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The Impact of Digital Marketing and Customization on Service Innovation: Case of Moroccan Healthcare Services Companies during COVID-19

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ABSTRACT

COVID-19 outbreak has affected the customers’ preferences and purchasing patterns as a result of the restrictive regulations taken by governments. Thus, service companies must adapt to this change by focusing on innovation as a solution to survive this crisis. Therefore, the basic objective of this study is the development of an integrated framework to investigate the impact of digital marketing and customization on service innovation in the context of the COVID-19 crisis. Data were collected from 53 Moroccan companies operating in the healthcare services industry. The data was analyzed, and the theoretical model was validated using Partial least square (PLS) and structural equation model (SEM). The findings show that: integration of digital marketing improves service innovation; customization of service offerings improves service innovation; customization has a higher impact on service innovation compared to digital marketing; and finally, customization has a significant effect on digital marketing. The contribution of this study is to emphasize the roles of customization and digital marketing, during the COVID-19 crisis, on companies’ service innovation so that they can differentiate their offered services and survive the current crisis.

Keywords: service innovation, digital marketing, customization, global health crisis, COVID-19.

INTRODUCTION

The increased digital development of new technologies has introduced new business opportunities (Huarng, 2011) and pushed service providers to focus more on service innovation (Domazet & Neogradi, 2019; Tether, 2005). According to Dereli (2015), innovation is considered as the most valuable, and companies that can develop new ways and bring new products or services to the market are the most successful. Therefore, companies have become more service-oriented, and service innovation has gained an increased focus in academic research (Dotzel, Shankar, & Berry, 2013; Ordanini & Parasuraman, 2011).

However, the concept of service innovation is still novel (Flikkema et al., 2019), and its theories need to be further explored (Ostrom et al., 2010). The literature review of service innovation research revealed that digital marketing and certain fields of research in marketing literature such as customization are relevant to service innovation (Bright & Daugherty, 2012; Englstätter & Sarbu, 2010; Jin, He, & Song, 2012; Kasiri et al., 2017; Wu, 2014). Therefore, for this study, we chose to focus on digital marketing and customization as literature shows that a restricted number of studies deal with the way that they both impact independently service innovation (Tether, 2005; Toivonen & Tuominen, 2009; Gallouj, 2002; Domazet & Neogradi 2019; Maglio & Spohrer 2008; Wu, 2014). This study will investigate the main research question: Is there any relationship between customization, digital marketing, and service innovation?

THEORETICAL BACKGROUND, MODEL, AND HYPOTHESIS:

This study reviewed the literature regarding service innovation and digital marketing in companies (Aas & Pedersen, 2010; Cheng, Shiu & Dawson, 2014; Kiang, Raghu & Shang, 2000; Nawaz & Kaldeen, 2020; Putri & Fithrah, 2017; Storey et al., 2016; Wu, 2014), in order to identify determinant variables to form a theoretical model.

Authors differ in the literature regarding the definition of service innovation and how it is used (Coombs & Miles, 2000; Witell et al., 2016). Building on a Schumpeterian approach, Toivonen and Tuominen (2009) defined service innovation as “a new service or such a renewal of an existing service which is put into practice and which provides benefit to the organization that has developed it; the benefit usually derives from the added value that the renewal provides the customers.” Literature on new service development (NSD) commonly views service innovation as a process and often uses the terms NSD and service innovation interchangeably (Menor, Tatikonda & Sampson, 2002).
In literature, strategic innovation management (Lee & Grewal, 2004) and Digital marketing (Bright & Daugherty, 2012) are the most relevant bodies of literature to service innovation research. Furthermore, certain fields of research in the Marketing literature, such as research into customization, are also relevant to service innovation (Engelstätter & Sarbu, 2010; Jin et al., 2012; Kasiri et al., 2017; Wu, 2014). Accordingly, Wu (2014) and Bitner and Brown (2006) argue that researchers need to contribute to inter-disciplinary research on services, as service innovation is liable to be the outcome of a number of components, contextual aspects, actors, and interactions (Toivonen & Tuominen, 2009).

Service innovation items:

Technology leadership and Service leadership:
According to Wu (2014), leadership consists of two research constructs in service innovation: Technology leadership and service leadership. These two factors are considered the main dimensions of the strategic response to service innovation (Ha, Janda, & Muthaly, 2010; Lee & Grewal, 2004).

