



# Influence of Modern Retail, Digital Marketing, and Technological Infrastructure Toward Traditional Retail in Indonesia

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**Abstract.** Digital transformation is concerned with the changes caused by digital technologies in the business model of companies, resulting in changes in products or the structure of the organization or the automation of processes. The disruption caused by digitalization has triggered significant upheaval within the retail industry, with traditional offline firms worldwide facing unprecedented challenges [1]. This disruption is exemplified by the success of online store giants like Tokopedia and Shopee, which have rapidly seized market share. As a result, traditional retailers are compelled to confront this existential challenge by reconfiguring their business models while leveraging their offline strengths.

**Keywords:** Modern Retail, Digital Marketing, Technological Infrastructure and Traditional Retail

## 1 Introduction

### 1.1 Background

Changes brought about by digitalization in the world of entrepreneurship are growing rapidly. Everything we need can be found on various e-commerce sites. Everything we buy is available on e-commerce at a much cheaper price than when we shop at offline stores. This should change merits our attention. This is a topic worth further exploring because many traditional industrial sectors will be affected by online stores like this. Due to the advantages of online stores, their process tends to be cheaper in terms of cost of production. They may not require a place to sell but only a warehouse to store goods. Apart from that, online stores also have a significant advantage in digital marketing which can create advertisements in any area via social media platforms. This is what makes traditional retail threatened by the rapidly developing technological infrastructure and that is something we cannot avoid. Yet we must be able to adapt and must be able to see this as an opportunity.

Innovative company models, technological advancements, and customer-focused strategies that completely reshape the competitive environment are all introduced by entrepreneurial endeavors, which are essential to this revolutionary journey. often revolves around identifying and seizing a market opportunity, which is frequently rooted in previous experiences. This process involves entrepreneurs drawing upon their past encounters, learnings, and observations to discern gaps or untapped potential within a

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market. By leveraging insights gained, whether through personal ventures or professional roles, entrepreneurs can identify areas where innovation, improvement, or disruption is needed.

## 1.2 Research Problem

1. How do modern retail and traditional retail influence market dynamics and overall competitiveness?

In the rapidly evolving landscape of Indonesia's retail sector, understanding the nuanced impact of Modern retail on market dynamics, consumer behavior, and overall competitiveness within traditional is important. This research aims to investigate the intricate interactions between entrepreneurial initiatives and traditional retail, aiming to uncover the mechanisms through which such modern retail influences the broader market landscape.

2. How does traditional retail utilize digital business and marketing channels and traditional methods to reach and engage consumers effectively?

With technological Infrastructure and changing consumer preferences, traditional retail enterprises in Indonesia face the imperative to adapt their marketing strategies to effectively engage and retain consumers. The purpose of this research is to explore the strategic approaches adopted by traditional retailers both digital marketing channels and traditional methods, to enhance consumer reach and engagement in the Indonesian market context. Through a multi-methodological approach integrating qualitative interviews, quantitative surveys, and observational studies, this study seeks to unravel the nuances of traditional retailers' marketing strategies, assessing the efficacy of digital versus traditional approaches in driving consumer behavior and fostering brand loyalty. Furthermore, by examining factors such as resource allocation, technological proficiency, and organizational culture, this research aims to identify the determinants of successful marketing strategy implementation among traditional retail enterprises.

3. What are the barriers to the adoption and integration of technological infrastructure within traditional retail businesses, and how do these barriers affect competitiveness and sustainability?

The integration of technological infrastructure holds immense potential to enhance operational efficiency, customer experience, and competitive advantage within traditional retail businesses in Indonesia. However, the widespread adoption of such technologies is often impeded by various barriers. This research endeavors to identify and analyze the primary barriers hindering the adoption and integration of technological infrastructure within traditional retail establishments. Furthermore, by examining the interplay between technological infrastructure and market dynamics, this research seeks to provide actionable insights for overcoming barriers and unlocking the transformative potential of technology within traditional retail enterprises.

### 1.3 Research Questions

1. Does modern retail influence infrastructure technology?
2. Does digital marketing influence traditional retail through infrastructure technology?
3. Does digital marketing have a direct effect on traditional retail?
4. Does Technological Infrastructure influence traditional retail?

### 1.4 Research Objective

1. To analyze the relationship between digital marketing and its influence on traditional retail through the utilization of infrastructure technology.
2. To evaluate the direct influence of modern retail on technological infrastructure.
3. To investigate the direct effect of digital marketing implementation on traditional retail, assessing the immediate and observable impact of digital marketing approaches on the performance and competitiveness of traditional retail businesses.
4. To assess the impact of digital marketing on traditional retail, considering both direct and indirect effects.

