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## Blending Internet-of-Things (IoT) solutions into relationship marketing strategies

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### ABSTRACT

With contemporary life becoming more instantly connected and as the disruptiveness of technologies is occurring at a faster pace, the Internet-of-Things (IoT) is now even more accessible and common, prompting companies to adopt IoT solutions to improve their customers' experiences. IoT enables physical devices to connect and exchange data through the Internet by collecting strategic information, thus creating opportunities for companies to become more efficient and responsive to market changes. This paper thus investigates how companies are blending IoT solutions into their relationship marketing strategies and focuses on finding how this combination can boost business performance and what the challenges are when dealing with disruptive technology changes.

To explore the subject's detailed information and to get a better understanding of managerial decisions concerning IoT, this research conducts in-depth case design analysis from a company's point of view. The data presented herein come from two main sources: open-ended interviews and direct observations, with the interviewees holding high managerial positions in Taiwan's IoT industry. This study aims to contribute to the literature by bringing awareness to the importance of closely following technological trends in combination with relationship marketing strategies and how they help firms remain competitive and profitable.

The results of this empirical research shed light on the importance of understanding the impacts of IoT solutions on businesses, especially on clients' behaviors and the development of targeted strategies. The cases herein present similarities on the awareness of the speed of disruptive technologies like IoT, the importance of developing new solutions aligned with new technologies, their impact at creating new business solutions, and their contribution to the development of firm strategies. The findings also show that the application of innovative IoT solutions positively affects the process of developing long and successful relationships through relationship marketing actions. Conversely, concerns related to data security vary according to business segments and relationship marketing pillars such as trust, commitment, and reliability, which could help reduce feelings of ambiguity.

This research contributes to filling the gap in the literature by offering a deeper understanding of the correlation between IoT and relationship marketing. Moreover, we illustrate how a combination of these two factors can contribute to the development of stronger marketing strategies, as well as their implications on business. The results of this research suggest further and more comprehensive investigations are needed in the future in order to explore the topic in greater depth and to see how the speed of technology is evolving.

### 1. Introduction

Conducting business globally has become quite common for many companies over the last few decades, especially taking into account the speed of technology advances and the expansion of globalization. The use of Internet or e-commerce helps firms tap new markets and provides opportunities to increase their competitive advantages globally. Along with this, the popularity of online shopping has grown considerably,

and companies are investing vast sums of money on expanding their business through online channels.

Many researchers and practitioners have focused their attention on the speed at which technology has evolved and the way people and industries interact through new innovative technologies. Information and communication systems have been a part of people's daily lives for many years, with the result generating an enormous amount of data that can be stored, mined, and analyzed (Gubbi et al., 2013). In a world

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with Internet-of-Things (IoT), anything can be connected and communicated intelligently. With the popularity of online shopping, business owners are now interested in finding creative IoT solutions to their e-commerce in order to attract more customers.

IoT overall has the potential to drastically change how companies interact with their costumers and also how people interact with products and the Internet. Accessing products through IoT technology helps provide a wider exploration of digital services and experiences, creating a revolutionary way to connect businesses and costumers. This paper aims to shed light on how this combination can boost business performance and the challenges behind dealing with fast disruptive technology through an investigation into the way companies are blending IoT solutions and relationship marketing strategies.

The paper is organized as follows. [Section 2](#) presents the relationship marketing literature theory, introduces the IoT literature, and shows the causal interrelationship between the two. [Section 3](#) illustrates the methodology and steps taken to develop this study. [Section 4](#) addresses practical cases and the inferences obtained through an analysis of them. [Section 5](#) offers conclusions and future research suggestions.

## 2. Literature review

### 2.1. Relationship marketing

Over the past 20 years there has been a growing interest in the concept of relationship marketing among practitioners and academics ([Gummesson, 2002](#); [Morgan and Hunt, 1994](#); [Parvatiyar and Sheth, 2000](#); [Sheth and Parvatiyar, 2002](#)). The topic has developed over the years as a new and interesting strand of marketing that focuses on establishing long-term relationships with customers and other parties. It is based on three main principles: trust, mutual value creation, and commitment. Establishing a strong relationship with customers generates an outstanding level of customer satisfaction, which in turn helps gain their trust and their loyalty, thus benefitting the company as a whole ([Payne et al., 1995](#)). The overall literature on relationship marketing agrees that the quality of the relationships among the participants is an important determinant of their longevity, thus leading to the success of relationship-marketing practices.

