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Analysis of barriers in implementation of omni channel strategy

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Abstract — *The rise of internet, technology and digital change has changed retail strategies. Many retailers have begun to develop multi-channel and Omni channel strategies by adding new channels through which they communicate with users. As technological development continues to hinder retail strategies, practitioners of Omni channel discuss how to respond. Specifically, managers are concerned about managing several touch points, which are now simultaneously available to customers. The purpose of this study is to identify the barriers when introducing Omni channel strategy across the other channels and to provide necessary suggestions for successful implementation of Omni-channel strategy in future companies. An extensive literature review is undertaken to identify barriers for Omni channel implementation. The research model of Omni channel proposed in this study has four major categories of barriers as 'strategy related, 'organizational related, 'developmental related' and 'technological related, and that affects customer acceptance of Omni channel. To test the model, a questionnaire is designed. The statistical procedure for modelling is presented. The survey is carried out among the retailers in South India in which they have successfully implemented Omni channel.This study helps in better understanding of Omni-channel implementation barriers for retailers and provide necessary suggestions for future retailers on successful implementation*.

Keywords- Omni-channel, Channel management, Barriers, Questionnaire survey, Structural equation modelling

I. INTRODUCTION

As technology blurs the distinctions between physical and online retailing, retailers and their supply-chain partners will need to rethink their competitive strategies. Shopping via multiple channels- is a rapidly growing phenomenon, with companies continually adding new channels and customers increasingly using them. Customers are now demanding retailers to provide the ability to purchase anything, anytime, anywhere models. We now observe a move to so-called Omni-channel retailing. Omni-channel retailing is taking a broader perspective on channels and how shoppers are influenced and move through channels in their search and buying process. Thus, the concept of "Omni-channel retailing" emerged dissolving the boundaries separating the physical, virtual, and mobile storefronts.

Omni-channel is still in developing stage so only few companies have developed Omni-channel strategy successfully. Companies like Adidas, Zivame, Pepperfry, Raymond's, Van Heusen, AJIO and Big Bazar Direct are those introduced Omni-channel in India. There are many companies which want to shift into Omni-channel but they don't have an insight about the challenges they would face during this big change. In this paper an attempt is made to find out the barriers and their effects on customer acceptance of Omni channel.

II. LITERATURE REVIEW

2.1 Sales channels in retail

A sales channel is a customer-friendly platform that provides products or services. Until recently, the physical store was a stable and important sales channel for retailers (Levy et al, 2013). A retailer can choose between a variety of channel setups such as single- channel, multi-channel and Omni-channel.

A single-channel retailing consists of only one platform to reach the customers. Retailers can use either physical store or an online store as platform (Levy et al, 2013). The physical store is a traditional sales channel.It provides retailers for a direct accessing of customers in person (Agatz et al, 2008). Customers can directly receive the product after purchase and no need to wait for it.It enable touch and try facility before purchasing (Herhausen et al, 2015).But development in technology and internet facility provided a new platform for retailers to meet the customer requirement (Agatz et al, 2008). It enable constant accessibility for customers at all time and everyday. It enable customers for comparing prices and read the reviews about the product and also helps the customers to make purchase decision from their home itself (Johnson et al, 2015).Multiple payment methods are also available for the individual customer like invoice, split payments, card or mobile payment services (Moritz, 2017). Customers can choose place to pick up the products purchased and also have the opportunity to return it at no cost (Ferguson et al,2016).

Levy &Weitz (2013) define multi-channel retailing as a set of activities which are involved in selling products or services through more than one channel. Multi-channel include both physical retail stores as well as an online store and both are working separately to improve their own productivity (Saghiri et al, 2017).Multiple management and geographic seperation can cause problems with inconsistent information about products and inefficient inventory management might arise (Saghiri et al, 2017).Single channel retailers can increase market share by converting to multi channel without physically opening the new store (Kushwaha & Shankar, 2013).On the contrary, one of the main challenges to retailers is cost of providing several channels is higher than a single- channel (Zhang et al, 2010).

Omni- channel retailers provide the same type of customer touch points; online stores, physical stores and advertising as multi-channel retailers (Mansfield, 2014). There is no boundary between the physical channel and the online channel.Customer can buy online and return in the physical store if they don't like it(Beck &Rygl, 2015). Integration of information system in online and physical platforms is needed to enable such an Omni-channel shopping experience (Lazaris&Vrechopoulos, 2014). Another important aspect of Omni-channel retailing is the consistency between the different channels. By consistency, the authors mean that the prices and promotions should be the same in the physical and online store (Beck &Rygl, 2015).

2.2 Barriers in introducing Omni-channel

The challenges and barriers in introducing Omni channel strategy across the other channels is presented on Table 1 and classified these barriers into 4 main categories such as Strategy related, Developmental related, Technological related and Organisational related barriers.

