INFLUENCE OF USE OF DIGITAL METHODS ON DIGITALISATION IN THE ORGANISED RETAIL SECTOR IN KERALA- A MEDIATION APPROACH

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Abstract

Digital technology in India has been rapidly adopted and is rapidly expanding. Traditional brick-and-mortar retailers must embrace digitalisation in order to remain competitive. Retailers are currently challenged by customers' demands for convenience as well as competitive pricing; due to a lack of time, they want their shopping to be less time consuming and smooth. This paper aims to identify the area in which retail outlets use digital methods and examine the mediating effect of size of outlet on the relationship between use of digital methods and positive outcomes. Data required for the study was collected from organised retailers in Kerala. As per the retail industry update, three major contributors of organised retail sectors are food & grocery, apparel and consumer electronics. A sample of 110 each from these three sectors and a total of 330 samples were selected from retailers using convenient sampling method.

Key words:- Digitalisation, Organised retail sector, Digital methods, Mediation, Size of outlet.

The incorporation of digital technologies into business/ social processes with the goal of improving them is known as digitalisation. Digitalisation is a game changer. It alters how businesses interact with their customers and, in many cases, their revenue streams (scrive). Digital transformation is permeating every field and industry we know today, beginning with mass media and progressing to education, healthcare, finance, and banking.

Organizations go digital to improve their services and facilities in order to

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increase customer satisfaction. The concept behind digital transformation in retail is based on customer needs and requirements. When deciding whether to go digital, retailers consider how they can use emerging technologies to generate new revenue and create innovative business models (Takyar).

Literature Review

(Reinartz, Wiegand, & Imschloss, 2019) aims to identify how well the digital transformation affects value creation in the retail value chain and when will consumer interaction shift from brand manufacturers to retail platforms, as well as when it will remain with stationary retail? It also attempts to identify new research opportunities for marketing research that these developments create.

(Mostaghel, Oghazi, Parida, & Sohrabpour, 2022) Identify the distinct characteristics of digitization-enabled retail business model innovation, as well as how digitalization influences changes in retail business model innovation dimensions.

(Hagberg, Sundstrom, & Zandén, 2016) This paper has outlined the more comprehensive transformations of retail digitalization by discussing how it affects four elements of the retailer-consumer interface. It has examined a) how exchanges are transformed through changes in communication, transactions, and distribution; b) how actors are transformed through the intermixing of humans and digital technologies, increased blurring of boundaries, and new actors, roles, and relationships; c) how settings are transformed to include traditional and new settings, as well as their intermixing; and d) how offering is transformed.

(K & Hebbar, 2021) One of the amazing technologies established by the banking sector is the digital payment system. The main aim of the study is to learn about digital payment systems, identify the benefits of using digital payment on retail shops, and highlight the problems that retail shops face as a result of digital payment systems. This has benefited a growing number of customers. However, most digital payment mode programmes are unknown to the majority of customers. As a result, all e-banking customers should be informed by bank staff. According to the study, all 100 respondents would like to use digital payments in the future. Customers, on the other hand, must be aware of all transactions; if anything goes wrong in their account.

Research Gap

Many studies have been conducted in the area of digitalisation but none of the studies were conducted to study the mediating effect of size of outlet on the relationship between use of digital methods and positive outcomes of digitalisation in the organised retail outlets in Kerala.

Research Problem

The Indian retail sector is undergoing a significant transformation, which can be attributed to factors such as rising income, demographics, and increased consumerism. The Indian retail industry accounts for approximately 10 per cent of GDP and up to 8 per cent of employment. Retailing as a sector is undergoing a massive transformation as a result of the rapid development of new technologies, which is changing not only

consumer purchasing behaviour but also retailer behaviour. Use of digital methods in organised retail sector means use of online and digital technology in the retail outlets. It means use of digital methods in payment, sales, marketing, purchase etc. How far the retail units are using digital methods? In which all areas they are using digital methods? Is there any difference in the way of using digital methods? Does it vary with respect to the size of outlets? Is there a statistically significant relationship between the use of digital methods and positive outcomes of digitalisation, and can this relationship be mediated by a third variable size of outlet? This study aims to find out a solution for these problems.

