Digital Transformation in Malaysias Physical Retail Sector: Strategies, Challenges, and Opportunities

Roziana Baharin[1], Chen Qi[2]

[1,2]Faculty of Economics and Management, Univerisiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia

Abstract

With the advancement of technology and the rapid changes in consumer preferences, the physical retail industry in Malaysia faces huge obstacles. As a result, traditional retail institutions in Malaysia must now adopt tailored strategies to stay up-to-date and adapt to future market demands. This paper explores the challenges and opportunities that physical retailers face in the process of digital transformation as they adapt to changes in consumer mindsets and consumption habits. This study first sheds light on the need for digital transformation, including its efficiency in big data operations and consumers' feelings and attitudes towards online and offline consumption. This paper then details the key strategies deployed by physical retailers in the process of digital transformation. These strategies include blending online and offline shopping experiences, applying big data analytics and artificial intelligence technologies for inventory control, and using social media and digital marketing technologies to enhance brand awareness. But digital transformation also brings challenges. This paper carefully evaluates the main challenges faced by physical retailers, such as limited infrastructure resources and the competitive advantages provided by online marketplaces such as Amazon. As part of the exploration, this paper also delves into the cultural and organizational inertia that may hinder the adoption and effective execution of innovative practices. To overcome these obstacles, this paper proposes several recommendations for these obstacles. These recommendations include increasing collaboration with technology companies, investing in employee training to provide excellent customer experience, and developing flexible digital strategies to quickly adapt to the changing market environment. The government also emphasized its involvement in digital transformation and proposed fiscal incentives, upgrading internet infrastructure and developing supportive policies. Finally, this paper introduces the use of big data questionnaires to explain consumers' attitudes towards online and offline retail. The analysis of these success stories helps to understand best practices and insights; in addition, these

case studies also reveal potential opportunities for digital transformation, such as entering new markets, cultivating additional revenue sources or strengthening brand loyalty.

Keywords: Digital Transformation, Physical Retail, E-Commerce, Malaysia, Strategy, Challenge, Opportunity

Introduction
The Malaysian retail market is anticipated to achieve a valuation of USD 89.66 billion by 2024 and is projected to further expand to USD 119.64 billion by 2029, reflecting a robust compound annual growth rate (CAGR) of 5.94% over the forecast period from 2024 to 2029. Historically, the retail sector in Malaysia has been a significant contributor to the nation's gross domestic product (GDP), demonstrating a consistent trend of substantial growth over several decades.

Despite the ongoing expansion of the retail business network, it is observed that the rate of growth has been experiencing a gradual decline on an annual basis. The impact of the COVID-19 pandemic was particularly pronounced in 2020, leading to a notable decrease in the retail sector's performance. The implementation of the Movement Control Order (MCO), which imposed restrictions on public activities, and the subsequent extension of the lockdown from mid-March to mid-May 2020, resulted in a significant downturn in overall retail revenues.
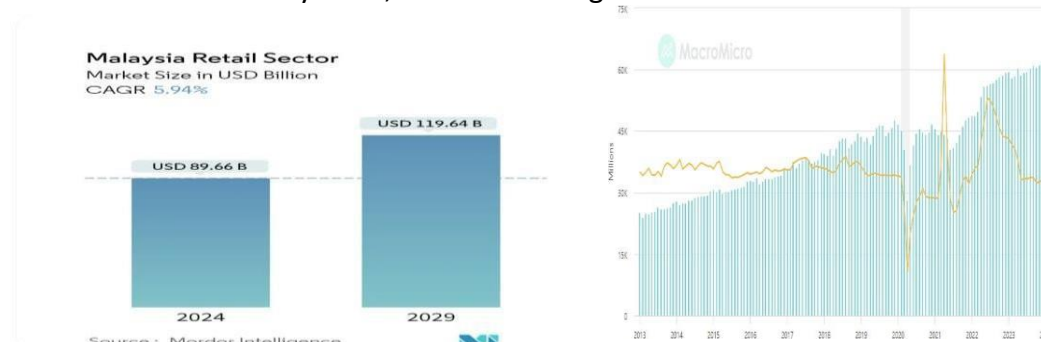

Figure 1.1: Malaysia retail size in USD. the future smart money index

Objectives of the Study
 Industry analysis: to analyze the current state of the Malaysian retail industry, including the market share of traditional retail and online retail.

