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THE EFFECT OF ONLINE TOUCHPOINTS ON UTILITY CUSTOMERS' EXPERIENCE

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Abstract

This conceptual study suggests the need matrix index as a measure of the effectiveness of online touch points for customers in the Malaysian utility industry. This study attempted to address this problem by improving the conceptual clarity and objectivity of its measurement. The online touch points of customers' experiences were discovered, together with their needs and expectations particularly in utility industry in Malaysia predominantly their needs and expectations as determined by the need metrics and the gap score generated from this study. With multiple retrieved papers that meet the search criteria that have been read, an evaluation of the prior measuring methods is undertaken through a literature review. The utilities industry has a new way for learning about customers' experiences, expectations, and needs that are relevant to online touch points. This strategy is based on updated knowledge and understanding. A thorough methodology to assess the needs, experience, and expectations from the online touch point's effectiveness, which ultimately affects shareholders' outcomes, specifically on TNB improvement and enhancement, would be beneficial to academics as well as practitioners. By providing novel insights on the measurement gap and shedding light on potential future studies, the study contributes to the literature on customers' experiences, needs, and expectations about the effectiveness of online touch points.

Keywords: Online touch points, customer experience, utility industry, Malaysia

1. Introduction

Utility providers today are dealing with an impeccable level of evolution (Fannin, 2017). A number of disruptive innovations are threatening current utility business models. Nevertheless, the interaction and absence of engagement between the utility business and the customer are one of the biggest issues the utility industry faces (Fannin, 2017). Utility customers of the modern era demand more than merely reliable electricity (Fannin, 2017). Customers want flexibility and the capability to use contemporary technology to manage their energy consumption, access information, and get notifications that deliver a relevant experience in a welcoming way (Fannin, 2017). Customers anticipate utilities to offer all of the digital touchpoints they are currently acquainted with in other industries (Fannin, 2017). Utilities shall immediately discover how to successfully use social media, mobile apps, and web-based systems to engage with customers more effectively and give them critical information (Fannin, 2017). As a new generation of utility customers, particularly Millennial, joins the customer base, this will become more and more crucial (Fannin, 2017). Therefore, utilities must first comprehend who their customers are and what they want to successfully attract new customers and keep the ones they already have (Fannin, 2017). Consequently, while maintaining the security of their customer's data, they will need to establish a bond of trust with them (Fannin, 2017). Likewise, they will need to use cutting-edge technology to give their clients excellent customer service and reliable, affordable electricity (Fannin, 2017).

Due to its importance in gaining a competitive edge, customer experience has become a buzzword in the corporate world (Alexander et al., 2022). Customer experience begins when a customer encounters each of the company's touchpoints throughout his interaction with the company (Alexander et al., 2022). These interactions may culminate in a favorable or unfavorable experience, which affects the customer's long-term connection with the business (Alexander et al., 2022). On the other hand, technological advancement has triggered major shifts in customer service channels (Rezaei et al., 2022). The abundance of numerous internet and mobile channels for customers, as well as offline and online touch points, have slashed obstructions to communication between customers and businesses (Hassan, Saleh, & Ibrahim, 2020). The proliferation of new channels and online platforms like mobile and social media platforms has altered company models, customer demographics, and customer behavior, boosting customer experience (Gallino & Moreno, 2014). Online touch points can be utilized with various technologies to track customer behavior, particularly in a virtual setting, comprehend more detailed information about each customer, and improve how they are served (Chen et al., 2018).

The company's communication channels have changed due to rapid technological advancements to operate in an online environment (Hillerborn & Eriksson, 2022). Customers now have "on-the-go" access to communication, web browsing, purchasing, and evaluating service providers attributable to the variety of online systems available (Kuss et al., 2018). E-commerce expansion has sparked evident changes in the customer products business and utility service providers. Meanwhile, blending online technologies and the abrupt transition into online adaptation have changed customer behavior globally and nationally (Pantelimon et al., 2020). Vast swathes of the economic interactions between businesses and customers have changed due to the expanding online platform and now occur simultaneously online (Volkova et al., 2021). New company strategies are now necessary due to the growth of e-commerce and online marketplaces (Souiden et al., 2019). Customers increasingly engage in a wide range of online interactions

that produce a variety of behaviors and, inevitably, experiences (Hillerborn & Eriksson, 2022). In terms of face-to-face context, information delivery, engagement duration, and brand presentation, an online customer experience differs from an offline experience (Rose et al., 2011).