Significance and Scope of the study

In recent years, the retail industry has undergone dramatic changes in order to improve business operations and become more customer-oriented. According to (Statista, 2022), the retail market in India is expected to be worth $1.7 trillion. Several factors, including changing customer dynamics, trends, and demands, have made it necessary for the retail industry to adopt innovative approaches and adapt to technologically advanced requirements as quickly as possible. The retail industry is transitioning to a more advanced digital scenario and environment in order to carry out operations in a more personalised manner. Currently, the retail industry is expanding beyond mobile and connecting more devices. As faster technology and smart phones have made internet shopping available at people's fingertips, technological advancement has completely changed the mode of shopping. With digital transformation, the in-store shopping experience has also changed, with several stores providing screens or iPads to view product specifications and provide information for marketing lists and customer relationship management.The changing nature of the retail industry necessitates the incorporation of advanced technologies into operations in order to maintain a competitive edge in the market (Bansal). This study will help to identify the influence of digital methods on digitalisation in the organised retail sector. This study is limited to the state Kerala as it is the first digital state in the country. It is also limited to three organised retail sectors i.e., food and grocery, apparels and consumer electronics.

Objectives of the Study

- To identify the use of digital methods in the organised retail sector.
- To test the use of digital methods in the retail outlets varies with respect to size of outlets.
- To examine the mediating role of size of outlet on the relation between use of digital methods and positive outcomes of digitalisation in the retail sector.

Hypotheses

- Ho1: There is no significant difference in the use of digital methods in the retail outlets with respect to size of outlets.

Ha1: There is significant difference in the use of digital methods in the retail outlets with respect to size of outlets.

- Ho2: Size of outlet does not significantly mediate the relationship between use of digital methods and positive outcomes of digitalisation.

Ha2: Size of outlet significantly mediates the relationship between use of digital methods and positive outcomes of digitalisation.

Research Methodology

The research work is descriptive in nature. It includes both secondary and primary data. Secondary data was collected from journals, websites, reports etc. Primary data was collected from the organised retail outlets in Kerala using pretested questionnaire. The population of this study consists of organised retail outlets in Kerala. Non-probability sampling technique is used for selecting the sample respondents. Three cities where there are large number of organised retail outlets i.e., Thiruvananthapuram, Ernakulam and Kozhikode were selected.Three retail sector was selected based on its contribution in organised retail. As per the retail Industry update (Rating, 2019)(IBEF, 2019). Food &Grocery, Apparel and Consumer Electronics holds the major part of organised retail and hence these three sectors were selected.Non probability sampling technique was used to select sample. A sample of 330 was selected using convenient sampling method from the organised retail outlets in Kerala. It includes 110 each from food & Grocery, apparels and consumer electronics. The collected data was analysed using one-way ANOVA, mean, standard deviation, hierarchical regression and Sobel test.

Results & Discussion

In order to identify whether the retail outlets use digital methods in their organisation, the respondents were asked to mark the use of digital methods from 5 being the highest to 1 being the lowest on the variables transfer of payments, selling of goods and services, purchase of finished/semi-finished goods, marketing, inventory management and customer care/ after sale support. Table 1 shows the mean and standard deviation of these variables.

Table 1

Use of Digital Methods in Business

Use of Digital methods in Business	Mean	Standard Deviation
For transfer of payments	3.66	1.06
For selling of goods and services	2.48	1.27
For purchase of finished/semi-finished goods	2.85	1.03
For marketing	3.30	1.32
For Inventory management	4.02	1.03
For customer care/ after sale support	3.41	1.05

Source: Primary Data

The above table reveals that inventory management have the highest Mean (4.02) with standard deviation 1.03 followed by payment with a mean of 3.66 and standard deviation 1.06, customer service with a mean of 3.41 and marketing with 3.30 which means that most of the retail outlets are using digital methods in inventory management, payment, customer service and marketing. Lowest mean is for purchase and sales which indicates that digital methods are very less used in this aspect.