Table 1. Barriers in introducing Omni channel

Barriers	How it affects	Reference
Strategy Related		
Recruitment and Training (RT)	Omni channel operations require staff with different skills, often due to the use of new technology	Barry Berman et al.(2004)
Blurring channel(BC)	Blurring channels into a unique one with various touch points	Picot-Coupey et al. (2016)
Cultural (CL)	Moving from a web culture to a web/physical culture	Picot-Coupey et al. (2016)
Managerial (ML)	Mutualising operational modes, decision-making style, Convincing the staff	Picot-Coupey et al. (2016)
Marketing(MK)	Marketing for Omni-channel retailing is very complex. A successful e- commerce business must be globally aware, system-oriented and customer sensitive.	Picot-Coupey et al. (2016)
Understanding Customer (UC)	A small minority of customers has credit cards and even they are reluctant to put financial information online.	Chopra et al. (2016)
Organizational Related		
Organizational Commitment(OC)	Implementing cross-functional and transversal management	Picot-Coupey et al. (2016)
Level of Investment (LI)	Level of investment required to succeed	Picot-Coupey et al. (2016)
Financial Resources and Lack of Board-Level Engagement (FE)	Major capital expenditures are required by the retailers to redesign legacy IT and logistics infrastructure. Retailers experiences difficulties getting financial investment due to lack of board-level multichannel engagement	Picot-Coupey et al. (2016)
Developmental Related		
Outdated infrastructure(OI)	Even once brands have committed to breaking down organizational silos, oftentimes their Omni channel strategy can still be hobbled by legacy infrastructure that doesn't support a new way of thinking and working. With ideas flowing freely among teams, it's imperative that data can flow freely as well.	Kembro et al. (2018)
Supply chain complexity(SC)	Challenge of supply chain complexity	Ye et al. (2018)
Miscalculating Demand(MD)	In today's Omni channel environment, calculating demand is more challenging than ever	Kho et al. (2017)
Integrating data (ID)	Integrating all data into one place and using it effectively to gain useful insights from them. Such integration would require huge investment in technology and infrastructure.	Ailawadi et al. (2017)
Retailing Mix(RM)	Retail mix is a marketing plan that responds to a set of varying factors, such as location, pricing, personnel needs and offered services and goods. A retail mix plan targets strategies to attract customers and influence their purchasing ability	Picot-Coupey et al. (2016)
Multiplying Touch points(MT)	Breaking silos and barriers between touch points	Picot-Coupey et al. (2016)
Balancing Inventory(BI)	Omni channel retailing requires the right products to be at the right place at the right time. Failing to do this puts the entire	Ali et al. (2017)

	Omni channel system at risk of collapsing.	
Uncertainty Non-digital(ND)	It is a key barrier to consumers' willingness to buy online, for example, the fit and feel of apparel and related categories or the taste and texture of products — is difficult to fully observe and assess without a physical inspection.	Soysal et al. (2019)
Technological Related		
Availability of internet (AI)	Availability of the internet across the country. There are challenges in terms of bandwidth, speed intier III & IV town	Adivar et al. (2019)
Information system(IS)	Merging IS in order to achieve synchronization across channel is difficult	Picot-Coupey et al. (2016)
CRM(CRM)	CRM is an approach to managing a company's interaction with current and potential future customers. The CRM approach tries to analyse data about customers' history with a company, to improve business relationships with customers, specifically focusing on customer retention, and ultimately to drive sales growth	Picot-Coupey et al. (2016)
Security(SY)	Security is the most addressed issue in implementing trust in Omni-channel retailing because the customer's main concern is whether it is safe to conduct online payment to protect business from fatal blow to business.	Xu et al. (2019)
Redesigning IT and Logistics(RIL)	Rebuilding internal elements of IT and morphing legacy systems to answer increased customer demands, increase service, and creating a logistics process that is more agile, able to fly faster and go farther.	Xing et al.(2010)

2.3 Customer acceptance of Omni-channel

Customer satisfaction is outlined as a subjective circumstance wherever a conferred product or service (in different words chosen alternative-in this case, the store) meets or exceeds the expectations (Engel, Blackwell, & Miniard,1990,p.47).In line with another definition, customer satisfaction reflects the slight distinction between customers' before sales expectations and after sales experiences, with efficiency meeting and in reality, surpassing the customer expectations with product and services (Aktepe, Baş&Tolon,2009,p.11).

Store reputation is outlined as customers' overall analysis of the retail store brand (Bao et al., 2011). It represents the flexibility of the sales outlet to deliver valued outcome to customers and different stakeholders (Lee and Shavitt, 2006). as an example, Wang and Li (2012) show that service providers' brand equity positively influences customer acceptance of mobile services. more recently, beck and kenning (2015) demonstrate that retail store image and trait enhances customers' perceptions of product trait and buy intentions for new FMCG merchandise.

