fong and Yazdanifard, 2014; Kubina and Lendel, 2015). There are many different definitions of s-CRM. Askool and Nakata, (2011) explain s-CRM as a new paradigm that integrates social networking in more traditional CRM systems. In other definition, it is defined as a business strategy that is supported by technology platforms (social network sites) to engage customers in a collaborative conversation (Greenberg, 2010). Turban and colleagues highlight that social media and people are two dimensions added to the traditional CRM (Turban et al., 2018). An s-CRM software will integrate the social media account of the organization and automate the interactions with followers, clients, or fans. In this way, the organization can understand how the market thinks about its products or services. Further, it can schedule responses or forward information to the right person (Elena, 2016). S-CRM emphasizes the logic that companies should create a dialogue with their customers (Yahav et al., 2020). It is about joining ongoing conversations with customers and prospects that are already engaged to understand and find out valuable customers for companies on the internet. The studies about s-CRM mainly focus on explaining the difference between s-CRM and traditional CRM as well as explaining how social media can benefit the company’s CRM. Greenberg, (2010) reveals the difference between traditional CRM and s-CRM is about the focus of each system. Traditional CRM focuses on the company and creating customer relationships. Whereas, social CRM concentrates on all iterations of the relationships including the company, customers, and clients. Especially, s-CRM also focuses on enabling the “influential” nodes. From another perspective, Hoong Fong and Yazdanifard, (2014) reveal that traditional CRM mainly focuses on data-driven and process-centric while s-CRM is more about content and conversation. With social media, it is not about how much of the investment but



about the time and patience a company offers to satisfy its customer. In another word, the huge advantage of s-CRM compared to traditional CRM is the volume of real-time data. Kubina and Lendel, (2015) highlight the factor of voluntarily deciding what s-CRM offers the customer. It means that customers can voluntarily decide to be updated by the company because social network sites are ideal grounds for acquiring socio-demographic data. However, these scholars also show that implementing a successful s-CRM system is not an easy task because there is no single correct method. Accordingly, the company should construct an explicit plan. The first step is to utilize content as a tool to engage customers in conversations. The secret behind conversations is to create a collaborative relationship to generate value. For instance, the interaction of customers with companies through social network sites also contributes to easing the upselling efforts and reducing the risk of churn (Maecker et al., 2016). Other scholars also agree on the great support of s-CRM to customer management strategies associated with increasing sales while reducing costs. S-CRM also supports marketing strategy in expanding the brand awareness of the company (Elena, 2016; Wahyuni and Lestari, 2020). In a study by Harrigan and colleagues, they describe s-CRM as a second-order dynamic capability. Hereby, it can balance the front-office and back-office, which traditional CRM cannot do. An s-CRM front office can facilitate customer engagement activities while an s-CRM back office can support social information processes. The critical point is that utilizing social media as a raw resource to build capabilities for s-CRM and balance activities of front- and back- offices (Harrigan et al., 2020). Jami Pour and Hosseinzadeh, (2021) describe such factors of successful s-CRM as a company's income, customer satisfaction, continuous application of s-CRM in the organization, and the acceptance of stakeholders.

By contrast, other studies collected offer a different classification by CRM branches (Table 5). Khodakarami and Chan, (2014) in research about the role of CRM systems in customer knowledge creation, indicate that CRM systems might group into three categories such as operational CRM, analytical CRM, and collaborative CRM systems. operational CRM focuses on automating CRM processes to enhance their efficiency and productivity, while analytical CRM systems offer information on customers' preferences and behaviors. Collaborative CRM systems are responsible for managing and integrating communication channels and customer interaction. This type of classification focus on the functions of each branch in the whole CRM system. Accordingly, the whole system can positively support customer knowledge creation. For instance, analytical CRM strongly supports the combination process. Collaborative CRM provides the greatest support for externalization and socialization within an organization. Operational CRM facilitates socialization with customers. Both Collaborative and analytical CRM support the internalization process by providing learning opportunities. Other scholars, on the other hand, add strategic CRM as another type of CRM. It is a core customer-centric business strategy to keep a profitable customer (Liu, 2015). Further, scholars also highlight the changes in these CRM types in recent times. For instance, Liu,



