A Study Evaluating the Adoption of Digital Transformation in Retail Stores with Special Reference to D-Mart

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ABSTRACT: Digital transformation is the process through which businesses use technology into every facet of their business operations to effect significant change. It offers several advantages, including improved productivity, more company adaptability, and, in the end, additional benefits for stakeholders like workers, clients, and shareholders. This research aims to evaluate the digital transformation in retail stores with special reference to D-Mart. The technique used in this study is a Parametric one sample t-test. The outcome of the study indicated that Virtual reality, Contactless payment, Mobile apps, E–commerce platforms, Dmart ready store, Contactless shopping, In-store technology and Avenue Supermart have high adoption, whereas Chatbots, Artificial intelligence, and Customer analytics have low adoption.

KEYWORDS: E-commerce, digital transformation, artificial intelligence.

I. INTRODUCTION

The retailing sector in India is now undergoing a number of changes. Customers enjoy the luxury of selecting the goods and services they want in a variety of configurations to meet their requirements. The word "retail" comes from the verb "retailer," which is French for "to cut off, clip, and divide." The first French word for tailoring was "sale in small quantities" (1365). Its literal meaning in the context of retail was "cut off, shred, paring." A company manages the sale of products or services as a means of distribution and concentrates its marketing efforts on delighting the end user, according to Gilbert, D. (2013). The popularity of retail has always been higher. A retailer's duties may include sorting, breaking up bulk, keeping merchandise, acting as a medium of communication, storing, promoting, and offering a few other services. Prior to independence, the country's well-established commercial houses, most notably the Moss Bros., saw the beginning of organised retail in India.

The sector's third largest retail chain, DMart, has 91 locations throughout India. Avenue Supermarts Ltd. (ASL), its parent business, runs it. R. K. Damani founded the DMart network of supermarkets and hypermarkets in Mumbai, India, in 2000. DMart was established in Mumbai (India) about 23 years ago by its promoters, who wandered the city's supermarkets and cooperative shops and watched the items in shoppers' carts to learn what the public preferred and disliked. Although it is evident that the business had to abide by Sam Walton's standards theoretically, all operational knowledge had been gleaned from the supermarket. There was no reason why a store in India couldn't follow the straightforward strategy that Wal-Mart had used to flourish in the retail industry. In a fundamental sense, DMart's only activities were to observe the shopping carts and read anything they could find on Sam Walton and Walmart. Customers are waiting outside shop doors due to the retailing strategy's spectacular success. In the vast company, the straightforward formula that powers DMart is acknowledged and instinctively recognised as being of immeasurable value. Its simplicity has allowed it to expand well while maintaining a lean structure. One of the keys to DMart's ongoing success is how it has maintained its thrifty approach to retail through all of the changes in the market and internal restructuring over the years. (Pawar & Sangvikar 2019).

Dmart is a one-stop grocery store chain that aims to offer customers a wide range of necessary personal and home items under one roof. Every Dmart store sells products that customers appreciate at low prices, such as "food, personal care products, apparel, kitchenware, bed and bath linens, home appliances, and more". Their major objective is to offer customers high-quality products at fair pricing. At Dmart, outstanding customer service is a top priority.
Digital transformation promotes and facilitates novel approaches of value generation, enabling the satisfaction of persistent customer demand in previously unthinkable ways. As sources of value creation, automation, individualization, ambient embeddedness, interaction, transparency, and control integrate a variety of activities and

processes. Customers choose players that best add value on various dimensions, according to the underlying idea. We prioritise meeting customer expectations, but we also take into account value-creation potential that go beyond actual sales (such effects on the use of the product worth or user interface sharing). (Reinartz et al 2019)

The aim of conducting this research is to evaluate the adoption of digital transformation in retail stores with particular reference to D-mart, one of the leading retail stores available in the country. Dmart has been running a successful business for the past two decades. This study will help anticipate that more enterprises will employ digital transformation technology as the retail sector changes.