Visit frequency tells you how many people visit your store repeatedly for purchasing (and how many repeat visits they make). Therefore, this study considers the role of customer satisfaction, store reputation and customer visit rate as an organisational characteristic facilitating our understanding of customer acceptance of Omni channel

2.4 Omni channel customer acceptance model

The research model of this study, based on barriers and challenges when synchronizing with Omni channel strategy across any other channels is shown in Fig.1

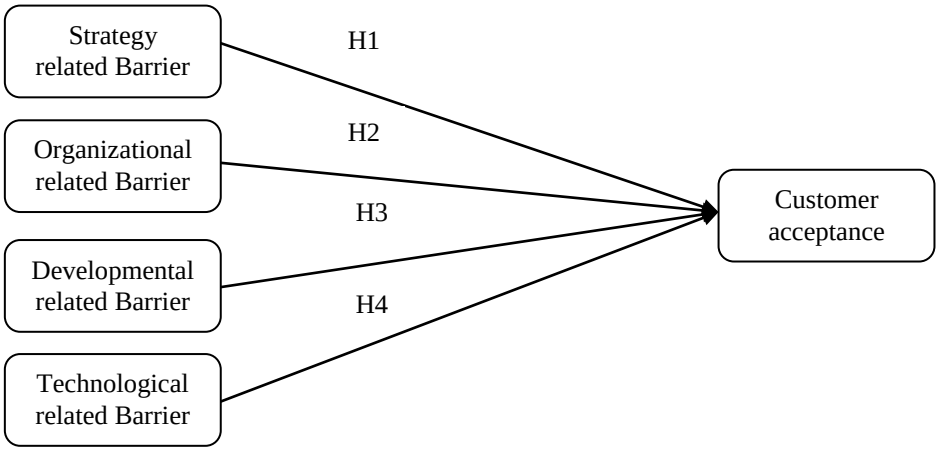

Figure 1. Research model for the Omni channel implementation in retailers

The hypotheses of this research seek to extend the research by examining the influence of barriers in synchronizing to Omni channel system. Thus, we hypothesize that:

H1: There is a significant relationship between strategy related barriers and customer acceptance.
H2: There is a significant relationship between organizational related barriers and customer acceptance.
H3: There is a significant relationship between developmental related barriers and customer acceptance.
H4: There is a significant relationship between Technological related barriers and customer acceptance.

III. METHODOLOGY

Four hypotheses supported by literature review are already presented in the previous section. Details of questionnaire development and description of variables are described in the following two subsections.

3.1 Questionnaire Design

A three part questionnaire was designed for the survey to find the implementation barriers of Omni channel strategy among the retailers in South India who successfully implemented Omni channel. First part contained basic information about respondents such as designation, age and experience and information about organizational details such as product offered, location, sales etc. Second part contained 22 questions on various attributes related to the research model. Respondents provided their response on a 5 point likert scale. The construct and the measurement items are presented in Table 2.

SEM needs to set a prior sample size based on the latent variables, observed variables, and through the power analysis (Westland, 2010; Hair et al., 2013). Sample size criterion was determined by the use of a priori sample size calculator for SEM (Soper,2015). Inputting the required information, such as 80 percent desired statistical power level, 25 observed variables, five constructs, 0.05 probability levels, and the anticipated medium effect size of 0.3, the required sample size obtained from the calculator is 150. This result shows that the sample size of 150 is sufficient for getting reliable conclusions.

Table 2: List of survey items ,mean,standard deviation,reliability

Construct	Items	Measurement items	Mean	SD	Cronbach's α
Strategy Related	RT	Requirement of staff with multiple skillset	3.61	0.93	.908
	BC	Providing multiple touch points for marketing	3.59	0.91	
	CL	Incorporating online and physical store for point of sale	3.5	0.93	
	ML	Management problems in decision making, convincing the staff	3.61	0.92	
	MK	Marketing for Omni channel retailing	3.58	0.95	
	UC	Hesitation by customers to provide financial information online	3.63	0.94	
Organisational Related	OC	Implementing cross-functional and transversal management in practice	3.53	0.84	.804
	LI	Additional capital required to implement Omni channel strategy	3.54	0.86	
	FE	Difficulties in getting financial investment due to lack of board-level multichannel engagement	3.61	0.95	
Developmental Related	OI	Willingness to break from legacy infrastructure and follow contemporary infrastructure	3.64	0.94	.902
	SC	Challenges in supply chain complexity	3.6	0.79	
	MD	Challenges in forecasting demand	3.57	0.89	
	ID	Integration of all datas into one place and using it effectively to gain useful insights from them	3.65	0.87	
	RM	Requirement of retail mix plan targets strategies to attract customers	3.67	0.89	
	MT	Barriers between touch points	3.62	0.89	
	BI	Problem in providing the right products to be at the right place at the right time	3.54	0.86	
	MD	Customers willingness to buy online	3.65	0.9	