As per the table below, retail outlets with the size 20000 & above sq. ft. have highest mean (25.47) and lowest standard

deviation (1.64). It means that use of digital methods is high in the retail outlet with the square feet of 20000 & above.

Table 2

Comparison of size of outlet and use of digital methods in the retail outlets

Dependent Variable	Size of outlet	N	Mean	Standard Deviation	F	P value
Use of digital methods	Less than 1000	114	15.82	4.40	38.004	.000
	1000-5000	155	20.65	5.19		
	5000-10000	27	24.15	5.39		
	10000-20000	15	24.73	2.93		
	20000 & above	19	25.47	1.64		

Source: Primary data

■ Ho1: There is no significant difference in the use of digital methods in the retail outlets with respect to size of outlets.

Ha1: There is significant difference in the use of digital methods in the retail outlets with respect to size of outlets.

To test the use of digital methods in the retail outlets varies with respect to the size of the outlet, one-way ANOVA test was conducted. As per the result shown in the above table p value obtained is less than 0.05 which indicates that the null hypothesis is rejected and alternate hypothesis is accepted. It can be concluded that use of digital methods varies with respect to size outlets. Multiple comparison test was conducted to determine which among the groups varies significantly and the result is shown in the table 3 below.

Multiple comparison test result shows that use of digital method is same for the retail outlets with size 5000-10000 sq. ft., 10000-20000 sq. ft. and 20000 & above sq. ft., but it is different with respect to rest of the categories of size of outlets.

Table 3

Multiple Comparison Test result of Use of Digital mode and Size of outlet

Size of the outlet		Mean Difference (I-J)	Std. Error	Sig.
Less than 1000	1000-5000	-4.82937*	.58371	.000
	5000-10000	-8.33236*	1.01254	.000
	10000-20000	-8.91754*	1.29937	.000
	20000 & above	-9.65789*	1.17228	.000
1000-5000	Less than 1000	4.82937*	.58371	.000
	5000-10000	-3.50299*	.98656	.004
	10000-20000	-4.08817*	1.27923	.013
	20000 & above	-4.82852*	1.14992	.000
5000-10000	Less than 1000	8.33236*	1.01254	.000
	1000-5000	3.50299*	.98656	.004
	10000-20000	-.58519	1.52347	.995
	20000 & above	-1.32554	1.41663	.883
10000-20000	Less than 1000	8.91754*	1.29937	.000
	1000-5000	4.08817*	1.27923	.013
	5000-10000	.58519	1.52347	.995
	20000 & above	-.74035	1.63400	.991
20000 & above	Less than 1000	9.65789*	1.17228	.000
	1000-5000	4.82852*	1.14992	.000
	5000-10000	1.32554	1.41663	.883
	10000-20000	.74035	1.63400	.991

*Source: Primary data *The mean difference is significant at 0.05 level*

Mediating effect of Size of outlet between Use of digital methods and Positive outcomes of digitalisation

For studying mediating effect of size of outlet between Use of digital methods and Positive outcomes of digitalisation, Hierarchical regression and the Sobel test was used. "The purpose of the mediation analysis is to investigate the relationship between an independent and dependent variable"(Yay, 2017). To test the

significance of the effect the following hypothesis was formulated.

Ho2: Size of outlet does not significantly mediate the relationship between use of digital methods and positive outcomes.

Ha2: Size of outlet significantly mediates the relationship between use of digital methods and positive outcomes.

Table 4 presents the Mediating effect of Size of outlet between use of digital methods and positive outcomes. X is the independent variable (Use of digital methods), Y is the dependent variable (Positive outcomes) and M is the mediator (Size of Outlet). It shows how variable X's causal effect can be apportioned into its indirect effect on Y through M and its direct effect on Y (path c 2) (Bader & Jones, 2021). 'b' is the parameter relating the mediator (Size of Outlet) to dependent variable (Benefits) adjusted for effects of the independent variable, 'a' is the parameter relating the independent variable (Digitalisation) to mediating variable (Size of Outlet). Diagrammatic representation of direct and mediation effect is shown in figure 1 and 2.