(2015) concentrates on how analytical CRM (A-CRM) changes in the 21st century. He reveals that due to the raise in big data trends and ubiquitous computing, A-CRM needs to change and adopt these changes. This scholar also develops a conceptual framework of a-CRM to offer directions and guidelines for practitioners. Accordingly, the framework starts with loyalty schemes, that collect customer data and paves the way for CRM. Further, most structured data are collected from traditional operational CRM or electronic CRM (e-CRM) & mobile CRM (m-CRM), and ubiquitous CRM (u-CRM). Traditional operational CRM only provides such data as customer transactions and choices of products. Whereas, e-CRM, m-CRM, and u-CRM add new information to customers through social communications, interaction, mobility, and so forth. A big data strategy with four sub-strategies is then presented to direct analytical CRM. As a result, A-CRM might help create a custom strategy to guide target marketing.

4.6.2. How CRM can affect a firm's performance in the 21st century

Apart from offering ways to categorize CRM, scholars during this time also draw attention to researching how or by which ways CRM can support a firm's performance. It is not a new research topic. However, the critical point is that the development of technology has generated new aspects of CRM, so companies can utilize these changes to transform or renovate their traditional CRM system. From a marketing perspective, the integration between Web 2.0 tools and CRM systems might facilitate the accumulation of shared content, foster trust, and enhance the communication between online businesses and customers. As a result, it contributes to increasing customer loyalty, and worth-of-mouth through constructive dialogues on these channels (Chua, 2011; Hoong Fong and Yazdanifard, 2014). In the study of Elena, (2016), the key objective of s-CRM strongly relates to helping companies to expand their activities and gain brand awareness. Accordingly, companies can plan or conduct suitable marketing campaigns and activities. Or through a case study of LC company, Ghazian and colleagues CRM has a significant effect on customer's reactions in terms of reaction to price, brand development, brand preference, and customer intention to purchase (Ghazian et al., 2016). Herman and colleagues also highlight the role of e-CRM in promoting company performance. In particular, e-CRM improves the company's knowledge of customers' tastes and preferences. Therefore, it supports to development of higher product innovativeness and enhances marketing performance (Herman et al., 2021).

From a technology perspective, Khan and colleagues focus on CRM applications and data warehousing. These scholars indicate that companies should shift to this technique to minimize ETL processing, offer high-quality data, and enhance customer services and retention while decreasing operational cost. They also construct a data warehouse framework to direct how to process customer information (Khan et al., 2012). In other research, Bahrami and colleagues also highlight the important role of information technology (IT) in a CRM system and encourage investment in the IT field.



Adopting IT in the CRM system generates many benefits such as stable growth, communication improvement, customer service improvement, achieving competitive advantage, sales increase, marketing improvement, and cost reduction (Bahrami et al., 2012; Gil-Gomez et al., 2020). Other research suggests the application of business analytics in CRM might enhance the ability to analyze, integrate, and leverage information resources and the customer feedback (Nam et al., 2019)

Most of the studies approach CRM through the perspective of marketing or technology. However, other studies also identify the role of CRM from other perspectives. For instance, Li and colleagues research the business value of CRM from a financial perspective. Based on an empirical analysis of CRM business value on operational and strategic benefits and firm performance, they show that there is a relationship between the operational benefit of CRM and a firm's high revenue per employee. Whereas, strategic benefits of CRM reflect in customer satisfaction. Especially, both enhance a firm's profitability and market valuation (Li et al., 2019). Or the research of Ghalenooie and Sarvestani, (2016) highlight the factor of human resource in building a CRM system. These scholars argue that apart from technology, it is essential to consider human resources as key sources in the success of customer relationship management. Human factors include view, understanding, and self-recognition. Hereby, the view and understanding of employees about the organization can associate with customer relationship management.