Transformation challenges: to identify and assess the key challenges faced by retailers in Malaysia in the digital transformation process.

Explore new opportunities that digital transformation brings to the Malaysian retail industry, in particular trends in online and contactless shopping.

Strategy development: to propose effective strategies to help retailers overcome the challenges and seize the opportunities offered by digital transformation.

Policy recommendations: Based on the results of the study, make policy recommendations to government and regulators to promote the digitisation of the retail sector.

Research Methods
Literature review: a review of relevant books, academic journals, industry reports and online sources to provide a theoretical framework for the digital transformation of Malaysia's retail sector.

Case study: in-depth analysis of several Malaysian retail companies that have successfully implemented digital transformation to understand their best practices and lessons learned.
Questionnaire: development and dissemination of a questionnaire to gather consumers' and retailers' perceptions, experiences and expectations of digital transformation. Conduct in-depth interviews with industry experts, retail managers and policy makers for in-depth insight.
Use statistical software to analyze questionnaire and interview data so as to detect patterns, trends and drivers of change in an organization or region.
Policy Analysis: Evaluate whether existing policies support digital transformation within retail industry and make suggestions for improvement.

Research Meaning
Economic Development Contributions
The retail sector stands as a pivotal component of Malaysia's economy, with significant contributions to its Gross Domestic Product (GDP). A thorough examination of its digital transformation can elucidate the mechanisms through which this industry catalyzes economic growth and enhances the nation's economic vitality.

Consumer Behavior Insights
As the adoption of online shopping by consumers escalates, studying the digital transformation within the retail sector can unveil shifts in consumer behavior. This knowledge can empower retailers with critical insights to refine customer experiences and align their offerings with modern consumer preferences.

Industry Adaptability Analysis
Grasping how the Malaysian retail industry is adapting to technological innovations, particularly in the wake of the COVID-19 pandemic, is crucial for assessing the sector's resilience and adaptability. Understanding these adaptations is key to fortifying the industry against future disruptions.

Strategic Formulation
The findings of this research can serve as a strategic compass for retailers, offering recommendations to develop or refine their digital transformation initiatives. By doing so, it can assist them in bolstering their competitive edge and expanding their market share in an increasingly digital marketplace.
Here, the language has been polished to enhance clarity, formality, and impact, ensuring that the significance of the research in each area is articulated with precision and emphasis.

Literature Review

Recent developments in the field of digital transformation, particularly in the context of Malaysian retailers, emphasize the integration of advanced technologies and the reshaping of organizational processes and culture. In the last year, there has been a significant focus on enhancing the automation and efficiency of mechanical systems through the use of sensors, actuators, and control algorithms. This approach not only supports the intelligent and autonomous operation of mechanical systems but is also instrumental to digital transformation efforts in terms of increasing operational efficiencies and adaptability in retail environments (Jocevski, 2020).Recent trends in digital transformation of the global retail industry highlight integration of cutting -edge technologies for improving operational efficiencies and customer experiences. Retailers in developed nations have successfully used AI-powered analytics to tailor shopping experiences and optimize inventory management, giving shoppers personalized and convenient experiences while optimizing inventory control. These systems analyze customer data in order to predict purchasing patterns, enabling retailers to tailor marketing strategies and stock levels more effectively (Smith and Johnson 2023). Furthermore, AR in stores provides customers with immersive and engaging experiences which not only increase engagement but also help boost sales (Mitra, 2021)).