Exploring the online environment of business models within different industries demands more research because the market is constantly changing, and online strategies are largely untapped and constantly changing (Pasirayi & Fennell, 2021). Without the capacity to interact with customers directly to establish trust and foster customer loyalty, the direct online strategy struggles to persuade customers to complete a transaction (Hidayat et al., 2021). Notwithstanding, both practice and research are concurrently placing a greater emphasis on the customer experience. Customers base their purchasing choices on their experiences (Sun et al., 2022). Customers can now rapidly interact with businesses through various contact points during the consumption journey with the advent of digital technologies, as well as the emergence of new devices and channels (Becker & Jaakkola, 2020; Homburg et. al. 2017). However, only a partial understanding of the customer experience is possible due to the limited understanding of customer touch points in academia and industry (e.g., Li et. al. 2020; Roggeveen et. al. 2020). There is also little empirical evidence to support this assertion (Sun et al., 2022). Digital technologies are reshaping service system competencies and altering the customer experience, including mobile and location-based technologies, augmented reality, virtual reality, blockchains, and artificial intelligence (Law et al., 2020). Though the relationship between technology and customer experience research is expanding, few studies have examined how technological solutions affect customer experience (Sun et al., 2022). An integrated framework is required to comprehend the customer experience in today's technology environment (Sun et al., 2022).

To address the research gap, this paper aims to examine the effect of online touch points on utility customer experience. In this study, it helps us understand the effect of online touch points on utility customer experience in the Malaysian perspective. This paper aims to investigate the effect of online touch points on utility customers' experience in Malaysia by analyzing the respondent data through IBM SPSS, Version 26. The study's findings resulted from large-scale questionnaire surveys covering every region of Malaysia. These questionnaire surveys provide useful insights for the government and responsible bodies when formulating policies that aim to improve the effectiveness of online touch points' customers' experience in the utility industry. In terms of a total contribution to knowledge, this study intends to fill the following research gaps. Firstly, this paper will develop measurements to discover customers' insight for future needs, calculate and compare the customer effort score (CES) and close the gap from need expectation analysis specifically on the online touch points on Malaysian utility customers' experience, which can be beneficial to the one and only Malaysian utility company which known as Tenaga Nasional Berhad (TNB).

The paper is arranged in the following way. Section 1 introduces the study, including motivations, related works, and contributions. Section 2 contains the literature review and hypothesis development, including a review of the effect of online touch points on utility customers' experience, theoretical background, and hypotheses development. Section 3 discusses the research method and the research

context. Section 4 provides the analysis of the results and the hypotheses testing. Section 5 discusses the results, and Section 6 covers the conclusions and future works.

2. Literature Review

Strong customer experience enhancement is now a top management's ultimate aim (Lemon & Verhoef, 2016). Online interactions between providers and customers are becoming more prevalent in the digital age (Zhang, 2021). Customers can use online touch points to access a variety of information and create various experiences for themselves after acquiring offers from providers, especially with the expansion of smartphones (Lim et al., 2019). An increasingly growing number of instances of co-creation of usage experiences after purchase between providers and customers have been reported due to the business environment's digitalization (Kohler et al., 2011). It is not exaggerated to suggest that online touchpoints are becoming increasingly imperative to customer experiences, particularly in light of how COVID-19 has changed how people connect and share information online (Zhang, 2021). Online information sharing appears to be more necessary and efficient in situations where face-to-face communication is not convenient (Zhang, 2021). New business mechanisms are required in the digital age when using online touch points to create distinctive customer experiences (Zhang, 2021). The website's technology made the transactions "simple" and "convenient," facilitating those (Stein & Ramaseshan, 2016). Technology is an essential element of the touch point (Stein & Ramaseshan, 2016). Customers are increasingly embracing technology, such as point-of-sale terminals, tablets, and kiosks, in addition to internet channels, for their regular transactions in physical settings (Fowler & Bridges, 2010; Giebelhausen et al., 2014). A crucial factor that has been examined to assess the significance of touch points in the customer experience is encountering positivity at touch points (Baxendale et al., 2015).