4.6.3. The internal CRM approaches

Most of the studies of CRM are familiar with the factor of the customer in its definition. Customer is the key factor because it is the objective as well as the outcome of the CRM system. However, scholars generally focus on the external customer, who brings direct benefits to the companies. Few studies focus on the factor of internal customers who are employees and clients. Yang and colleagues offer an approach to internal customers of the company through the employee relationship management system (ERM). These scholars show that the ERM system is responsible for informing internal customers about the organization, it also serves users by producing and offering information. As a result, to an extent how the employees are satisfied with the ERM system depends on their quality perception of the system's usefulness (Yang et al., 2011). From other perspectives, scholars also highlight the demand for promoting the internal CRM system. They believe that there is a service triangle between firm, employee, and customer. Accordingly, the firm-employee relationship may influence employees' behavior when they interact with customer (Agrawal, 2021; Anderson and Smith, 2017).

Duffy and colleagues link theories of CRM and supplier relationship management (SRM) to explain the relationship between buyers and suppliers. Accordingly, these researchers reveal that short-term, cost-driven decisions of buyers can strangle suppliers and undermine their capabilities to effectively



implement CRM. Therefore, strong relationships between buyers and suppliers as well as the fairness of SRM can support supplier engagement in the CRM process (Duffy et al., 2013). Or in other research, Vasista and AlAbdullatif, (2017) also highlight the concern of CRM and demand chain management, which targets value creation and value innovation in today's marketplace.

4.6.4. Other ways to research CRM in the 21st century

Based on the theories of the resource-based view (RBV) and knowledge-based view (KBV), other research also analyzes the changing process of CRM technology infrastructure to organizational performance. They conclude that CRM technology infrastructure plays an enabling role, only exerting an indirect impact on CRM success. Further, they are mediated by knowledge management and organizational commitment. Especially, the human factor is critical to the success of a CRM initiative (Chuang and Lin, 2013; Garrido-Moreno et al., 2014). Wang and colleagues' research about early mover advantage (EMA) argue that CRM capabilities can enhance the demand side factors of EMA in an online setting (Wang et al., 2016). Haenlein, (2017) identifies the changes in customers nowadays. Therefore, the way to build a relationship with them also needs to change. Instead of three major pillars in CRM as in the past, CRM nowadays contains 6 key insights including interactions on firm-and customer-level, relationship maintenance cost and profitability (not all customers are profitable), relationship types, and relationship termination (in some cases, customers are not sufficiently interested in the products), strategic behavior on both relationship sides (firms sometimes forget that customer can behave strategically), multi-faced, complex, and difficult valuation and churn prevention and loyalty to the product portfolio. Further, he also indicates that the rise of new trends such as big data and social media would change CRM significantly. As a result, it also raises the demand for more research to support companies to avoid adopting more sophisticated techniques and how to overcome those obstacles. Powell and colleagues use an environmental contingency perspective to examine the support of technology for CRM capabilities. The reason is that this approach is suitable for company strategies among diverse environmental characteristics such as micro- or macro- environmental characteristics. The results show that the support of technology for CRM capabilities is complicated based on the contingency theory perspective. Accordingly, human or machine CRM support highly depends on two factors (1) function support if it is marketing, sales, data access, or data analysis support; and (2) the characteristics of the environment. For instance, while Sales support is performed by man, marketing support is performed by machine (Powell et al., 2018). Wereda and Woźniak, (2019) mention the way to build relationships with customer 4.0 in marketing 4.0. Accordingly, "marketing 4.0" involves both online and offline interactions with clients and customers. Different from previous generations, marketing 4.0 deeply focuses on the human factor and deals with customers on their buying journey. Customer 4.0 mentions 4 groups of customers including mature, baby boomers, gen X, and gen Y. These scholars affirm that sharpening the development of innovative enterprises depends on a good relationship with customer 4.0 in terms of



minimizing the number of complaints, financial liquidity, and efficiency of core business processes.

