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Factors Affecting Customer Relationship Management Perception: A Study of Jordnian Hospital Sector

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Abstract

The concept of Customer Relation ManagementSystem (CRMS) has engendered considerable interest in Jordan in recent years. While previous research on the relationship between external, organization and technology factors and CRMS perceptions has largely been based on international data, this paper reviews the relationship between the perception of external, organization and technology factors and CRMS perceptions in the Jordanian hospital. A total of 103 responses were received from a population that had already worked in Jordanian hospital. The partial least squares equation modeling was used as the approach to examine the proposed model. This study found a significant relationship between technology and organization factors and CRMS perception. The findings imply the need for hospital, particularly Amman and Irbid, to strategically leverage the effect of CRMS on hospital performance.

Keywords: CRM, performance, perception, external, hospital

1. Introduction

Customer-Relationship Management (CRM) is conceptualized as a means of integrating sales, marketing and service strategies tomaximize customer benefits and improve long-term business-customer relationship (Pulevska, 2008). The customary performance of CRM is often seen as a win-win proposition, where a company can "support worthwhile causes whilst at the same time build the business" (Atkins, 1999). From the modern marketing perspective, CRM is seen as the new paradigm, which is given the most priority in the decision-making process and serves as an essential tool for most business firms that are working towards creating a long-term and rewarding interaction with their customers (Lostakova, 2009; Morgan, 2009; Kim, Kim, & Park, 2010).

CRMS concept is still at its infancy stage, especially in Jordan (Alsmadi & Alnawas, 2011). Only limited academic studies have been carried out on CRMS in Jordan. For example, Alsmadi et al. (2011) attempted to develop a CRM model and empirically test its underlying compositions in the banking and financial sector in Jordan. Harb and Abu-Shanab (2009) showed how Zain (a telecommunications company in Jordan) moved toward CRM implementation and provided features that addressed customers' needs to improve their loyalty and maintain better relationships with them in Jordan.

2. Literature Review

Technology, organizational, and external factors are the important factors which are proven to have an impact on the implementation of CRMS As such, these factors will be described further as the following:

2.1 Technology Factors

Technologies are recognized as having features that impact the decision of their adoption and implementation. Rogers (2003) identified several challenges associated with innovation diffusion including innovation decision process, personal ingenuity, rate of adoption and perceived characteristics. Furthermore, the adoption have substantially used perceived attribute's theory to explore IT innovation, depending on the six attributes (characteristics) of innovation, proposed by Rogers (2003), which include relative advantage, compatibility, complexity, trialability, observability, and reliability. The literature has indicated further analysis towards the impacts of technological features on the organizational level adoption (Ramamurthy & Premkumar, 1999).

2.2 Organizational Factors

The organizational aspect symbolizes the features of organizations, which has been defined as the characteristics of the hospital in this study, which signifies its capabilities to proficiently adopt the CRMS. On other hand, the organizational factors need to be modified, based on the current issues and problems identified at the organizational level adoption of innovation in hospitals. Based on the past studies, the organizational factors are important for the adoption of CRMS (Ramdani, Kawalek, & Lorenzo, 2009)—top management support (Hung Hung, Tsai, & Jiang, 2010; Ramdani, Kawalek, & Lorenzo, 2009), IS experience (Kuan & Chau, 2001; Ramdani, Kawalek, & Lorenzo, 2009), organization culture (Shaukat & Zafar, 2010), senior executives (Hung et al., 2010), and knowledge management capabilities (Croteau & Li, 2003). The above mentioned are the characteristics of organizational factors of the hospital, which will affectthe adoption of the CRMS in the hospitals.

2.3 External Factors

Several researches have highlighted the significance of the external variables on the adoption of CRMS (Ramdani, Kawalek, & Lorenzo, 2009). External pressure has been diversely considered in the research literature; External pressure as the influences from the organizational environment. Furthermore, they claimed that generally, external pressure arises from two sources, such as industrial competitors (i.e., competitive pressure), and trading partners (i.e., government support). Competitive pressure occurs when competitors in the industry make progress and benefit from the new technology; a firm has to consider whether or not to follow its competitors (e.g., Ramdani et al., 2009).

3. Research Framework

Based on the literature review and the process used to develop the hypotheses of the study, Figure 1 illustrates the research framework and the hypotheses this study aimed to empirically test.