Technological Related	AI	Problem in the availability of the internet across the country	3.41	0.88	.848
	IS	Difficulty in merging information system in order to achieve synchronization across channel	3.43	0.83	
	CRM	Difficulty in managing company's interaction with current and potential future customers	3.47	0.86	
	SY	Requirement customers trust in Omni-channel	3.41	0.77	
	RL	Difficulty in rebuilding internal elements of IT and morphing legacy systems to answer increased customer demands	3.47	0.89	
Customer acceptance of Omni channel	CS	effect of Omni-channel implementation barriers on customer satisfaction	3.78	0.52	0.94
	CV	effect of Omni-channel implementation barriers on customer visit rate	3.78	0.53	
	SR	effect of Omni-channel implementation barriers on store reputation	3.75	0.50	

3.2 Data Analysis

The collected data will be processed to eliminate missing values, flat liners, duplicate responses and abnormal values that will hinder in meaningful interpretation. The first part will be examining the reliability of the constructs and after that descriptive analysis of the data will be carried out further a confirmatory factor analysis will be done using SPSS 24. Principle component analysis method will be used for factor extraction then the content validity, discriminate validity and convergent validity of the instrument will be checked. A structural equation model (SEM) will be developed using SPSS AMOS software. This will evaluate how well the proposed conceptual model explains or fits the data which will be collected

IV. RESULTS

SEM is an effective statistical method for analyzing the connection of measurement and structural models (Vinodh and Joy, 2012) between multiple variables (Hair et al., 1998).The hypothesized relationships between variables were analyzed using estimates of SEM, calculated with the maximum likelihood estimate in SPSS using AMOS A strong a priori basis of previous research warrants the use of the confirmatory factor analysis (CFA) instead of exploratory factor analysis (Shah and Ward, 2007). The CFA includes the data necessary for SEM to meet the normality assumptions (Bortolotti et al., 2015). An iterative alteration procedure, based on CFA, allowed the concurrent modification of the measures to evaluate the unidimensionality of the constructs of the first and second order. The CFA model developed for this study is shown in Figure 2.

4.1 Descriptive statistics

A survey having standard measurement scale was conducted to check the projected hypotheses. The context of this research is Omni channel retailers in South India. While various studies have been reported on the implementation barriers of Omni channel strategy in different countries, only a few studies have focused on the Indian context, especially in retail sector. Content validity of the draft questionnaire was assured by pretesting with a panel of experts, and by incorporating their suggestions, sequence, and wordings of questions and layout of the questionnaire were modified. A pilot survey was conducted with 30 members from the randomly selected respondents from the target population (Perneger et al.,2015). Table 2 provides survey items used in the study. The survey technique was adopted for data collection, as it facilitates to collect the information from the target respondents within a small period. The sample of organizations obtained from retailers in South India in which they successfully implemented omni channel. Face-to face interviews were conducted with the respondents. The respondents involved in this survey were managers, supervisors, or the owners of companies.

4.2 Measurement model, validity, and reliability

The first-order measurement models of the constructs are derived, and overall fit is evaluated. The derived models were recursive and over-identified. Internal consistency reliability of all constructs can be assessed using Cronbach's α. The value of Cronbach's α exceeding 0.7 is typically considered as adequate (Cronbach, 1951; Nunnally, 1978) and acceptable if at least 0.6 (Chen and Paulraj, 2004). From the Table 2, the values of Cronbach's α are between 0.6 and 0.9 which are in the acceptable range, which demonstrates satisfactory internal consistency reliability of all dimensions. Statistically, significant loading of all items from the respective latent constructs is the condition for the convergent validity (Anderson and Gerbing,1988). All items significantly loaded on their underlying construct (Table 3), show convergent validity.