Business and Market Opportunity Analysis:
Song and Parry (1997) assume that the ability to identify the business and market opportunity is important to the service provider. Thus, Crawford and Di Benedetto (2000) argue that providing the most desired differentiating characteristics in services requires testing and refining concepts developed earlier in the process with key customers and users based on their feedback. They also assume that an effective business analysis will assist the service provider to select the best service(s) to develop based on analysis of market potential, customer preferences, and advantage relative to competing services (Crawford & Di Benedetto, 2000).

Marketing innovation:
Defined by Aas and Pedersen (2010) as:
- Changes to product design of goods or services
- Changes to the packaging of goods
- New media or techniques for product promotion
- New marketing strategy
- New methods for product placement or sales channels
- New methods of pricing goods or services

Service innovativeness:
It is defined as the degree of newness/originality/radicalness of the service offering (Chen, Damanpour, & Reilly, 2010; Evanschitzky et al., 2012; Storey et al., 2016), and considered a key success factor likely to differentiate a new service from its competing offerings (Cheng et al., 2014; Agarwal, Erramilli, & Dev, 2003; Ettlie & Kubarek, 2008). Service innovativeness is also included the new features introduced to the market by the offered service and its unconventional way of solving problems (Cheng et al., 2014).

Digital Marketing:

Concept of Digital Marketing:
Trainor et al. (2011) see digital marketing as a form of innovation that will promote customer satisfaction and retention. Frost and Strauss (2016) gave a simpler definition by referring to digital marketing as the result of information technology applied to traditional marketing.

According to Techopedia (2015), digital marketing includes a set of internet marketing techniques with key objectives of developing visibility and generating sales by enabling customers to interact with products and services of the business through digital media promotion. Furthermore, Cintra (2010) underlines that digital marketing is a strong tool for competitive companies since creative and up-to-date advertisements lead to consumer attractiveness and interest in researching the company's services and products. Similarly, Jung, Perez-Mira, and Wiley-Patton (2009) noted that the changes in technology and consumer behavior have always been the main drivers of change in marketing strategies.

Digital marketing items:

Social media:
It is defined as the online communication and interaction between people on certain media platforms (Frost & Strauss, 2016). The variables of social media marketing in this study are described using several indicators mentioned in the study of Nawaz and Kaldeen (2020) and Putri and Fithrah (2017). These variables include:
- Relationship: Forming a relationship with customers through existing media.
- Communication: The interaction between sellers and consumers/buyers.
- Post-Purchase Interactions: Communication between the seller and the buyer following a concluded sale transaction
- Information Format: The delivery of complete and clear information to capture the consumers’ attention.

Customer engagement:
Customer engagement is a psychological process and mechanism that builds customer loyalty to the brand (Muchardie, Yudiana & Gunawan, 2016). Moreover, it can be determined using several indicators such as the wealth, clarity of explaining information about the goods and services offered, a clear multimedia content to attract the interest of consumers, a high level of interactivity that can lead to greater online participation, a correct description of the product/service offered, the information presented in an entertaining way that will capture more positive attention and a novelty of content that will further stimulate customer interest.

**Purchase intention:**
According to Mirabi, Akbariyeh, and Tahmase bifard (2015), purchase intention is similar to decision making, whereby consumers determine their likelihood, willingness, or plan to purchase certain brands. It can be identified by several indicators (Nawaz & Kaldeen, 2020; Putri & Fithrah, 2017). First, a transactional indicator is related to the tendency of a person to buy the item or service offered. Second, a refractive indicator is related to the tendency of a person to refer products or services to others—third preferential indicator is related to an interest that defines preference between choosing another product or service. And fourth, an exploratory indicator related to an interest that defines the conduct of an interested person to seek information about the product or service of interest.

Many scholars mentioned the impact of technology and digital development on service innovation (Tether, 2005; Toivonen & Tuominen, 2009; Gallouj, 2002; Domazet & Neogradi, 2019). Researchers argued that new technology is an essential part of innovation in service systems (Maglio and Spohrer 2008) and consider it the main driver of service innovation (Tether, 2005; Toivonen & Tuominen, 2009; Wu, 2014). Moreover, Calle et al. (2020) emphasize the role of advanced technologies when combined with the use of digital capabilities for internet-based marketing on servitization. Therefore:

**H1: Digital Marketing has a significant positive impact on service innovation.**

**Customization:**
Customization is the strategy that enables customers to adjust products and services according to their preferences (Gilmore & Pine, 1997). Researchers argue that integrating customization and standardization of offered services is necessary to improve service quality (Kasiri et al., 2017), and the consumers’ perceived customization is likely to impact service diversity to enhance consumer’s needs (Wu, 2014), which in turn will enhance the company’s offered services. Therefore:

**H2: Customization has a significant positive impact on service innovation.**

COVID-19 crisis resulted in fundamental changes in customers’ preferences, purchasing patterns (Lewis, 2020; Wang et al., 2020), and their purchasing behavior (Zaoui et al., 2021). Consequently, customers will seek new customized products or services to satisfy their needs, which in turn push firms to navigate new opportunities to survive under the ongoing crisis (Li-Ying & Nell; 2020). Thus, with customized products or services, the companies will face the challenge of promoting. COVID-19 crisis has raised the interest in digital marketing for firms to reach customers (Alshakteheep et al., 2020) and increased the development of new technologies and online shopping popularity (Popcorn, 1992; Zalega, 2018). Kiang et al. (2000) have stated that product customization is one of the factors leading to market the products or services on the Internet and most successful online marketing companies belong to companies that provide digital or high customization potential products or services. Therefore, in this study, we will investigate if there is a significant relationship between customizing services and advertising via digital marketing in COVID-19 crises.

**H3: Customization has a significant positive impact on digital marketing.**

**A model to link digital marketing, customization, and service innovation:**

**Theoretical model:**
Our model is developed based on field research and an integration of the scholarly literature regarding service innovation and digital marketing (Wu, 2014; Aas & Pedersen, 2010; Song and Parry, 1997, 2009; Storey et al. 2016; Cheng et al., 2014; Nawaz & Kaldeen, 2020; Putri & Fithrah, 2017; Kiang et al., 2000).

Source: The authors
Figure 1: Theoretical model linking digital link marketing, customization, and service innovation.
METHODOLOGY AND SAMPLING:

The analytical studies on service innovation and digital marketing developed in the previous studies mentioned above do not provide an exhaustive view of the impact of both digital marketing and customization on service innovation and a potential relationship between customization and digital marketing.

Quantitative analysis using an empirical study was adopted to test the theoretical model in figure 1 and to verify the hypotheses presented above. Moreover, COVID-19 was used as a case study. Data for this study was collected by developing a structured questionnaire based on previous studies and conducting a survey. The questionnaire deployed structured questions to help respondents evaluate their companies’ digital marketing and customization along with their perceived opinion about service innovation. Moreover, a parallel translation method was used (Kalay & Lynn, 2015; Zaoui et al., 2021) to translate some questionnaires to French (second language in Morocco), to avoid language barriers and make it easier for respondents who did not speak English. Three experts working in the field of healthcare services in two companies revised our questionnaire and solved any difficulty in understanding the questions. Furthermore, a pilot study was not conducted since the items for the measurement were derived from previous studies. (Nybakk & Jenssen, 2012).

The scales for the variable were derived using items based on the compilation of different studies (Table 1). The measurement of the dependent variable, service innovation, consists of items combined and developed based on the literature review from the studies of Aas and Pedersen (2010), Song and Parry (1997, 2009), Storey et al. (2016), Cheng et al. (2014) and Wu (2014). Measurement items of customization come from the study of Wu (2014). Moreover, digital marketing was measured by items from the study of Nawaz and Kaldeen (2020) and Putri and Fithrah (2017).

This empirical study was conducted on Moroccan medical healthcare services companies. The medical healthcare services sector was chosen because of the increased number of companies offering customized healthcare services in Morocco during the COVID-19 crisis. These companies provide customized services such as assisting with home medical consultation and analysis, affording specialist doctors for emergent home checkups, ensuring emergent medical transport, and installing and monitoring medical equipment and materials at home. Consequently, this sector has the potential of benefitting from the emerging digitalization as well as the new opportunities resulting from the current COVID-19 crisis.

Sample selection was carried out using a database of 86 medical healthcare service companies in the region of Grand Casablanca in Morocco. We drew a sample of 60 companies using systematic random sampling. Moreover, to adhere to safety regulations during this pandemic, we contacted each company by phone or email to explain the study’s purpose and to request participation in our study. Questionnaires were sent by email in order to adhere to safety regulations during this pandemic. The research was conducted in compliance with certain ethical responsibilities, such as respecting respondents’ choices of not responding to questionnaires and protecting their anonymity. We requested two answers from each company to avoid single-source bias (Kalay & Lynn, 2015; Zaoui et al., 2021). Therefore, the analysis included a total of 53 companies who agreed to send back two answers to the questionnaire as required. The participants were asked to state their perceived opinions about service innovation, customization, and digital marketing of their companies in comparison to their competitors in the market. Constructs were measured using items on a 7-point Likert type scale ranging from 0 to 7 (0 = strongly disagree, 7 = strongly agree) (Table 1).