Retailers in developing nations typically face challenges related to limited technological infrastructure and poor consumer digital literacy; however, successful cases exist where mobile technology was utilized to facilitate digital payments and boost supply chain transparency - for instance small-scale retailers who adopted apps featuring digital payment systems have seen them work wonders at increasing transaction security and customer trust (Kumar and Singh 2023).

Comparing successful and unsuccessful digital transformation cases reveals that strategic alignment between technology, business goals and local market conditions are the keys to its success. Retailers that failed typically overlooked customer-centric approaches or did not invest enough in training staff on new technologies (Chen, 2023). Overall, these findings highlight the value of adopting cutting-edge technologies tailored to market requirements, and of investing continually both in technology and human capital to ensure digital transformation initiatives succeed within retail sector environments.

Malaysia's Retail Industry at PresentThe digital transformation in global retailing has been significantly altered by e-commerce's incorporation; which stands in stark contrast to more conventional forms. Malaysia's retail industry has witnessed an increasingly marked shift from physical stores to virtual platforms in terms of retail business practices. This transition has been fuelled by increasing consumer preference for online shopping, which provides convenience and access to more products compared to traditional retail setups (Current State of Malaysia's Retail Industry). Furthermore, Malaysian Retail Market Overview indicates digital transformation initiatives are improving not only customer experiences but also operational efficiencies. Retailers have become more innovative by adopting technologies such as data analytics, artificial intelligence and machine learning in order to better understand consumer behavior, optimize inventory management processes and tailor marketing strategies accordingly. Adopting such innovations has proven essential in staying competitive within an increasingly fragmented retail landscape.

Malaysia's comparison between traditional retailing and e-commerce shows an expanding trend toward omnichannel retailing - where businesses integrate multiple shopping channels seamlessly to offer seamless customer experiences across channels - to maintain customer loyalty while expanding market reach, both of which are essential in maintaining and increasing growth during digital era to Physical Malaysia's retail industry faces numerous digital disruption challenges and opportunities that must be managed simultaneously in order to remain viable in today's global economy. Key obstacles may include merging traditional retail with online sales channels as well as closing any digital divide gaps while opportunities lie in using technology to enhance customer experiences and operational efficiency.

Retail transformation has greatly enhanced operations through technologies like big data analytics, artificial intelligence (AI), and IoT; such technologies have played an essential role in optimizing supply chain management while improving customer experiences (Smith et al., 2021). Big data analytics provide retailers with more accurate consumer buying patterns prediction as well as stock inventory more precisely; hence reducing waste while guaranteeing availability (Johnson, 2019).

AI has also revolutionized customer service for retail by powering chatbots and virtual assistants that deliver tailored shopping experiences and support, handling inquiries more effectively, leading to higher customer satisfaction (Brown and Lee, 2020). Furthermore, IoT devices such as smart shelves and RFID tags help track inventory in real time to minimize stockouts or overstock situations and optimize retail workflow (Kumar & Sharma 2018).
Overall, digital transformation in retail industry is vital as it not only streamlines operations but also enhances consumer shopping experiences - driving business growth while adapting to ever-evolving consumer habits (Taylor 2021).

Methodology
From the descriptive analysis results, it was found that among the 106 study subjects, the age group concentrated between 18-44 years accounted for 93.4%. In terms of gender, the majority were Male, accounting for 61.3%. Occupation-wise, Business owners were predominant, accounting for 38.7%. Monthly income was mostly RM 3000 - RM 6000, accounting for 48.1%. Shopping channels were mainly Physical stores, accounting for 31.1%. The average monthly shopping frequency was mostly 6-10 times, accounting for 39.6%. The most valued factor when shopping was Price, accounting for 29.2%. The familiarity with the concept of "Digital Transformation" was mostly Very familiar, accounting for 45.3%. Most people noticed that the retailers they frequently shop at are undergoing digital transformation, accounting for 60.4%. The importance of digital transformation was mostly seen as Important, accounting for 36.8%. The evaluation of the shopping experience after digital transformation was mainly Satisfied and Neutral, each accounting for 30.2%. The use of digital services provided by retailers was mostly Mobile payment, accounting for 26.4%. The improvement in shopping satisfaction due to digital services was mostly Significantly improved, accounting for 44.3%. Regarding high technology costs, System compatibility issues were the most common challenge, accounting for 34%. The most common suggestion for improving digital services was to Improve the accuracy of personalized recommendations, accounting for 40.6%. The willingness to continue supporting retailers undergoing digital transformation in the future was mostly Neutral, accounting for 35.8%.