II. REVIEW OF LITERATURE

- **Chowdary, G. S., & Sekhar, S. C. (2018).** This study's objective is to outline the marketing strategies and procedures D-Mart employed to register trademarks in India. One of the economies in the world that is growing the quickest is India. The Indian retail market offers several opportunities to retailers and brands from all sectors. These include a big client base, expanding income and job opportunities, increased consumer awareness, etc. The organised retail sector in India, which makes up only 6% of the nation's total retail market, presents a large opportunity for 24,500 new enterprises. Techniques that were unique to Indian retail were embraced by D-Mart. The majority of retail chains up to that point rented their premises, but Dmart carefully considered its findings and, for the majority of part, owned its locations. Since Walmart hasn't ever had to close a store during any of the many years of its existence, this technique has been extremely successful. The innovative strategies and business models employed by D-Mart have much to teach us, especially those that produce substantial revenue and cost-effectiveness. These strategies and ideas are distinct from those used in any other retail marketplace now in use. In contrast to other retail marketplaces, this one has a lot of difficulties, yet the creator was always willing to try some unconventional strategies and perform admirably. His idea of offering items at lesser costs has greatly benefited families in the middle class. Comprehending a company's performance and how it differs from its rivals is simple by considering the following facts and explanations. The business is making steady progress by trying a few online offerings and home delivery services while keeping an eye on its cost-effectiveness.

- **Nadkarni, S., & Prügl, R. (2021).** The authors of this study map the landscape by presenting significant macro- and micro-level observations, summarise current findings primarily drawn from the literature on information systems, and suggest future investigation directions for this broad area. In the report, 58 peer-reviewed publications authored throughout 2001 and 2019 that discuss various aspects of the digital transformation are thoroughly analysed. After conducting their investigation, the authors produce inductive thematic maps that identify actor and technology as the two key components of the digital shift. In order to better understand the details of digital transformation processes and to highlight the most important and unique causes and consequences, the authors construct additional analytical modules for each dimension (a total of nine fundamental themes). In order to assist break down academic silos and reinforce the management viewpoint, the researchers add multidisciplinary insights from "28 papers on technological disruption and 32 papers on corporate entrepreneurship" to the resultant state-of-the-art of digital transformation.. According to the evaluation, several factors—like the modification rate, social and professional surroundings, or an intermediate management perspective—are seriously undeveloped.

- **Pawar, A., & Sangvikar, B. V. (2019).** This paper aims to analyse the DMart retail chain's situation and offer insights into why it has been successful in India. Due to the size of the market and the country's economic might, the retail sector in India is quickly becoming one of the most vibrant and expanding. DMart is an expandingly successful retail supermarket chain in India that seeks to provide consumers with a wide selection of essential personal and home goods under one roof to provide top-notch goods at competitive costs. Customers favour DMart over its rivals because they provide huge discounts and more excellent value for the money. Families and groups with middle-class incomes striving to fulfil most basic consumer demands are their target market. Their approach differs significantly from that of almost every other Indian store. While other businesses have swiftly entered several areas with distinctive retail chains, DMart has limited segmentation. Due to this, DMart is more successful than others. There are various difficulties, but the founder always has some novel strategies ready and performs well. The majority of DMart's clients are middle-class families that like it for its affordability, value, and deals and discounts.

- **Reinartz, W., Wiegand, N., & Imschloss, M. (2019).** Historically, consumers have made purchasing decisions at the shop shelf, providing established brick-and-mortar merchants considerable leverage to understand and shape consumer behaviour. This long-held dominance is in danger from new rivals thanks to the growth of e-commerce, mobile shopping, and, most recently, innovative technology. We examine how digitalisation began to undermine institutional retailing as the critical interface to the customer by adopting a value-creation viewpoint. We create a framework that identifies five new value-creation sources and suggests how they advance and change competition for this interface. Stationary retailing may dominate as a significant interaction point in a multichannel choice journey, depending on the significance of the new sources of value generation (in different buying scenarios). But the widespread use of branded product platforms, such as linked gadgets and online shopping platforms, gives new players more power. It's essential for the parties engaged in this multifaceted competition to recognise the changes and actively manage their place within the changing ecosystems.