## 2 Literature Review

### 2.1 Modern Retail

Modern retail gives enormous pathways for brands to create and deliver their values [1] because the modern model refers to a business model whose value proposition is fully embodied within the business enabled by digital technologies [2] Modern retail appears to have more advantages because it is visible both to stakeholders and clients [3] such as who the targeted customers are, the value proposition that they offer to their consumers ways to deliver the values to customers, and value-capture activities, such as handling profits and expenses [4].

There has been a noticeable evolution in the way entrepreneur businesses operate, transitioning from conventional and traditional methods to more modern and advanced approaches. This transformation has been largely driven by the rapid advancements in technology that continue to unfold. As technology becomes increasingly Improved, it has become a catalyst for change, revolutionizing the entrepreneurial landscape [5].

Entrepreneurs are now compelled to adapt to these evolving technological developments to remain competitive in the market. In the past, businesses may have relied on traditional practices such as offline stores or manual processes. However, the landscape has shifted so fast, with technology now playing a central role in nearly every aspect of business operation. From e-commerce platforms to data analytics tools, entrepreneurs are leveraging a wide array of technological solutions to streamline

processes, enhance efficiency, and improve customer experiences. For example, the advent of social media and digital marketing has opened new avenues for businesses to reach and engage with their target audiences in ways that were previously unimaginable.

## **2.2 Digital Marketing**

Digital marketing has emerged as a central focus in the realm of digital transformation. There is a noticeable shift from traditional marketing methods towards more advanced digital marketing strategies. This trend highlights the importance of leveraging new technological opportunities offered by digitalization to enhance marketing efforts [6].

Digital marketing plays a crucial role in the broader landscape of digital transformation. It leverages various digital channels and technologies to connect with customers, promote products, and drive business growth. Despite its clear advantages, small and -medium-sized enterprises (SMEs) have not yet fully harnessed the potential of digital marketing compared to larger enterprises (LEs). This discrepancy presents significant opportunities for SMEs to adopt digital marketing strategies and improve their competitive stance [6].

Marketing strategies are increasingly being directed towards the opportunities provided by digital technologies. One such opportunity is responsive marketing communication, which creates a direct feedback loop from customers back to the organization. This allows businesses to quickly adapt and respond to customer needs and preferences, fostering stronger relationships and improving customer satisfaction [6].

## **2.3 Technological Infrastructure**

Technological infrastructure, which integrates information, computation, communication, and interaction, is drastically changing company planning, business processes, firm capabilities, commodities and services, and key exchanges between organizations in expanding commercial partnerships [7]. Technological infrastructure has become a prominent topic as a driver of new business models [8].

Technology has provided various opportunities for companies to interact with their customers and this, in turn, has led to business model innovations. The fashion industry has become increasingly reliant on digital technology [9].

Social media, digital marketplaces, and electronic payment systems have all enabled small businesses to quickly expand their operations and internationalize at a low cost [10]. At the same time, these technologies have enabled fragile incumbent businesses to reposition themselves within an industry. The capacity difference between giant firms and small newcomers to the market or industry is narrowing thanks to digital technologies, making competition more intense [11]. Digitalization can be viewed as an entrepreneurial process that helps firms review existing business models. It has long been recognized as one of the most significant factors of organizational transformation. According to studies, IT serves two functions in organizational change: as an operand resource that helps or enables organizations to be more efficient and effective, and as

an operant resource that operates as an active agent to trigger or initiate business innovations.

## **2.4 Traditional Retail**

The competition between traditional and modern retail is surrounded by various internal and external factors, with one key internal factor being the amount of capital held by traditional retailers. Capital limitations directly impact several critical aspects of traditional retail operations. These limitations restrict the number of available products, leading to frequent stockouts and reduced purchasing power, which in turn hampers profit margins [12]

Limited capital affects product diversity, making it challenging for traditional retailers to offer a wide range of items that cater to diverse customer preferences. This lack of variety can drive customers towards competitors who can provide a broader selection. To overcome these capital limitations, traditional retailers need access to credit from financial institutions. Access to credit allows retailers to expand their inventory, ensuring a consistent supply of products and the ability to purchase in bulk, which can reduce costs and improve profit margins. It also enables them to diversify their product offerings and respond more swiftly to market trends, enhancing customer satisfaction and loyalty [12].

The product supply strategies of traditional and online merchants. In a simplified arrangement, the traditional retailer sells unique products to an online retailer, who also sells common products from third-party suppliers or the traditional retailer. When offering common products, traditional retailers suffer difficulties since they must commit to completing orders placed by online retailers, which may result in cost disadvantages when compared to third-party suppliers. This disincentive may deter traditional retailers from providing common products unless they have a large cost advantage in sourcing.