[Koiranen \(1995\)](#) explains relationship marketing as a way to establish, cultivate, and enhance long-term relationships with customers and other stakeholders. As stated in the relationship marketing theory, relationships represent much more than the goods and services provided by a supplier to its customers; thus, service quality aspects are not the only things influencing business loyalty. Even so, service quality is considered essential for customer satisfaction as is often discussed in the literature ([Anderson et al., 1994](#); [Brady and Cronin Jr, 2001](#); [Cronin Jr. and Taylor, 1992](#); [Dick and Basu, 1994](#); [Gotlieb et al., 1994](#); [Parasuraman, 1998](#)).

One primary assumption is that a relationship helps participants to meet their objectives, and depending on the stage of the relationship (whether at the beginning stage, cultivating stage, or enhancing stage) the strategic implications might vary. As a result, firms must pay attention to different aspects through the different stages, from creating customer knowledge to shaping its perceptions.

The relationship between an organization and its customers is strengthened by many attractions displayed by multiple marketing actions ([Berry et al., 1983](#)), leading to further customer retention. Relationship marketing embodies tactical and strategical elements that can positively impact a firm ([Grönroos, 1996](#)). According to [Landry \(1998\)](#), relationship marketing can be defined as an expanded database created by a firm to get a better understanding of its customers' profiles, therefore facilitating the development of relationships through the exploration of different communication channels and further delivering value and service. [Armstrong and Kotler \(2000\)](#) emphasize that relationship marketing is a relationship process for developing, retaining,

and boosting mutual value among firms and customers or other stakeholders, focusing on a long-term arrangement that can transfer value to customers. The implementation of relationship marketing endeavors to enhance the value of an enterprise to its customers along with the long-term relationship between them ([Bruhn, 2003](#)). Fundamentally, customers and firms both derive value and gain from a mutually beneficial relationship, providing a win-win situation as intended by the marketing concept ([Baker, 1975, 2009](#); [Gummesson, 1999](#)).

Relationship marketing theory focuses on comprehending the main drivers that influence the critical outcomes for the firm, as well as the reasons behind the relations between these drivers and outcomes. All the activities embedded in relationship marketing are fundamentally evaluated on the basis of the company's overall profitability. However, there are numerous variables largely independent that influence a firm's profitability, and these variables are not necessarily related to relationship marketing actions. Considering this, we note two main points in the marketing literature that discuss important relationship marketing outcomes: customer word-of-mouth communication and customer loyalty.

Relationship marketing explores the marketing concept further, by focusing on the customer as an important representative figure, exploring a promising way to acquire competitive advantages through the exchange of information and closer to the customer, strengthening the bond to be truly advantageous to both parties, and committing both buyers and sellers to work toward achieving long-term benefits that offer greater chances for a successful relationship ([Ganesan, 1994](#)). Relationship marketing can be a challenging concept to implement, and the development of close bonds with customers is not always possible or alluring ([Webster Jr., 1992](#)). Developing desirable bonds can be costly, especially considering the time and resources allocated during the process, without even taking into account the resistance that customers may present to the seller's attempt at establishing such relationships.

With the advances of the Internet and technology, the 21st century is already demonstrating a favorable time for tapping into different forms of communication with customers and for exploring how to access the large amount of available customer data. Sellers can utilize technology to go through large amounts of data, deriving specific information and gaining insights about customer preferences and behavior. Therefore, they can design more suitable solutions and products to meet their customers' needs.

The value of relationship management for business is considered essential for the development of any firm, and the quality of the relationship determines continuity of the business relationship in the future. The strength of the relationship can be seen as a competitive edge in any industry sector, and the quality of the relationship determines the type of maintenance of this competitive aspect.

The concept of relationship quality is not widely employed in the relationship marketing literature. Several studies have, however, applied concepts and measurements used in social psychology to identify specific components of relationship quality. According to [Wray et al. \(1994\)](#), the composition of relationship marketing is complex with a strongly relevant interaction among its components, and the elements that predict and determine relationship marketing are not easily determined. The inherent ambiguity existent in theories on this topic results in a lack of a commonly accepted definition for relationship marketing in the literature ([Ashnai et al., 2009](#)). However, many researchers cite commitment, trust, and relationship satisfaction as the focal dimensions of relationship quality ([Smith, 1998](#); [Ulag and Eggert, 2006](#)).

### 2.2. IoT

Over the last two decades, IoT has been the subject of ever-growing global interest ([Martínez-Caro et al., 2018](#)). Its concept was introduced in 2005 ([Yang et al., 2013](#)), and recent trends in IoT research have been stimulated by applications and the need for convergence in a great

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