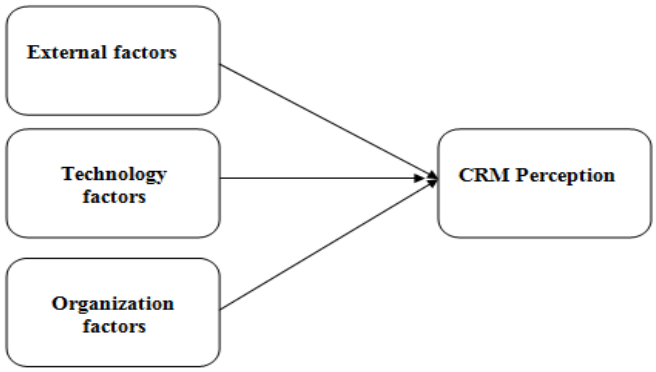

Figure 1. Research framework

4. Research Method

A questionnaire survey was carried out to ascertain the view of top management officials in Jordanian hospital. As the purpose of the study, is to examine the effect of the external, technology and organization factors on CRMS perception in the Jordanian hospital.Furthermore, our target population comprised of all of the hospital using CRMS in Jordan without referring to any specific group of hospitals. according to the Ministry of Health (2012), altogether there are 92 private and public hospitals in Jordan, of which 58 public and private hospitals are in Irbid and Amman, However, the study conduct only 18 hospitals which are the population for the study (15 private and 3 public hospitals), which have adopted the CRMS but it is not completed that based on the web-site which using by the hospitals. A total of 144 respondents were selected as our respondents, with 103 respondents fully participated in the study. The questionnaires were conveniently distributed to top management of hospitals in Jordan using stratified systematic sampling technique by visited each hospital and distributed the questionnaires by assisting of the human resources department after got the permission to collect the data. In the other side, after completion the data collection in hospitals, the researcher visited again the hospitals to get confirmation latter ensuring that the researcher completes the data collection in the hospitals to ensure that the sample represents the population. Roscoe (1974) recommended that sample sizes larger than 30 and less than 500 are appropriate for most studies. The obtained data were analyzed using the SPSS software version17.0 and Partial Least Squares (PLS).

5. Results and Discussion

5.1 Convergent Validity and Reliability

The convergent validity of the measure is defined as the degree to which a set of items converge consistently to measure a particular concept. It can be measured through the factor loadings, composite reliability (CR) and average variance extracted (AVE) criteria (Hair, Black, Babin, Anderson, & Tatham, 2010). To establish that, we examined the items' factor loadings and cross loadings to identify if there are problems related to some items. The cutoff value of 0.7, as suggested by (Hair et al., 2010), was used to assess the goodness of items' loadings. As exhibited in Table 1, all the items' loading exceeded the recommended value of 0.7 (Hair et al., 2010). In other words, results in Table 1 shows that all the items highly loaded on their respective factors when compared to their loadings on other factors.

Next, the composite reliability was examined as an important aspect of convergent validity. The composite reliability refers to the extent to which a set of items indicates consistently the latent construct (Hair et al., 2010).

As illustrated in Table 1, the composite reliability ranged from 0.813 to 0.895 which exceeds the recommended value of 0.7 thus indicates an adequate convergent validity (Fornell & Larcker, 1981; Hair et al., 2010). Additionally, the average variance extracted (AVE), which refers to the average variance extracted among a set of items, was examined. In fact, AVE can be used to compare the variance captured by the indicators with the variance assignable to the measurement errors. As suggested by Barclay, Thompson and Higgins (1995), values of AVE higher than 0.5 indicate that the set of items has an adequate convergence in measuring the concern construct. Based on the results of Table 2, the values of average variances extracted (AVE) of all the constructs were ranged between 0.645 and 0.801. Thus the measures used have an adequate level of convergent validity.