Traditional retail rivalry with modern retail is influenced by both internal and external factors, one of which is the quantity of capital retained by traditional shops. Traditional retailers' capital limitations will have an impact on the number of products available, product diversity, and brand diversity. To circumvent the constraints of capital owned by traditional shops, they have access to financing from financial institutions [13].

## 2.5 Research Model

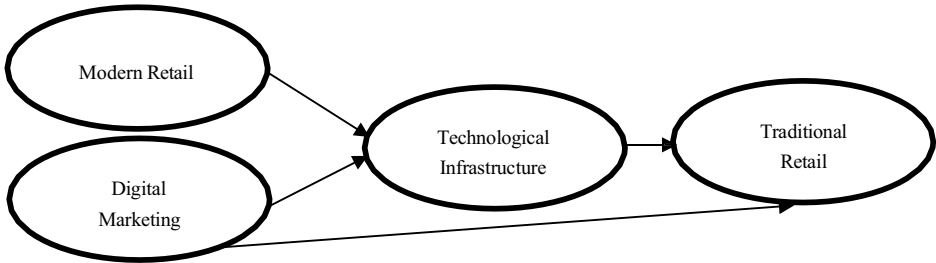


Figure 1 Research model

## 2.6 Hypothesis

H0: There is no significant positive relationship between digital marketing and its impact on traditional retail.

H1: There is a significant positive relationship between digital marketing and its impact on traditional retail [6]

H0: There is no significant positive relationship between modern retail and its impact on Technological Infrastructure

H2: There is a significant positive relationship between modern retail and its impact on Technological Infrastructure [14]

H0: The impact of digital marketing on traditional retail is not mediated by technological infrastructure.

H3: The impact of digital marketing on traditional retail is mediated by technological infrastructure [15].

H0: There is no significant positive relationship between technological infrastructure and traditional retail.

H4: There is a significant positive relationship between technological infrastructure and traditional retail [14]

## 3 Research Method

### 3.1 Type of study

The purpose of this study is to examine the influence of modern retail, digital marketing, and technological infrastructure on traditional retail in Indonesia. This study used a

quantitative explanatory study as its research method. In order to quantify and explain a particular phenomenon that is happening, the researcher use a quantitative explanatory study approach [15]. Few researchers explain the relationships between variables. Additionally, quantitative research quantifies the relationship between variables.

### 3.2 Unit of analysis

The unit of analysis is the entity being evaluated in a study [16]. There is one unit to analyze; the individual level (consisting of several human beings) The researcher will be measuring the relationship between four variables, which are Modern retail, Marketing Strategy, Technological Infrastructure, and Traditional retail. This research investigated Indonesian Traditional consumers in Indonesia, specifically in the Jakarta area to discover the influence of Technological Infrastructure.

### 3.3 Population and Sampling

The target population is a collection of people (or collections of organizations) who share some common traits that enable researchers to identify and study them [17]. This research will focus on consumers of Traditional retail Industries. The target population of this study is men and women aged 18 and above living in the Jakarta Area

This study is conducted in Jakarta, Indonesia by using a non - probability sampling technique linked with a purposive sampling technique. Purposive sampling is a type of non-probability sampling in which the participants are chosen based on the researcher's judgment. Using certain traits, experiences, attitudes, or perceptions, the researcher makes judgments about the sample that will be studied This study specifically uses purposive sampling as the researcher involves the intention to use; therefore, the sample should be the consumers of Traditional retail industries who feel the influence Entrepreneur venture, Marketing strategy, and Technological Infrastructure.

### 3.4 Sampling Size

The minimum number of participants who are willing to respond to the questionnaire determines the sample size. According to [18], it is recommended in the use of multiple regression analysis. This is because the study involves two or more independent variables. In this analysis, the sample size, and the number of participants should be at least (1) ten times the highest number of formative points for each question and (2) ten times the highest number of total research models. Therefore, it is expected that each will be answered by a minimum of ten interpretations. Below is the formula to determine the minimum and maximum number of respondents for this research [18].

$$40 \times 5 = 200 \text{ required sample size}$$

**The minimum number of respondents required is 200**

### 3.5 Type of Data Collection Method

To identify solutions to the study problems and hypotheses, data collecting is the act of gathering information from all particular essentials [20]. Quantitative research will be used as the data collection approach to measure the relationship between the independent variable and the dependent variable. In the quantitative research, questionnaires will be used. The items on the questionnaires will be based on the independent and dependent variables of this study. The questionnaire will be held online and distributed via Google Form with a Likert Scale to measure: Strongly Disagree 1, Disagree 2, Neutral 3, Agree 4, and Strongly Agree 5. Moreover, the researcher will also use research journals, books, and websites for the secondary data.