- **Stark, J., & Stark, J. (2020).** Digital transformation is the main topic of this graduate textbook. It provides essential answers to significant concerns, such as what technologies may be utilised to change an organisation, which organisational functions can be transformed, and what the purpose of digital transformation should be. The text is structured into three main sections, the first of which serves as an introduction to the subject, highlights critical instances of digital transformation, defines the language, and helps readers quickly grasp its key ideas. Examples of digital transformation in various industries are covered in the book's second section, including government, business, health care, industry, and education. The activities and procedures in a typical digital transformation project are described in the third and last portions of the book. Both students who have never participated in such a curriculum and professionals who intend to execute digital transformation in their organisation will find value in the book due to its educational approach to the process.

- **Vial, G. (2019).** The authors inductively constructed a framework of digital transformation articulated over eight building components through an evaluation of 282 works. The framework highlights digital transformation as a process whereby digital technologies cause disruptions, triggering strategic organisational responses that aim to change their value creation pathways while managing the structural changes and administrative barriers that affect the process's positive and negative outcomes. The results highlight the fact that the environment in which businesses operate is becoming more complicated. As information, processing, communication, and connectivity are improved by digital technology, new types of collaboration amongst dispersed networks of diverse players are made possible. Additionally, they establish interdependence between people whose interests might only partially coincide. This new reality has enormous potential for creativity and performance within organisations, and it has an impact outside of the firm's walls on people, businesses, and society as a whole. The capacity of companies to maintain their competitive edge is simultaneously made more vulnerable than ever since they have less control over aspects of their working environment.
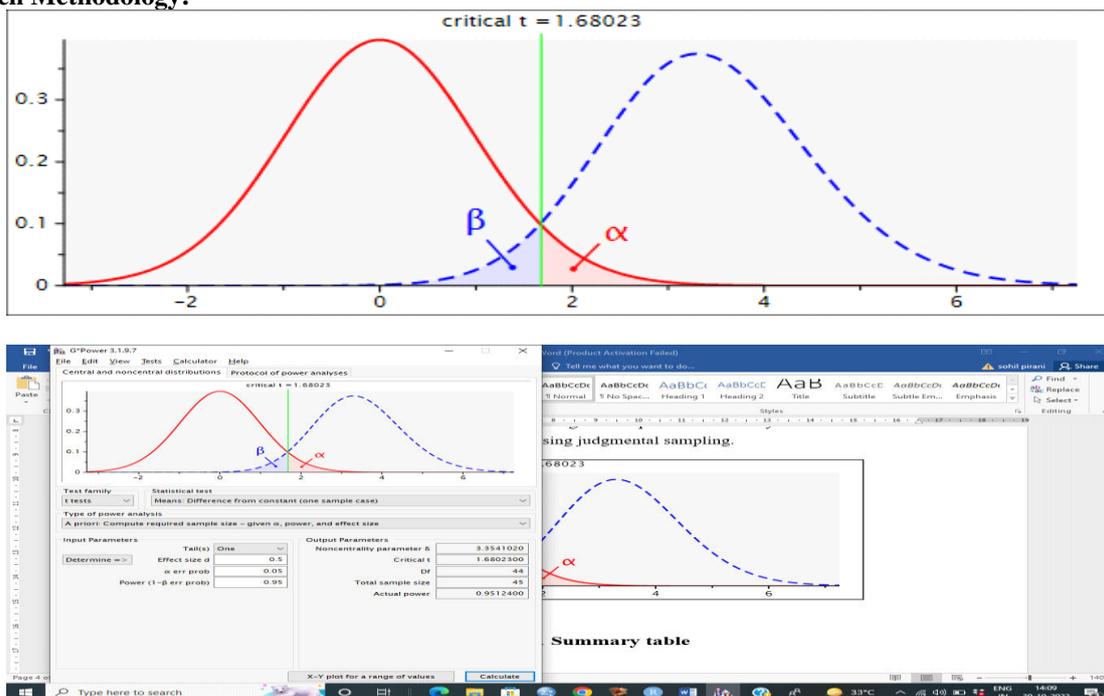
Objective of the Study:
To evaluate the digital transformation in retail stores with reference to Dmart.