<table>
<thead>
<tr>
<th>Constructs and scale items</th>
<th>Mean</th>
<th>Sd</th>
<th>Standardized loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service innovation (Aas &amp; Pedersen, 2010; Song &amp; Parry, 1997, 2009; Storey et al., 2016; Wu, 2014)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology leadership (TL)</td>
<td>3.774</td>
<td>1.712</td>
<td>0.81</td>
</tr>
<tr>
<td>Business and Market Opportunity Analysis (BMO)</td>
<td>3.038</td>
<td>1.414</td>
<td>0.70</td>
</tr>
<tr>
<td>Marketing innovation (MI)</td>
<td>3.792</td>
<td>1.606</td>
<td>0.85</td>
</tr>
<tr>
<td>Service innovativeness (SI)</td>
<td>3.170</td>
<td>1.476</td>
<td>0.72</td>
</tr>
<tr>
<td>Service leadership (SL)</td>
<td>4.057</td>
<td>1.522</td>
<td>0.76</td>
</tr>
<tr>
<td>Customization (Wu 2014)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your company provide more options for the customer to meet their needs (MO)</td>
<td>4.717</td>
<td>1.571</td>
<td>0.90</td>
</tr>
<tr>
<td>Your company allow customers to choose different services (SD)</td>
<td>4.396</td>
<td>1.652</td>
<td>0.86</td>
</tr>
<tr>
<td>Your company give customers greater control over customizing service (GC)</td>
<td>4.811</td>
<td>1.770</td>
<td>0.88</td>
</tr>
<tr>
<td>Digital marketing (Nawaz &amp; Kaldeen, 2020; Putri &amp; Fithrah, 2017)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social media (SM)</td>
<td>4.830</td>
<td>1.450</td>
<td>0.87</td>
</tr>
<tr>
<td>Customer engagement (CE)</td>
<td>5.415</td>
<td>1.559</td>
<td>0.86</td>
</tr>
</tbody>
</table>
Purchase intention (PI) | 5.038 | 1.715 | 0.86

Source: This study

Service innovation, digital marketing, and customization during COVID-19 crisis:
The coronavirus disease 2019 (COVID-19) pandemic has impacted healthcare services companies and institutions both in Morocco and worldwide and has forced them to make changes to how they work and adopt innovative practices. Thus, we conducted a preliminary survey with the selected 53 healthcare services Moroccan companies. Respondents from these companies were asked first whether the way they carry out service innovation, customize their services and use digital marketing to promote them has changed during the COVID-19 crisis. Most respondents indicated a strong business response to the COVID-19 crisis across those three factors (see figure 2). We found that there is an increase of 39% in the adoption of service innovation, 43% in digital marketing, and 13% in customization during the COVID-19 crisis compared to before it. This explains that most companies consider developing and investing in digital marketing, improving and creating new services, and responding to new emerging consumer needs by customization as a response to the COVID-19 crisis.

Source: the authors

Figure 2: Customization and digital marketing influence on service innovation during the Covid-19 crisis.

Empirical results:
In this study, SmartPLS 3 software was used to apply the partial least square (PLS) method for the development and test of a path model to estimate the measurement and structural parameters in the structural equation model (SEM) (Chin, 1998). Moreover, the study followed Sosik, Kahai, and Piovoso (2009) suggestion to use the PLS approach due to the relatively small sample size.

We used AMOS 16 to conduct confirmatory factor analysis (CFA) to assess the validity and reliability of service innovation, customization, and digital marketing constructs (Hair et al., 1992). CFA indicates a good fit for the theoretical model (Table 2). Furthermore, the loading factors of the items were greater than 0.4 and ranged from 0.70 to 0.90 (table 1). This shows that the items are significant according to the study of Straub, Boudreau, and Gefen (2004).

The reliability test shows that the values of Cronbach’s Alpha were higher than the acceptable level of 0.70 (table 2); therefore, it meets the standards of reliability for the survey instrument (Nunnally, 1978). The average variance extracted (AVE) values of constructs are greater than the minimum required criteria of 0.5 (Fornell & Larcker, 1981). In addition, evaluating the overall model fit indices indicate a good fit (CFI=0.91, GFI=0.83, and RMESA=0.06).

Table 2: Reliability test.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha (α)</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Innovation</td>
<td>0.837</td>
<td>0.601</td>
</tr>
<tr>
<td>Customization</td>
<td>0.861</td>
<td>0.781</td>
</tr>
<tr>
<td>Digital Marketing</td>
<td>0.839</td>
<td>0.753</td>
</tr>
</tbody>
</table>

Source: This study
In addition, the highest correlation was between customization and digital marketing (0.67). Correlation between customization and service innovation (r=0.46, p<0.05), and digital marketing and service innovation (r=0.29, p<0.05) are significant and positive (figure 3).