### 3.6 Data Analysis Technique

#### 3.6.1 Outer Model

Before testing a concept and research model for relational and causal relationships in a predictive model, it is essential to establish and validate the measurement model. The measurement model plays a crucial role in assessing the validity and reliability of the constructs and instruments used in the research. Validity testing is conducted to determine which research instruments accurately measure what they are intended to measure. The reliability test on the other hand gauges the consistency of measurement instruments in capturing a concept of consistency of respondents in responding to questionnaire items or research instruments [19]. It is crucial for the measurement model to be established and validated before proceeding to test the concept and research model in predictive models that investigate relationships. These are the calculations of the outer model:

#### Convergent Validity

The evaluation of Convergent Validity in Partial Least Squares (PLS) is conducted by analyzing loading factors. These loading factors represent the correlation between item scores or component scores and construct scores. An indicator with a value greater than 0.5 is considered to have a significant impact on measuring the construct. Therefore, a higher loading factor value indicates a more crucial role in interpreting the factor matrix. The guideline for assessing convergent validity, suggests that the outer loading should be above 0.5 and the Average Variance Extracted (AVE) should be above 0.5 [18].

#### Discriminant Validity

The discriminant validity test was assessed based on the cross-loading of the construct measurement. In cross-loading measurements, the rule of thumb is  $> 0.5$  [18].

#### Composite Reliability

The reliability composition method is deemed superior for estimating the internal consistency of a construct [18]. Therefore, the author utilizes the reliability composite



to assess reliability, following the guideline that it should exceed 0.5. Consequently, this statistical technique is used to evaluate the internal consistency during reliability testing.

### 3.6.2. Inner Model

The inner model refers to a structural model that predicts causal relationships among the main variables. By utilizing the Bootstrapping process,  $t$  statistic test parameters are employed to forecast these causal relationships. In the context of PLS, the evaluation of the structural model includes examining the R2 value for the dependent construct, as well as path coefficient values or  $t$  values for each path to assess the significance of the constructs within the structural model. The R2 value helps determine the extent to which variations in the independent variable account for changes in the dependent variable. A higher R2 value indicates a more effective prediction model for the proposed research model. However, it is important to note that R2 is not an absolute parameter for measuring prediction model accuracy, as the theoretical relationships serve as crucial factors in explaining causal relationships. The path coefficient or inner model score represents the level of significance in hypothesis testing. For two-tailed hypotheses tested at a 5 percent alpha or 0.05 and a power of 80 percent, the path coefficient or inner model score, as indicated by the  $t$  statistic value, must be greater than 1.96. For one-tailed hypotheses, the score should be greater than 1.64 [18].

## 3.7 Hypothesis Analysis

H1: Digital marketing significantly positively impacts traditional retail, supported by a high  $t$  statistic and very low  $p$  value.

H2: Technological infrastructure mediates the relationship between modern and traditional retail, evidenced by a high  $t$  statistic and a very low  $p$  value.

H3: Technological infrastructure does not mediate the impact of digital marketing on traditional retail, as indicated by a low  $t$  statistic and high  $p$  value.

H4: There is no significant positive relationship between technological infrastructure and traditional retail, confirmed by a low  $t$  statistic and high  $p$  value.

## **4 Conclusion and Recommendations**

### **4.1 Conclusion**

The findings of this study underscore the significant positive impact of digital marketing on traditional retail in Indonesia. The results show that digital marketing strategies significantly enhance traditional retail performance, which highlighted benefits such as increased customer engagement and improved brand recognition. Traditional retail businesses should thus focus on integrating digital marketing to boost their market presence and sales.

The study also reveals the critical mediating role of technological infrastructure in the relationship between modern retail and traditional retail. It indicates that technological infrastructure significantly enhances the positive effects of modern retail practices on traditional retail performance. The importance of technological infrastructure in supporting efficient operations and customer interactions. Investments in technological infrastructure are crucial for traditional retail businesses to fully leverage the advantages of modern retail practices.

However, the analysis shows a limited direct impact of technological infrastructure on traditional retail performance, indicating no significant relationship. Technological infrastructure alone does not significantly drive traditional retail success in developing countries. Future research should explore other factors that may influence these relationships and further investigate the role of technological infrastructure in different contexts.

### **4.2 Recommendations**

Based on the findings, several recommendations for future research include exploring additional mediators like customer satisfaction, brand loyalty, and competitive intensity in the relationship between digital marketing and traditional retail. Future studies should also investigate the role of emerging technologies such as AI, machine learning, and blockchain in enhancing traditional retail performance, and analyze how technological infrastructure and digital marketing influence consumer behavior and purchasing decisions. Additionally, research should focus on the integration of digital marketing and technological infrastructure with other business functions like supply chain management, inventory control, and customer service to provide a holistic view of retail management. These recommendations aim to deepen the understanding of modern retail practices and support the development of effective strategies for traditional retailers in a digitalized marketplace.

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