5. DISCUSSION

Although aspects of Customer relationship management (CRM) in the 21st century have drawn great attention across research areas, little has been done to summarize the findings. In this paper, we synthesize the research on customer relationship management (CRM), published from 2010 up to now into groups of research to identify the interest of scholars relating to this topic. In the following part, we offer our recommendations for future research to address the research gaps identified in the literature. Then, we also discuss the implication and limitations of our research.

5.1. Recommendations for future research

In the literature analysis, we find that most of the research adopts questionnaires as the method of data collection. Only 8,11% apply the in-depth interview method. The in-depth interview method facilitates respondents to generate more insightful responses. As a result, it provides a higher quality of samples. Therefore, in future research, it is necessary to conduct research using the in-depth interview method as a channel of data collection. Second, CRM scholars generally focus on the external customer, who brings direct benefits to the companies. The factor of internal customers such as employees and clients is ignored. Therefore, it is also essential to approach internal customers in the future. The reason is that there is a service triangle among the firm, employees, and customers. Accordingly, the firm-employee relationship may influence employees' behavior when they interact with customer (Agrawal, 2021; Anderson and Smith, 2017). Further, clients are also play important role in capabilities to effectively implement CRM. Third, our study shows that the research on building relationships with customers in the 4.0 industry is also emerging and they need more attention in the future. The reason is that the 4.0 industry has changed all aspects of the business. For instance, "marketing 4.0" involves both online and offline interactions with clients and customers (Wereda and Woźniak, 2019). Or Customer 4.0 is also different the traditional customers. Therefore, the shifting toward this research area brings new findings for both scholars and practitioners.

5.2. Research implications

This study advances our knowledge of customer relationship management (CRM). First, it provides an overview of the current stage of research on CRM, which mainly focuses on the combination between advanced information technology (IT) and customer relationship management (CRM) among firms. As a result, the concepts of e-CRM and s-CRM are emerging as the tendencies to approach customers in the 21st century. Although maintaining the principles of traditional CRM, e-CRM, and s-CRM updated with the support of internet-based technology, are improved to provide firms with better customer communication. Second, this study also highlights some of the interests of scholars in CRM during this time. Accordingly, the great concern of scholars is to identify how CRM can affect



the companies' performance in terms of marketing, finance, and human resource management. The critical point is that the development and dominance of the internet, social media, and other technologies create transformations in traditional CRM systems. For instance, the integration of social media and the traditional CRM system contributes to generating customers' trust, loyalty, word-of-mouth, and so forth. Or the application of CRM and data warehousing also contributes to increasing customer services while decreasing operating costs. Other attentions also highlight the perspective of internal CRM and some other ways to research customer relationship management. For instance, the changing process of CRM technology infrastructure and human capital to organizational performance. Third, this study also presents a distribution of CRM literature during this time. The attention of CRM scholars targets the industries serving a large number of customers such as service, banking, retail, and so on.

5.3. Limitations of the research

Like other studies, our research also has some of the common limitations of literature analysis. The review is limited to the pool of journals that are satisfied our keywords and selection criteria. Therefore, future research is recommended to expand research scopes to non-academic research, which can enrich the classification framework. Second, it is true that the line of research is still emerging with many different approaches. Hence, the number of research selected is insufficient to perform a meta-analysis. In future research, it is essential to replicate the research in different contexts and make a meta-analysis on this topic.