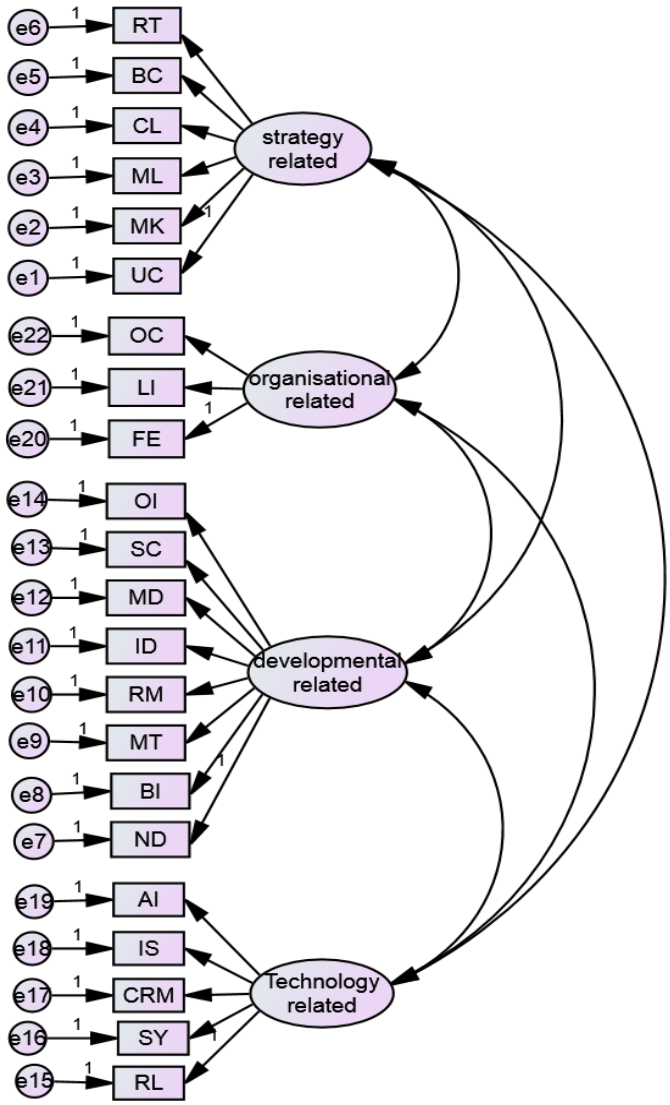

Figure 2: Measurement model for the Omni channel implementation in retailers

The fit indices such as χ^2, ratio of χ^2 to degrees of freedom (χ^2/df), the model square residual (SRMR), normed fit index (NFI), incremental fit index (IFI), Tucker-Lewis Index (TLI), and comparative fit index (CFI) were used for the evaluation of the measurement model(χ^2=260.797, χ^2/df=1.285,GFI=.868; NFI=.870; IFI =.968, TLI =.963; CFI=.967, RMSEA =.044;RMR=.045). No strict guidelines are followed to represent an acceptable fit (Schermelleh-Engel et al., 2003). However, several parameters are evidenced from various references and academic works. According to Byrne (2001), an RMSEA value of less than 0.08 is reasonable and a value of 0.05 or less indicates a good fit. According to Schermelleh-Engel et al. (2003) and Kline (2005), an SRMR between 0.05 and 0.10 is considered favourable. The values of GFI, NFI, TLI, CFI, and IFI close to 1.0 or greater than0.9 represent a good fit (Byrne, 2001; Kline, 2005). Small sample sizes, GFI and NFI, are often underestimated and hence the measurement models can be good fit indices with the exclusion of these two indices (Byrne, 2001; Kline, 2005). According to Shah and Goldstein(2006) CFI, TLI, and IFI are considered fit measures for small sample sizes. So the overall fitof the model was acceptable and thus supporting the unidimensionality and convergent validity of all dimensions.

Discriminant validity indicates the degree to which each construct is distinct from one another (Hair et al., 1998). Discriminant validity occurs if the square root of the average variance extracted (AVE) by each construct goes above the corresponding inter-variable correlation (Fornell and Larcker, 1981). Table 4 provides first-order inter-construct correlations, reliability, and discriminant validity of all constructs. The square roots of AVEs are indicated on the diagonal in Table 4, and all these values are greater than the construct correlations and thus satisfying the condition for reasonable discriminant validity. The composite reliabilities of all constructs are above the acceptable standard of 0.70, which shows good construct reliability (Fornell and Larcker, 1981).

Table 3: Results from confirmatory factor analysis

Construct	Item	Final Factor Loading
Strategy related	RT	.926
	BC	.735
	CL	.847
	ML	.789
	MK	.678
	UC	.904
Organisational related	OC	.814
	LI	.783
	FE	.876
Developmental related	OI	.875
	SC	.672
	MD	.754
	ID	.677
	RM	.805
	MT	.760
	BI	.684
	ND	.838
Technology related	AI	.847
	IS	.686
	CRM	743
	SY	.760
	RL	.678

Table 4: First order inter construct correlation, reliability, discriminant validity

	CR	AVE	Developmental related	Strategy related	Organisational related	Technology related
Developmental related	0.902	0.541	0.735			
Strategy related	0.913	0.641	0.309	0.800		
Organisational related	0.812	0.594	0.224	0.249	0.770	
Technology related	0.851	0.538	0.029	0.082	0.205	0.734

4.3 Evaluation of structural model

The structural model developed by path diagram is shown in Figure 3. The model goodness of fit values are as follows $\chi^2 = 355.441$, $\chi^2/df = 1.341$, GFI = 0.848; NFI = 0.873; IFI = 0.964, TLI = 0.959; CFI = 0.964, RMSEA = 0.048; RMR = 0.041. Based on the guidelines stated earlier it can be inferred that there is adequate model fitness. Summary of the hypotheses tested is presented below

H1,strategy related barrier effect on customer acceptance of Omni channel is accepted. The estimated coefficient of β = .417 ($p<0.001$) for the relationship between strategy related barrier and customer acceptance of Omni channel is significance indicating a strong support for the hypothesis *H1*.