Table 1. Results of measurement model

Model Construct	Cronbach'sAlpha	CR	AVE
External	.767	.832	.687
Technology	0.844	.872	.725
Organization	0.876	.895	.801
Perception	0.846	.813	.645

5.2 Discriminant Validity

The next step was to examine the discriminant validity of the measures. The discriminant validity of the measures refers to the degree to which items can differentiate among constructs. Meaning that, the items measuring constructs do notoverlap. To say the same in different way, a particular construct shares higher variance with its own items than other constructs' items (Compeau, Higgins, & Huff, 1999). The discriminant validity of the measures was examined by following the method suggested by Fornell and Larcker (1981). In this method, the square root of average variance extracted (AVE) should be higher than the cross correlation among constructs. As illustrated by Table 2, the diagonal elements, which are the square root of the AVE for each construct, is higher than the cross correlation between that construct and other constructs. Thus, these results demonstrated adequate discriminant validity. From the convergent validity and construct validity analysis, the construct validity of the measure can be concluded.

Table 2. Results of the discriminant validity of constructs

Variable	External	Technology	Organization	Perception
External	.687			
Technology	0.113877	.725		
Organization	0.051553	0.335929	.801	
Perception	0.367707	0.245825	0.318356	.645

6. Testing the Research Model

The results of the study showed that technology and organization variables were found to have a positive significant effect on CRMS perception with indicators (B= 0.283, t-value=3.512, p< 0.001), and (B= 0.258, t-value=4.379, p< 0.0001) respectively. These results indicated that H2 and H3 (Table 3) were supported by the results of the study. On the other hand, external factors was found to be insignificant predictor with Company

performance (B= 0.029, t-value=0.445, p> 0.05). Thus hypothesis H1 was not statistically supported by the results of this study.

These results, moreover, confirm the importance of these three variables in explaining the variance in Jordan hospitals performance. Table 3, Figure 2 and Figure 3, however, summarize the results related to the hypotheses of the study.