6. CONCLUSION

Generally, the interest of scholars during the time from 2010 to 2021 mainly focuses on the combination of new technologies and CRM to create new systems such as e-CRM or s-CRM. Especially, there is a higher concern about the effect of social media platforms on CRM systems to increase firms' performance in terms of marketing, technology, human resource, and so forth. The research surrounding branches of CRM according to functions is also concerned. Further, scholars also adopt a variety of research approaches to analyze the relationship between CRM marketing and technology infrastructures. However, there is a higher demand for research about internal customer relationship management as another approach versus external customer relationship management. Furthermore, the aspect of 4.0 technology such as IoT, AI, and VR also needs to be approached as supportive equipment for innovation in CRM. Last but not the least, theoretical studies about CRM in the 20th century are also needed due to the combination of advanced technology. The research areas should be expanded to other industries.

REFERENCE



- Relish** Agrawal, S.R., 2021. Adoption of WhatsApp for Strengthening Internal CRM through Social Network Analysis. *J. Relatsh. Mark.* 20, 261–281. <https://doi.org/10.1080/15332667.2020.1802643>
- Anderson, S., Smith, J., 2017. An empirical examination of the services triangle. *J. Serv. Mark.* 31, 236–246. <https://doi.org/10.1108/JSM-12-2015-0369>
- Askool, S., Nakata, K., 2011. A conceptual model for acceptance of social CRM systems based on a scoping study. *AI Soc.* 26, 205–220. <https://doi.org/10.1007/s00146-010-0311-5>
- Bahrami, M., Ghorbani, M., Arabzad, S.M., 2012. Information Technology (IT) as An Improvement Tool For Customer Relationship Management (CRM). *Procedia - Soc. Behav. Sci.* 41, 59–64. <https://doi.org/10.1016/j.sbspro.2012.04.008>
- Bishnoi, V., 2014. Role of Information Technology and ECRM in 21st Century Retail Organisations. *Int. J. Emerg. Technol. Adv. Eng.* 4, 433–440.
- Chua, A.Y.K., 2011. How Web 2.0 supports customer relationship management in Amazon. *Int. J. Electron. Cust. Relatsh. Manag.* 5, 288. <https://doi.org/10.1504/IJECRM.2011.044693>
- Chuang, S.-H., Lin, H.-N., 2013. The roles of infrastructure capability and customer orientation in enhancing customer-information quality in CRM systems: Empirical evidence from Taiwan. *Int. J. Inf. Manag.* 33, 271–281. <https://doi.org/10.1016/j.ijinfomgt.2012.12.003>
- Duffy, R., Fearne, A., Hornibrook, S., Hutchinson, K., Reid, A., 2013. Engaging suppliers in CRM: The role of justice in buyer–supplier relationships. *Int. J. Inf. Manag.* 33, 20–27. <https://doi.org/10.1016/j.ijinfomgt.2012.04.005>
- Elena, C.A., 2016. Social Media – A Strategy in Developing Customer Relationship Management. *Procedia Econ. Finance* 39, 785–790. [https://doi.org/10.1016/S2212-5671\(16\)30266-0](https://doi.org/10.1016/S2212-5671(16)30266-0)
- Farhan, M.S., Abed, A.H., Ellatif, M.A., 2018. A systematic review for the determination and classification of the CRM critical success factors supporting with their metrics. *Future Comput. Inform. J.* 3, 398–416. <https://doi.org/10.1016/j.fcij.2018.11.003>
- Garrido-Moreno, A., Lockett, N., García-Morales, V., 2014. Paving the way for CRM success: The mediating role of knowledge management and organizational commitment. *Inf. Manage.* 51, 1031–1042. <https://doi.org/10.1016/j.im.2014.06.006>
- Ghalenoie, M.B., Sarvestani, H.K., 2016. Evaluating Human Factors in Customer Relationship Management Case Study: Private Banks of Shiraz City. *Procedia Econ. Finance* 36, 363–373. [https://doi.org/10.1016/S2212-5671\(16\)30048-X](https://doi.org/10.1016/S2212-5671(16)30048-X)
- Ghazian, A., Hossaini, M.H., Farsijani, H., 2016. The Effect of Customer Relationship Management and its Significant Relationship by Customers’ Reactions in LG Company. *Procedia Econ. Finance* 36, 42–50. [https://doi.org/10.1016/S2212-5671\(16\)30014-4](https://doi.org/10.1016/S2212-5671(16)30014-4)
- Gil-Gomez, H., Guerola-Navarro, V., Oltra-Badenes, R., Lozano-Quilis, J.A., 2020. Customer relationship management: digital transformation and sustainable business model innovation. *Econ. Res.-Ekon. Istraživanja* 33, 2733–2750. <https://doi.org/10.1080/1331677X.2019.1676283>
- Greenberg, P., 2010. The impact of CRM 2.0 on customer insight. *J. Bus. Ind. Mark.* 25, 410–419.