The physical boundaries of time and location are not the only places where service providers and customers can interact; there are also numerous touch points online (Zhang, 2021). The generation of the customer experience was discovered to be influenced by a range of online touch points or repeated contacts through a single touch point (Zhang, 2021). Additionally, it has been noted that a web site's sociability, visual components of information display, and other aspects of its environment might influence how users view its offerings and their perceived worth (Puccinelli et al., 2009). Likewise, Rose et al. (2012) research revealed that customers make judgments about a provider's website based on their cognitive and emotional processing of the material, which impacts their memories and affects the customer experience. Technology is crucial for the customer experience, according to researchers (Flavián et al., 2019a; Verhoef et al., 2009). For instance, Flavián et al. (2019a) suggested that technology may assist or empower the customer experience and provide new experiences along the customer journey. According to Thomas (2017), emerging new digital technologies is the driving force behind individualised experiences. The customer experience can be transformed by digital technology, according to Parise et al. (2016). According to Rodríguez et al. (2016), technology-based resources can support the customer experience when they are buying. Researchers have examined how mobile and online services contribute to satisfying customer experiences (Kang & Lee, 2018; McLean et al., 2018). New digital technologies are becoming more and more crucial in enhancing the customer experience. Studies on the effects of developing technology on customer experiences are becoming more prevalent (Sun et al., 2022). For instance, Chylinski et al. (2020)

conceived the idea of augmented reality marketing and thought it might enhance customer experiences and decision-making. Dacko (2017) discussed how mobile augmented reality apps support smart retail environments and provide users with valuable experiencing opportunities. The effects of virtual, augmented, and mixed reality technologies on the customer experience were discussed by Flavián et al. (2019a). In addition, Tom Dieck and Han (2022) examined how immersive technologies like augmented and virtual reality fit into the customer experience management procedure. The customer experience is undergoing a significant transformation, according to Hoyer et. al. (2020), abreast of the latest technologies like the Internet of Things, augmented reality, virtual reality, mixed reality, virtual assistants, chatbots, and robots.

The modern retail environment is shaped by the use of advanced technologies, which has the ability to enhance the customer experience (Sun et al., 2022). The significance of technology for the customer experience has been underlined by researchers (Sun et al., 2022). For instance, Foroudi et al. (2016) pointed out that for businesses to innovate technically affects the customer experience. Rodríguez et al. (2016) in their study claimed that utilising technology is essential to creating a positive customer experience. The researchers set up a framework for creating a better shopping experience for customers termed "shopping experience design," which places emphasis on technology (Sun et al., 2022). The impact of virtual reality, augmented reality, and mixed reality technologies on the customer experience were investigated by Flavián et al. (2019a). They stated that these technologies might provide a new experience that includes a faster and more convenient purchasing process, tailored purchasing experiences, improved interactive purchasing customer experiences, and a new experience (Sun et al., 2022).

Technological breakthroughs are revolutionising the customer experience and the capabilities of service organisations and systems (Breidbach et al., 2018), plaguing the customer experience (Lemon & Verhoef, 2016; Van Doorn et al., 2017). A future customer may interact with a service robot and sensors integrated into the servicescape, a smartphone application, and a human being at the same time who may be an employee or a friend (Bolton et al., 2018). Information services are one of several key economies for products and services supported by the internet (Bolton et al., 2018). Businesses are implementing cutting-edge digital technologies, including mobile, location-based, virtual reality, digital twins, blockchains, artificial intelligence, wearable technology, neuroscience, and business process automation (Bolton et al., 2018). Digital technology may create a highly personalised and immersive environment, enabling interaction and rich information flow between the business and the customer (Parise et al., 2016), thus altering customer expectations, behaviour, and experiences (Bolton et al., 2018). With the help of modern digital technology, virtual experts, or customer service representatives, may now respond to inquiries, make suggestions, and give guidance in any setting or format (Breidbach et al., 2018). Digital agents that communicate with users through mobile apps or augmented reality technologies are examples of virtual experts, as are actual experts that connect to the customer via video conferencing (Bolton et al., 2018). Businesses need to make it easier for customers to interact with other actors since customers actively co-create experiences (Bolton et al., 2018). Through cell phones, social networks, and other channels, customers can have repercussions on other customers (McColl-Kennedy et al., 2015; Tombs & McColl-Kennedy, 2013). Customer experience has been affected due to increased social media participation (Tyrväinen, 2022).