Hypothesis:
H_O: The adoption of digital transformation in retail stores is low (Mean score ≤ 3)
H_1: The adoption of digital transformation in retail stores is high (Mean score > 3)

Research Methodology:

A descriptive research design is used for the current study. The sample size selected for the study is 50 managers of Dmart Mumbai Region. The sampling technique used for the present study is non-probability purposive sampling. Both primary and secondary data collection sources have been used. A parametric one-sample test has been used using R studio software. (As per Faul et al. minimum required sample is to run one sample t-test one-tailed=45)

Data Analysis and Interpretation:

Table No: 1 One sample t-test

Items	t – statistics	P – value	Ha: digital transformation in a retail store (Dmart) (mean score > 3)
Virtual reality	**19.95**	**0.000**	**High adoption**
Contactless payment	**20.09**	**0.000**	**High adoption**
Chatbots	**17.22**	**1**	**Low adoption**
Artificial intelligence	**19.34**	**1**	**Low adoption**
Mobile apps	**19.66**	**0.000**	**High adoption**
E-commerce platform	**20.45**	**0.000**	**High adoption**
Dmart ready store	**18.11**	**0.000**	**High adoption**
Contactless shopping	**19.67**	**0.000**	**High adoption**
Customer analytics	**20.11**	**1**	**Low adoption**
In-store technology	**20.76**	**0.000**	**High adoption**
Avenue Super Mart	**18.99**	**0.000**	**High adoption**

Parametric one sample t–test (one-tailed) is applied to examine digital transformation in a retail store (Dmart) through the exploratory research. It is seen that p–value < 0.05 and t statistics > 1.96 for Virtual reality, Contactless payment,

Mobile apps, E–commerce platforms, Dmart ready store, Contactless shopping, In-store technology and Avenue Supermart have high adoption, whereas Chatbots, Artificial intelligence, Customer analytics have low adoption.

Findings and recommendations:
- The Leading technologies in widespread adoption in retail establishments were found to be: Virtual reality, Contactless payments, Mobile applications, E-commerce platforms, Dmart-ready stores, Contactless shopping, In-store technology, Avenue SuperMart
- These technologies enhance client experiences, streamline processes, and improve company performance.
- Chatbots, artificial intelligence, and customer analytics are still in their infancy in the retail industry, despite their promise in automation, personalized consumer encounters, and data-driven insights.
- The adoption of certain digital technologies is slower due to factors like consumer acceptability, data protection concerns, and specialised knowledge requirements.

Recommendation:
- Before introducing new technologies, retail businesses should carefully evaluate the benefits and challenges involved.
- Create technical plans to incorporate digital transformation initiatives successfully.
- To create new possibilities, encourage innovation, and acquire distinct competitive advantages, put your attention on adopting high-adoption technology.
- To fully realise the promise of the digital revolution in the retail business, invest in additional financing, research, and execution in regions with low technology adoption.

III. CONCLUSION

The study emphasises the vital importance of digital transformation to the retail sector. The results show that certain digital technologies have already been widely adopted, resulting in observable improvements in customer experiences, simpler business operations, and enhanced overall performance. For retail businesses, these technologies—such as virtual reality, contactless payments, mobile apps, e-commerce platforms, Dmart-ready locations, contactless purchasing, in-store technology, and Avenue SuperMart—have changed the game. But the report also shows a long way to go before digital transformation reaches its full potential. Some technologies, such as chatbots, artificial intelligence, and customer analytics, are still in their infancy in retail despite their enormous potential for automation, personalised consumer interactions, and data-driven insights. This delayed uptake can be ascribed to several difficulties, including customer acceptance, data privacy worries, and the requirement for specialised skills. Overall, the research's conclusions offer a useful road map for retail companies looking to traverse the digital transformation scenario effectively. Retailers can stay current, promote sustainable development, and provide unmatched customer experiences by embracing the correct mix of technologies and tackling the issues associated with their adoption, positioning themselves for success in the always-changing retail market.

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