<https://doi.org/10.1108/08858621011066008>

Haenlein, M., 2017. How to date your clients in the 21 st century: Challenges in managing customer relationships in today’s world. *Bus. Horiz.* 60, 577–586. <https://doi.org/10.1016/j.bushor.2017.06.002>

Harrigan, P., Miles, M.P., Fang, Y., Roy, S.K., 2020. The role of social media in the engagement and information processes of social CRM. *Int. J. Inf. Manag.* 54, 102151. <https://doi.org/10.1016/j.ijinfomgt.2020.102151>

Herman, L.E., Sulhaini, S., Farida, N., 2021. Electronic Customer Relationship Management and Company Performance: Exploring the Product Innovativeness Development. *J. Relatsh. Mark.* 20, 1–19. <https://doi.org/10.1016/j.ijinfomgt.2020.102151>

Hoong Fong, N., Yazdanifard, Assoc. Prof. Dr. R., 2014. HOW SOCIAL MEDIA CONTRIBUTES TO MULTINATIONAL MARKETING STRATEGIES AND ITS IMPACT ON CUSTOMER RELATIONSHIP MANAGEMENT IN THE 21 ST CENTURY. *Glob. J. Commer. Manag. Perspect.* 3, 102–108. <https://doi.org/10.13140/2.1.2228.1921>

Hung, S.-Y., Hung, W.-H., Tsai, C.-A., Jiang, S.-C., 2010. Critical factors of hospital adoption on CRM system: Organizational and information system perspectives. *Decis. Support Syst.* 48, 592–603. <https://doi.org/10.1016/j.dss.2009.11.009>

Jami Pour, M., Hosseinzadeh, M., 2021. An integrated framework of change management for social CRM implementation. *Inf. Syst. E-Bus. Manag.* 19, 43–75. <https://doi.org/10.1007/s10257-020-00479-z>

Joju, J., Vasanrtha, D., Manoj, D., 2015. E-CRM: A PERSPECTIVE OF URBAN & RURAL BANKS IN KERALA 6.

Khan, A., Ehsan, N., Mirza, E., Sarwar, S.Z., 2012. Integration between Customer Relationship Management (CRM) and Data Warehousing. *Procedia Technol.* 1, 239–249. <https://doi.org/10.1016/j.protcy.2012.02.050>

Khodakarami, F., Chan, Y.E., 2014. Exploring the role of customer relationship management (CRM) systems in customer knowledge creation. *Inf. Manage.* 51, 27–42. <https://doi.org/10.1016/j.im.2013.09.001>

Kubina, M., Lendel, V., 2015. Successful Application of Social CRM in The Company. *Procedia Econ. Finance* 23, 1190–1194. [https://doi.org/10.1016/S2212-5671\(15\)00487-6](https://doi.org/10.1016/S2212-5671(15)00487-6)

Li, Y., Huang, J., Song, T., 2019. Examining business value of customer relationship management systems: IT usage and two-stage model perspectives. *Inf. Manage.* 56, 392–402. <https://doi.org/10.1016/j.im.2018.07.012>

Liu, C., 2015. A Conceptual Framework of Analytical CRM in Big Data Age. *Int. J. Adv. Comput. Sci. Appl.* 6, 4.