H2,organizational related barrier effect on customer acceptance of Omni channel is accepted. The estimated coefficient of β = .405 ($p<0.001$) for the relationship between organizational related barrier and customer acceptance of Omni channel is significance indicating a strong support for the hypothesis *H2*.

H3,developmental related barrier effect on customer acceptance of Omni channel is accepted. The estimated coefficient of β = .308 ($p<0.001$) for the relationship between developmental related barrier and customer acceptance of Omni channel is significance indicating a strong support for the hypothesis *H3*.

H4,Technology related barrier effect on customer acceptance of Omni channel is accepted. The estimated coefficient of β = .251 ($p<0.001$) for the relationship between technology related barrier and customer acceptance of Omni channel is significance indicating a strong support for the hypothesis *H4*.

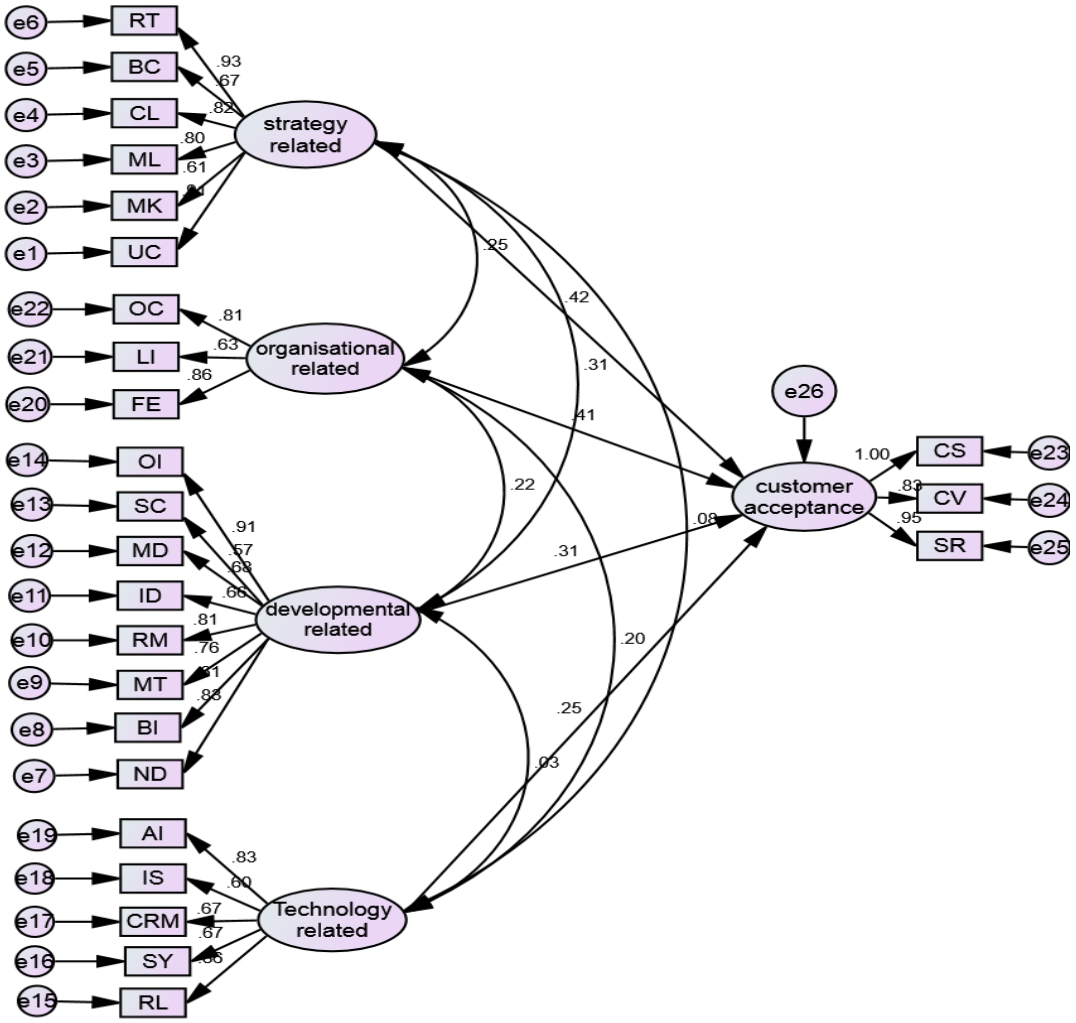

Figure 3: Structural model for the Omni channel implementation in retailers

Table 5: Results of Examining Hypotheses in the Developed Structural Model

H	Dependent variable	Path	Independent variable	Value of path coefficients [β]	P value	Significance Yes / No
H1	Customer acceptance	⇦	Strategy related	.417	.000	Yes
H2	Customer acceptance	⇦	Organisational related	.405	.000	Yes
H3	Customer acceptance	⇦	Developmental related	.308	.000	Yes
H4	Customer acceptance	⇦	Technology related	.251	.000	Yes

V. DISCUSSION AND SUGGESTIONS

5.1 Discussion

The study has investigated the customer acceptance of Omni channel among the retailers of South India and the study tries to find the factors that determine the implementation barriers of Omni channel strategy. Based on extensive literature review four hypotheses were developed. Also, a research model was formulated based on the four hypotheses which were tested and analyzed. (Fig.1).