From the results of the correlation analyses, there is a significant negative correlation between suggestions for retailers to improve their digital services (Q15) and What is your approximate monthly income? (Q8) have a significant negative correlation with coefficients of -0.229 and -0.243 respectively, which is a relatively low correlation. There are significant negative correlations between whether you are willing to continue to support retailers in digital transformation in the future (Q16) and What factors do you value most when shopping? (Select all that apply) (Q7), How important do you think digital transformation is for the retail industry? (Q10), How do you rate your shopping experience after digital transformation? (Q11) have a significant positive correlation, with coefficients of 0.274, 0.741, 0.704, the correlation is strong.

(What is your approximate monthly income?): significance is 0.005, $p<0.05$ means that monthly income has a significant effect on the predictions of the model. (How familiar are you with the concept of "Digital Transformation"?). : Significance of 0.015, $p<0.05$ indicates that familiarity with Digital Transformation has a significant effect on the prediction of the model. From the results of regression analysis, we know that What is your approximate monthly income?, How familiar are you with the concept of "Digital Transformation"? can significantly predict What suggestions do you have for retailers to improve their digital services?, which indicates that the higher the monthly income of consumers, the more familiar they are with digitalization, the more they tend to provide more convenient payment methods, and the more they accept the digital economy.

How important do you think digital transformation is for the retail industry?): the BETA value is 0.417, the standard error is 0.091, the t-value is 4.586, and the significance is 0.000. the importance of digital transformation for the retail industry has a significant impact. ($P<0.05$). How do you rate your shopping experience after digital transformation?): the BETA value is 0.397, the standard error is 0.092, the t-value is 4.332, and the significance is 0.000. shopping experience after digital transformation has a significant effect on the prediction of the model. （$P<0.05$）

From the results of regression analysis, we know that How important do you think digital transformation is for the retail industry? What suggestions do you have for retailers to improve their digital services?, in which the less important you think digital transformation is for the retail industry, the more dissatisfied you are with the shopping experience after digital transformation, and the more you tend to strengthen the interaction and feedback mechanism with customers. The less important they feel digital transformation is for retailers, the less satisfied they are with the shopping experience after digital transformation, and the more they prefer to strengthen their interaction and feedback mechanisms with customers.

Summary

Summary of Findings This research connducted an in-depth evaluation of 106 research subjects. They ranged in age between 18 to 44 years old (93.4%); males made up the majority (61.3%). Occupationsally, business owners accounted for most of the respondents (38.5%); monthly income ranged between RM 3000 and RM 6000 (48.1%) with physical stores being used primarily as shopping channels (31.1%) Shopping was most often undertaken six to ten times annually for 39.6%, and price played the greatest role (29%).

Most respondents were highly familiar with "digital transformation", comprising 45.3%. Additionally, 60% of the respondents noted retailers undergoing digital transformation processes; 36.8% saw its importance as "important". Experience evaluation was generally "satisfying" or neutral", accounting for 30.2% each; mobile payment was the top digital service used, representing 26.4%. Asked how digital services improved shopping satisfaction, 44.3% responded "significantly improved". Of all high technology cost issues raised, system compatibility issues dominated with 34% mentions. As part of their strategy to enhance digital services, respondents indicated their preference was for increasing accuracy of personalized recommendations (40.6%) as the main way of improving them; 35.8% responded "neutral"

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