Maecker, O., Barrot, C., Becker, J.U., 2016. The effect of social media interactions on customer relationship management. *Bus. Res.* 9, 133–155. <https://doi.org/10.1007/s40685-016-0027-6>



- Nam, D., Lee, J., Lee, H., 2019. Business analytics use in CRM: A nomological net from IT competence to CRM performance. *Int. J. Inf. Manag.* 45, 233–245. <https://doi.org/10.1016/j.ijinfomgt.2018.01.005>
- Navimipour, N.J., Soltani, Z., 2016. The impact of cost, technology acceptance and employees' satisfaction on the effectiveness of the electronic customer relationship management systems. *Comput. Hum. Behav.* 55, 1052–1066. <https://doi.org/10.1016/j.chb.2015.10.036>
- Payne, A., Frow, P., 2004. The role of multichannel integration in customer relationship management. *Ind. Mark. Manag.* 33, 527–538. <https://doi.org/10.1016/j.indmarman.2004.02.002>
- Powell, A., Noble, C., Noble, S., Han, S., 2018. Man vs machine: Relational and performance outcomes of technology utilization in small business CRM support capabilities. *Eur. J. Mark.* 52. <https://doi.org/10.1108/EJM-10-2015-0750>
- Sharp, D.E., 2002. *Customer Relationship Management Systems Handbook*. CRC Press.
- Turban, E., Outland, J., King, D., Lee, J.K., Liang, T.-P., Turban, D.C., 2018. *Electronic Commerce 2018: A Managerial and Social Networks Perspective*, Springer Texts in Business and Economics. Springer International Publishing, Cham. <https://doi.org/10.1007/978-3-319-58715-8>
- Vasista, T.G.K., AlAbdullatif, A.M., 2017. Role of Electronic Customer Relationship Management in Demand Chain Management: A Predictive Analytic Approach. *Int. J. Inf. Syst. Supply Chain Manag.* 10, 53–67. <https://doi.org/10.4018/IJISSCM.2017010104>
- Wahlberg, O., Strandberg, C., Sundberg, H., Sandberg, K.W., 2009. TRENDS, TOPICS AND UNDER- RESEARCHED AREAS IN CRM RESEARCH 18.
- Wahyuni, P., Lestari, P.N.E., 2020. Application of Web-Based Customer Relationship Management in Marketing Information System: PT. BPR Bali Dananiaga. *Int. Res. J. Manag. IT Soc. Sci.* 7, 43–47.
- Wang, S., Cavusoglu, H., Deng, Z., 2016. Early mover advantage in e-commerce platforms with low entry barriers: The role of customer relationship management capabilities. *Inf. Manage.* 53, 197–206. <https://doi.org/10.1016/j.im.2015.09.011>
- Wereda, W., Woźniak, J., 2019. Building Relationships with Customer 4.0 in the Era of Marketing 4.0: The Case Study of Innovative Enterprises in Poland. *Soc. Sci.* 8, 177. <https://doi.org/10.3390/socsci8060177>
- Yahav, I., Schwartz, D.G., Welcman, Y., 2020. The journey to engaged customer community: Evidential social CRM maturity model in Twitter. *Appl. Stoch. Models Bus. Ind.* 36, 397–416. <https://doi.org/10.1002/asmb.2495>
- Yamin, M., 2019. Information technologies of 21st century and their impact on the society. *Int. J. Inf. Technol.* 11, 759–766. <https://doi.org/10.1007/s41870-019-00355-1>
- Yang, Y., Stafford, T.F., Gillenson, M., 2011. Satisfaction with employee relationship management systems: the impact of usefulness on systems quality perceptions. *Eur. J. Inf. Syst.* 20, 221–236. <https://doi.org/10.1057/ejis.2010.69>