From the results, it can be seen that the four factors identified from the literature have a direct impact on customer acceptance of Omni channel strategy. From the previous section it can be seen that the influence of strategy

related barrier on customer acceptance of Omni channel is high comparing with others (β =.417). The result give the evidence that , In the initial stage, consisting of initiating the move towards an Omni-channel retailing, strategy related barrier was the most challenging for the company, which is in line with the previous studies done by Picot-Coupey *et al*. (2016).According to Barry Berman *et al*.(2004) , Recruitment and Training (RT) is one of the most significant barrier under strategy related barrier, which also proven by our studies with β value is 0.935.It can be effectively address by developing training session for salespeople and by recruiting new salespeople for the new store concept(Picot-Coupey *et al*. (2016)). Understanding Customer (UC) is another most influenced barrier with β =.913, which is in line with Chopra *et al*. (2016) and can be effectively address by investing in referral marketing for leverage the personal connection. The other important barriers from the study are Cultural (CL) Managerial (ML) Blurring channel (BC) and Marketing(MK) barriers (β values are 0.819,0.801,0.669,0.613) and can be addressed by Staffing the company to support the convergence process (ML) , Opening new physical stores ,Optimizing the location of existing stores and Developing mobile applications(BC) and Opening a pop-up store to test the possibilities (MK) which is in line with study by Picot-Coupey *et al*. (2016).

Organisational related barrier has also positive significant influence on customer acceptance(β =.405).According to Picot-Coupey *et al*. (2016), Organisational related barriers are caused by strategy related barriers. Adding new channels will bring challenges at the organisational level. Under Organisational barrier, Financial Resources and Lack of Board-Level Engagement (FE) barrier has highest influence (β =0.855) and can be address by proper communication with board members and financial investors about new concept and to leverage funds (Picot-Coupey *et al*. (2016)).Other barriers include Organizational Commitment(OC, β =0.808) and Level of Investment (LI, , β =0.631).These can be address by Hiring a person in charge of defining and implementing the convergence process and Negotiating with financial investors to leverage funds , which is in line with Picot-Coupey *et al*. (2016).

After organizational related barriers, managers should focus on developmental related barriers in which its β value is .308.These challenges arise from operating the Omni-channel strategy. It has a positive significant effect on customer acceptance which is in line with the previous studies done by Picot-Coupey *et al*. (2016).Under this type of barrier, Our study shows that Outdated infrastructure(OI), Uncertainty Non-digital(ND), Retailing Mix(RM)Multiplying Touch points(MT),Miscalculating Demand(MD), Integrating data(ID)Balancing Inventory(BI) and Supply chain complexity(SC) are major barriers (β values are 0.909, 0.826, .0.813, .0.758, 0.675, 0.662, 0.605, and 0.569 respectively) which is in line studies done by Ye *et al*. (2018) and Picot-Coupey *et al*. (2016).Outdated infrastructure
(OI) can be addressed by Infrastructure refactoring method. Uncertainty Non-digital (ND) represents the Customers willingness to buy online and is addressed by providing more details and Get ahead of consumer questions with reviews. Retailing Mix (RM) issues can be solved by checking for price consistency across channels, allowing some flexibility for in-store promotions and integrating in-store connected devices. Multiplying Touch points (MT) and Miscalculating Demand (MD) barriers can be addressed by developing new performance criteria in order to reward collaboration and Identifying consumer behavior and demand trend respectively. Integration of all datas into one place (ID) can be done by digitising the supply chain and by making more investments in technology to unify disparate systems. Balancing Inventory(BI) and Supply chain complexity(SC) can be effectively addressed by Centralized delivery through store fulfilment, assigning 3PLs to dispatch orders based on geographic proximity and optimize fleets for last mile delivery, By achieving on-time product tracking via 3PLs' tracking systems and Use multiple channels to sell overstock respectively. This finding, of course, is in line with the recommendations of Ye *et al*. (2018).