Business managers and experts believe that service refinements that produce new value propositions will benefit AI and "big data" (Hartmann et al., 2016; Huang & Rust, 2018). The way that technology is used in creating and delivering the customer experience must be shaped by individuals and organisations (Bolton et al., 2018). Device and platform connections can build sophisticated service systems that, should they fail, might have far-reaching effects that could be extremely damaging (Bolton et al., 2018). A technology has perceived usefulness and usability, as well as sensation seeking, subjective norms, relaxation, perceived enjoyment, and nostalgia, are all examples of motivational drivers (Kim & So, 2022). Empirical evidence has indicated that customers' online experiences with mobile technologies are influenced by cognitive aspects, including perceived usefulness and considered ease of use (Xia et al., 2018). Kim and So (2022) stated that customer experience was influenced by accessibility, informativeness, interaction, telepresence, temporal dilation, modality, navigability, innovativeness, preview mode, and technological embodiment. Technology features like navigability and modality can improve virtual travel experiences (Choi et al., 2018). In a similar vein, embodied technology and customer experience have been related (Flavián et al., 2019b). Flow experiences can result from website aspects, including design, usefulness, and interactivity (Jeon et al., 2018). The preselected studies also looked at the flow antecedents of social networking sites, such as skills, obstacles, telepresence, and time distortion (Kang et al., 2018).

Companies with an online business model solely utilise their platform, making it crucial to comprehend how customers make decisions using the internet (Kim et al., 2021). As a result, it motivates creative brands to engage customers directly and deliver a memorable customer experience (Hillerborn & Eriksson, 2022). Companies broadcast all brand interactions to online touchpoints (Hillerborn & Eriksson, 2022). Prior research has found how a product's uniqueness increases interest in an online brand (Weber & Chatzopoulos, 2019). The customer's sense of community is essential to establishing a strong online brand and developing a captivating customer experience through online touch points (Weber & Chatzopoulos, 2019).

Meanwhile, Hillerborn and Eriksson, (2022) discovered that the elements that customers appreciate the most when engaging with an online business are connected by a strong emphasis on a user-friendly webpage that includes comprehensive information about the products, business, and safety measures. Customers value user-friendly web solutions to browse products and seek information before purchasing (Yin & Xu, 2021). Companies' safety measures for customers influence the customer experience (Arora et al., 2020; Cao et al., 2005; Kim et al., 2021). The system's ease of use or associated device also affects the customer experience in an online business setting (Zott et al., 2000). The empirical evidence revealed that the ease of use of the system or connected device affects the customer experience in an online business context (Arora et al., 2020; Cao et al., 2005; Kim et al., 2021). Customers value intuitive web solutions that allow them to browse products and gather information before purchasing (Yin & Xu, 2021). Customer experience is also impacted by businesses' safety precautions for customers (Zott et al., 2000). The online touch points embodying the aspects of the flexibility of fulfilment, simplicity of payment, and convenience of sharing play a crucial role.

Additionally, these dimensions positively impact enhancing customer experience, which includes the convenience of sharing through social media, the flexibility of fulfilment that demonstrates interconnection among touch points, and simplicity of payment, such as seamless mobile payments and

effectiveness. On the other hand, social media's significance in the customer journey has also grown (Tyrväinen, 2022). Customers are more inclined to utilise it for information searches and not only for sharing their experiences with their social networks (Tyrväinen, 2022)

3. Methodology

This study utilized a purposive sampling design. The target population for this research was Malaysian utility customers in Malaysia, which includes domestic, government, and business segment. The cross-sectional online survey was conducted from June 2022 to August 2022. A link to the survey deployed in Survey Sparrow was delivered to Malaysian utility customers via a Facebook community group page, WhatsApp group, and TNB customer database. The anonymous survey questionnaire took 15-20 minutes to complete once participants agreed to participate. The 3000 respondents that participated in this study were collected to analyse the effect of online touch points on utility customers' experience.

The study adapted validated scales to operationalize the variables and had shown good explanatory power in the previous literature. The adapted questionnaire consisted of 8 touch points used in assessing electricity usage in Malaysia from three different customers' segmentation and the questionnaire comprised two major parts. First part, the questionnaire laying out each touch points entailed three parts of major concern in this study, which the first one encompassed the expectation and real experiences from customers' insights, the second part consisted of customers' suggestion, complaints and recommendation for their future needs, and the third part comprised the effort score using the touch points. Meanwhile, the second major part is comprised of a demographic profile. These two major parts were devoted to constructing the main variables and thus detailing the items related to the independent and dependent variables. The questionnaire was anchored on a five-point Likert scale where "strongly disagree" was represented by 1, and "strongly agree" was denoted by 5. By exploring effectiveness of online touch points' customers' experience in the Malaysian utility industry, TNB can discover the pain point of the customers' experience and, more importantly, investigate the need and expectation analysis that may help them generate need metrics and measure the gap score for continuous improvements.

Acknowledgments

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