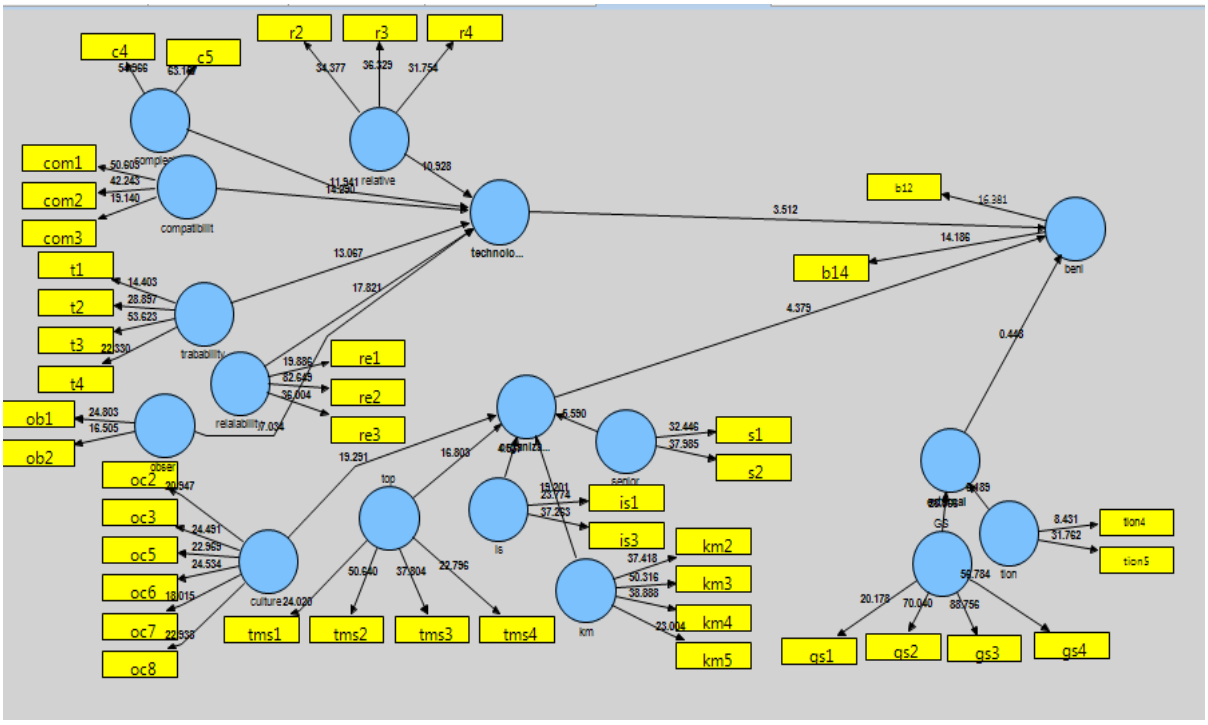

Figure 2. Path analysis results

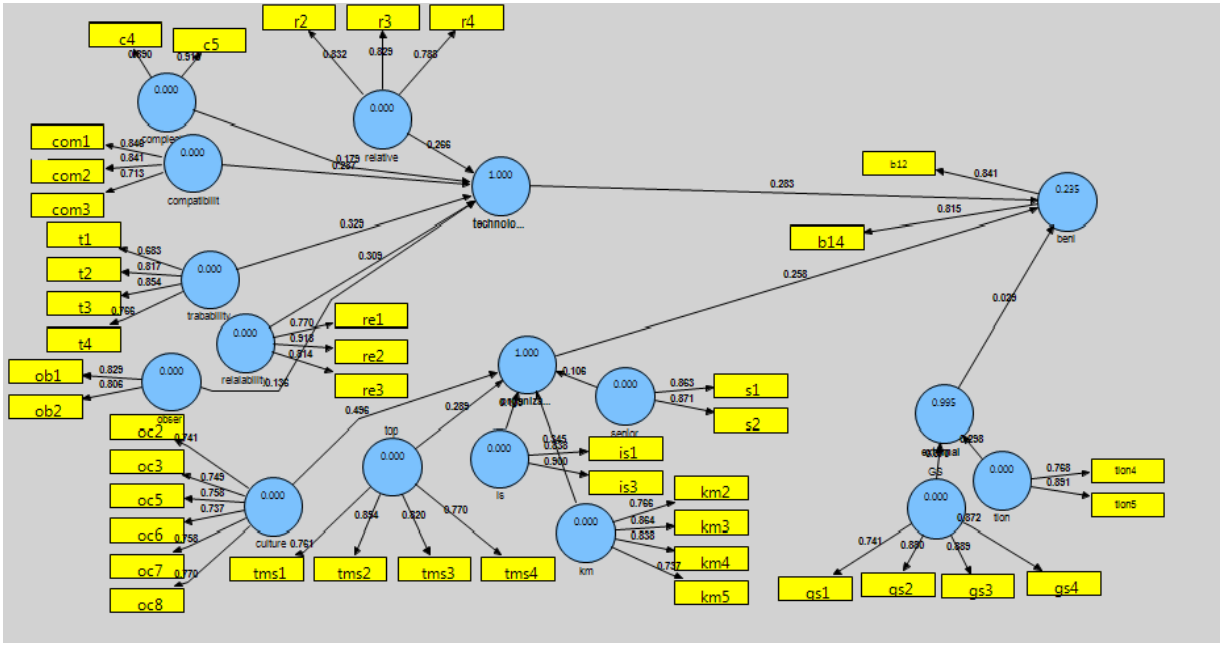

Figure 3. T-Values for the path analysis results

Table 3. Path coefficients and hypothesis testing

Hypothesis	From	To	Path Coefficient	T-value	Decision
H1	External	Perception	.029	0.448	Not supported
H2	Technology	Perception	.283	3.512	Supported
H3	Organization	Perception	.258	4.379	Supported

The result of this study seems to be consistent with that of Young (2007) who mentioned that, in a healthcare organization, CRMS is applied to optimize profits and to improve patients' health, relationships, and loyalty (Benz & Paddison, 2004). Additionally, CRMS could dispense a bigger ROI to healthcare operating organizations, and appears to be the perfect solution to the predicaments faced by the healthcare industry (Wettemann, 2007). This is because establishing poor relationship with customers may lead to more serious consequences for the healthcare industry than it is for other industries (Alexandera, 2005).

7. Opportunities for Further Research

This study only focused on hospital sector in Amman and Irbid in Jordan. Other sectors, such as hotels and companies' were excluded from the study. There is now an opportunity to research CRM in these broader sector. In particular, it would be interesting to undertake research on the hotels sectors given the increased level of competition. Past studies conducted a study to discover the relationship between factors affecting CRM perception by determining the presence of CRM features on the hotels sectors. They found that hotels differ in the presence of CRM features, and that there is a positive relationship between external factors and CRM perception.

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