Table 3 presents the hypotheses, the analysis of the causal paths in the structural model, and t-values. The standardized loadings have significant t-values (p<0.01), which shows that all indicators are relevant to the constructs they specify. The three hypotheses are significant, which shows that the theoretical model is reliable and supports the three hypotheses.

Table 3: Empirical results.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Hypothesized links</th>
<th>Standardized estimate</th>
<th>t-values</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Customization → Digital Marketing</td>
<td>0.67</td>
<td>8.14</td>
<td>Sig</td>
</tr>
<tr>
<td>H2</td>
<td>Customization → Service Innovation</td>
<td>0.46</td>
<td>9.17</td>
<td>Sig</td>
</tr>
<tr>
<td>H3</td>
<td>Digital Marketing → Service Innovation</td>
<td>0.29</td>
<td>2.01</td>
<td>Sig</td>
</tr>
</tbody>
</table>

Sig = Significant, NSig = Not significant, t values all significant at p < .05.

Source: This study

DISCUSSION:

This study’s objective is to test the influence of customization and digital marketing on service innovation, along with the influence of customization on digital marketing during the COVID-19 crisis. The three hypotheses showing the impacts were significantly supported based on data collected from 53 medical healthcare Moroccan companies.

Results showed that customization of services impacts service innovation. In other words, companies who integrate consumers’ perceived customization in their offered services have higher indicators of innovation services. These companies tend to diversify their services and enhance their quality to meet the consumer’s needs (Kasiri et al., 2017), especially during the COVID-19 crisis where service needs become more specific and require customization.

This study also confirmed that digital marketing impacts service innovation. As new technologies become widespread, reaching more customers through digital platforms becomes easier. Moreover, the current COVID-19 crisis has made customers dependent on digital platforms for purchasing more than ever before. Therefore, medical healthcare services started creating and offering new services to reach more customers and specifically online customers. In particular, this research emphasizes the role of digital marketing as a competitive advantage for service providers during this COVID-19 crisis. This finding is consistent with Tether (2005), Toivonen and Tuominen (2009), and Domazet and Neogradi (2019).

Lastly, results supported that customization has a significant relationship with digital marketing. In other words, customized services and integration of new emerging customer’s needs during the COVID-19 crisis influences the medical healthcare
companies marketing choices and pushes them to focus more on digital marketing opportunities to survive the ongoing crisis. This result is consistent with studies of Li-Ying and Nell (2020) and Kiang et al. (2000). Thus, Moroccan medical healthcare service companies need to increase the use of online platforms to meet the changes in their customers’ preferences and add value to customer service.

**IMPLICATIONS:**
This study shows that companies can successfully overcome this health crisis by improving their service innovation. This can be done if companies focus on innovating on their services along with considering the key factors of customization and digital marketing.

The results of this study can be applied in the Moroccan context to help medical healthcare services companies gain a competitive advantage as creative service providers during the COVID-19 crisis. First, managers of healthcare services companies must focus on customization to increase their service innovation. For this, these companies must provide more options for the customer to meet their needs, allow them to choose different services, and give them greater control over customizing their chosen service. When Moroccan healthcare services companies interact more with their customers, it will likely impact their service innovation as they will tackle new opportunities for new possible services. Second, Moroccan healthcare services companies must focus more on digital marketing and developing e-commerce platforms during the COVID-19 crisis in order to cope with the customer’s new purchasing behavior, due to which they can provide innovative services to increase their customer loyalty and survive the crisis.

**CONCLUSION:**
The research objective of this study is to empirically test the factors impacting service innovation among Moroccan healthcare services companies during the COVID-19 crisis. The data was collected from 53 companies, and the results showed that customization along with digital marketing has a significant and positive relationship with service innovation. This study also emphasized the high impact of customization on the digital marketing of healthcare services companies.

This study has a few limitations that give new recommendations to future scholars. First, this study was conducted with a limited sample size of healthcare services companies. Therefore, future researchers can focus on increasing the sample and consider other industries to generalize their findings. Second, the sample used in this study was taken from companies located in Morocco. Thus, the findings are limited and cannot be generalized to other countries. Future studies can be extended to various industries and samples to explore more generalized results. Third, the analysis did not include any mediator, so future scholars can include more factors in the given model to explore and test more associations. Lastly, this study is not longitudinal, and it did not fully test the causal characteristics of the relationships; therefore, future scholars should consider a longitudinal design to investigate the causal relationships of the constructs.

**REFERENCES**