Technology related barrier also has positive and significant effect on customer acceptance of Omni channel (β =.251).The reason for less influence comparing with other barriers is being nowadays because of the high penetration of Smartphone's and other technology related devices in our day to day life people have become more and more familiar with new and emerging technologies than before which results in the weak influence of Technology related barrier on customer acceptance. Under this barrier , the major barriers are Redesigning IT and Logistics(RIL), Availability of internet (AI), Security(SY), Customer Relationship Management(CRM) and Information system(IS)(β values are 0.858, 0.832, .0.673, 0.669 and 0.631 respectively).Channel choice, Channel coordination and Channel blending operations can be used in rebuilding internal elements of IT and morphing legacy systems to answer increased customer demands. Availability of internet (AI) can be addressed by providing real time web monitor. Customers trust in Omni-channel (SY) can be increased by Establishing a consistent brand experience across channels, Integrate the buying (and returns) experience and Implementing a CRM system that provides a single cross channel view. CRM issue can be addressed by Understanding how each touch point contributes to customer experience. Difficulty in merging information system (IS) can be reduced by Deploying financial and staff resources to this objective, for inventory management, purchases, CRM and a holistic view of flows. This finding, of course, is in line with the recommendations of Ye *et al*. (2018) and Picot-Coupey *et al*. (2016).

5.2 Suggestions

This study is one of the first to examine the customer acceptance of Omni channel among people in South India. It also shows how the existing retailers of Omni channel and its functionalities.It can be seen that Strategy related barrier has more effect on customer acceptance of omni channel then Organisational related, Developmental related and Technology related barriers. These four barriers have positive and significant impact on customer acceptance of Omni channel. The Table 6 describes about the way to address the challenges.

Table 6: Suggestions for implementation of Omni channel strategy

Construct	Items	Measurement items	Ways to address the challenges
Strategy Related	RT	Requirement of staff with multiple skillset	Developing training session for salespeople Recruiting new salespeople for the new store concept
	BC	Providing multiple touch points for marketing	Opening new physical stores Optimizing the location of existing stores Developing mobile applications
	CL	Incorporating online and physical store for point of sale	Staffing the company to support the convergence process
	ML	Management problems in decision making, convincing the staff	Anticipating decisions and having more joint analysis Integrating the most favourable and responsive people into the Project
	MK	Marketing for omni channel retailing	Staying customer-centric Opening a pop-up store to test the possibilities
	UC	Hesitation by customers to provide financial information online	Minimize purchase risk Get ahead of consumer questions with reviews Leverage the personal connection by investing in referral marketing
Organisational Related	OC	Implementing cross-functional and transversal management in practice	Hiring a person in charge of defining and implementing the convergence process
	LI	Additional capital required to implement omni channel strategy	Negotiating with financial investors to leverage funds
	FE	Difficulties in getting financial investment due to lack of board-level multichannel engagement	Communicating with board members and financial investors about new concept and to leverage funds
Developmental Related	OI	Willingness to break from legacy infrastructure and follow contemporary infrastructure	Infrastructure refactoring
	SC	Challenges in supply chain complexity	Use multiple channels to sell overstock
	MD	Challenges in forecasting demand	Identify consumer behavior and demand trend
	ID	Integration of all datas into one place and using it effectively to gain useful insights from them	Make investments in technology to unify disparate systems Digitize the supply chain and the process that support it
	RM	Requirement of retail mix plan targets strategies to attract customers	Checking for price consistency across channels Allowing some flexibility for in-store promotions Integrating in-store connected devices
	MT	Barriers between touch points	Developing new performance criteria in order to reward collaboration.
	BI	Problem in providing the right products to be at the right place at the right time	Centralize delivery through store-fulfillment Work hand-in-hand with 3PLs to assign and dispatch ordersbased on geographic proximity and optimize fleets for lastmile delivery Achieve on-time product tracking via 3PLs' tracking systems
	ND	Customers willingness to buy online	Provide more details about product Get ahead of consumer questions with reviews

Technological Related	AI	Problem in the availability of the internet across the country	Provide real time web monitor
	IS	Difficulty in merging information system in order to achieve synchronization across channel	Deploying financial and staff resources to this objective, for inventory management, purchases, CRM and a holistic view of flows
	CRM	Difficulty in managing company's interaction with current and potential future customers	Understanding how each touch point contributes to customer experience.
	SY	Requirement customers trust in Omni-channel	Establish a consistent brand experience across channels Integrate the buying (and returns)experience Implement a CRM system that provides a single cross channel view
	RL	Difficulty in rebuilding internal elements of IT and morphing legacy systems to answer increased customer demands	Channel choice Channel coordination Channel blending

VI. CONCLUSIONS

The present study reveals the barriers in Omni channel adoption in South Indian retailing sector and their effects on customer acceptance. The study shows the positive significant effect of 'Strategy related', 'Organisational related', 'Developmental related' and 'Technological related' barriers which influences the customer acceptance of Omni channel.

The final model will be very helpful for the companies who want to change their strategy to Omni-Channel. Model will tell the behaviour and relationship of the challenges they will face during this transaction by that they can address and be prepared for the successful implementation of Omni-channel system. In this study our theoretical model is valid and it supported by the data very well. The most critical factor is strategy related issues then Organizational, Developmental and Technological related issues respectively. The model is overall fit with the data it was evaluated using common model goodness-of-fit measures estimated by IBM SPSS AMOS 21. Overall, our model exhibited a reasonable fit with the data collected. We also tested the hypotheses based on our model.

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