Figure 1

Direct effect of use of digital methods and positive outcomes of digitalisation

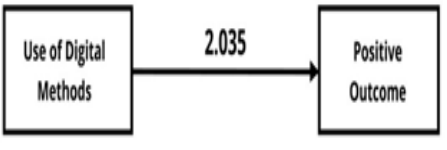

Figure 2

Mediating effect of use of digital methods and positive outcomes of digitalisation

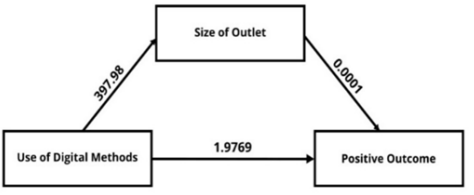

Table 4

Mediating effect of Size of outlet on Digitalisation and its Positive outcomes

Digitalisation - Size of outlet – Positive outcome	Beta Coefficient	Se	t	p
a=b(MX)	397.98	49.5749	8.0279	<0.001
b=b(YM.X)	0.0001	0.0001	2.0639	0.0398
c=b(YX)	2.0348	0.0636	32.0124	<0.001
c'=b(YX.M)	1.9769	0.0692	28.5748	<0.001
Indirect effect	0.0579	0.0296	1.9845	0.0472
Sobel test			0.9923	0.3210

Source: Primary Data

Sobel test was utilized to examine if size of outlet mediated the relationship between use of digital methods and positive outcomes. First, results of simple linear regression show that use of digital method was a statistically significant predictor of positive outcomes of digitalisation (beta = 2.0348, Se=0.0636, t = 32.0124, p < .01). Next, when the mediator, size of outlet, was entered in the regression analysis, use of digital methods was a statistically significant predictor of positive outcome (beta =1.9769, Se=0.0692, t= 28.5748, p < .01). To further investigate the mediator, the Sobel test was utilized to examine if size of outlet significantly mediated the

relationship between use of digital methods and positive outcomes. The results confirmed that size of outlet does not significantly mediates the relationship between use of digital methods and positive outcomes ($t = 0.9923$, $p>0.05$), which means the null hypothesis is accepted.

Major findings

- Most of the retail outlets are using digital methods for inventory management and transfer of payment.
- Use of digital methods in the retail outlets varies with respect to the size of outlets.
- The retail outlets with size of 20000 & above sq. ft. use more digital methods and with size less than 1000 sq. ft. uses fewer digital methods.
- Use of digital methods in the retail outlets with size 5000-10000 sq. ft. is similar with that of retail outlets with size 10000-20000 sq. ft and 20000 & above sq. ft.
- There exists a direct relation between use of digital methods and positive outcomes of digitalisation and while evaluated the influence of third variable (size of outlet) on the relationship between use of digital method and positive outcomes of digitalisation it was found that it has no mediation effect.

Suggestions

- Retailers can increase the use of digital methods for sales, purchase, marketing and customer services.
- Retailers can develop a mobile app for selling their products.
- Retailers can also concentrate on digital marketing.
- Retail outlets with size less than 1000 sq. ft. can at least use digital payment methods.

Conclusion

Organised retail sectors are in the digital transformation stage. The aim of using digital tool is to save time, encourage cashless transactions, provide wide reach for the products etc. The study aims to identify the use of digital tools in purchase, marketing, sales, payment, customer service and inventory management. The usage of digital mode is high for inventory management and payment. They also started to use digital methods for marketing and customer service but in case of sales and purchase it is comparatively low. This means that the influence of use of digital methods towards digitalisation in the organised retail sector is comparatively low. Digitalisation in the retail outlets varies with respect to the size of the outlet but the size of outlet does not mediate the relation between use of digital mode and positive outcomes of digitalisation.

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