4-2022

Key factors impacting success of omnichannel retailing: A managerial perspective

Anuradha NARASIMHAN
Singapore Management University, anuradhan.2015@phdgm.smu.edu.sg

KEY FACTORS IMPACTING SUCCESS OF OMNICHANNEL RETAILING:

A MANAGERIAL PERSPECTIVE

ANURADHA NARASIMHAN

SINGAPORE MANAGEMENT UNIVERSITY

2022

Key Factors impacting success of Omnichannel Retailing:

A Managerial Perspective

Anuradha Narasimhan

Submitted to Lee Kong Chian School of Business in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in Business (General Management)

Dissertation Committee:

Srinivas K Reddy (Supervisor/Chair)
Professor Emeritus of Marketing
Singapore Management University

Shantanu Bhattacharya
Lee Kong Chian Professor of Operations Management
Singapore Management University

Alan Megargel
Assistant Professor of Information Systems (Practice)
Singapore Management University

Singapore Management University
2022

I hereby declare that this PhD dissertation is my original work
and it has been written by me in its entirety.
I have duly acknowledged all the sources of information
which have been used in this dissertation.
This PhD dissertation has also not been submitted for any degree
in any university previously.

.

_____

Anuradha Narasimhan

20th April 2022

A Managerial Perspective

Anuradha Narasimhan

ABSTRACT

Omnichannel retailing has revolutionized consumer behaviour with consumers seamlessly flitting between offline and online channels as they explore, shop, buy, receive, and exchange or return products and services. The COVID-19 pandemic has accelerated digital and omnichannel adoption by consumers as retailers and brand owners create strategies and deployment to stay ahead. Omnichannel retailing is about seamless channels from the consumers' perspective and about integrated channels from the firms' side. This firm-focussed study examines the key factors driving success of omnichannel retailing using a mixed-methods approach – we conducted twenty-five depth interviews and received 146 responses to the quantitative survey from senior management professionals. Data was analysed for offline-first organizations and results for the overall industry sample indicate that a small set of internal factors covering both strategy and execution elements impact success, viz. top management digital focus and having a digital specialist, organizations building people capabilities in technology domain, organizations engaging in joint-business-planning with digital retailers and having competencies of cross-channel product returns. When organizations focussed differentially on channels, e.g., distinct online product portfolio or did not balance short-term and long-term horizons, e.g., supply chain maximization not optimization, these were detractors to success. The core industry segment and the COVID-19 pandemic were the external factors impacting omnichannel success which organizations have to contend with. The findings from the fashion industry subset indicate that organizations in this segment had omnichannel strategies in place and a higher preparedness for digital channels pre-COVID. Hence

the factors impacting success of omnichannel retailing for the fashion industry were largely in the execution domain. The empirical models for omnichannel retailing success are a key contribution to both academia and practice, and future research directions include developing omnichannel business models for online-first organizations, extending the model to emerging markets beyond India, and understanding sustainability of the omnichannel business model post COVID.

Keywords: Omnichannel Retailing, eCommerce, Brick-and-Mortar Retail, Channel Management, Fashion Industry, Retailing Framework, Omnichannel, COVID-19

Table of Contents

Chapter 1 : INTRODUCTION & STATEMENT OF THE RESEARCH PROBLEM 1

1.1 Introduction 1

1.2 Statement of the Research Problem 3

Chapter 2 : LITERATURE REVIEW 7

2.1 Definitions of Omnichannel 8

2.2 Consumer-focussed Research 11

2.3 Firm-focussed Research 15

2.4 COVID-19 Impact and the Future of Retailing 20

2.5 Gaps in Academic Literature 24

Chapter 3 : RESEARCH MODEL AND HYPOTHESES 25

3.1 Definition of Success in Omnichannel Retailing 27

3.2 Conceptual Model for Omnichannel Retailing 29

3.3 Internal Factors and Hypotheses 30

3.3.1 Top Management 30

3.3.2 Strategic Intent 31

3.3.3 Product Portfolio Strategy 32

3.3.4 Retail Strategy and Operations 32

3.3.5 Technology Capabilities 33

3.3.6 People Capabilities 34

3.4 External Factors and Hypotheses 35

3.4.1 Online consumer behaviour of category 35

3.4.2 COVID-19 Impact 36

3.5 Mediator Factor and Hypotheses 37

3.6 Success Factor 38

Chapter 4 : RESEARCH METHODOLOGY 40

4.1 Qualitative Research 41

4.1.1 Data Sample 42

4.1.2 Data Collection Methods 43

4.2 Quantitative Research 46

4.2.1 Sample Selection 46

4.2.2 Data Collection Methods 47

4.2.3 Measurements 53

4.2.4 Analytical Methods 66

Chapter 5 : DATA ANALYSIS & RESULTS 70

5.1 Description of the Sample Set achieved 70

5.2 Descriptive Statistics of Dependent and Independent Variables 71

5.3 Factor Analysis 76

5.4 Pairwise Correlations 78

5.5 Effects of Categorical Variable - Core Industry Segment 83

5.6 Multiple Linear Regression: Overall Industry 84

5.7 Binary Logistic Regression Model (Derived Dependent Variable) 87

5.8 Mutiple Linear Regression: Fashion Industry Segment 89

5.9 Summary of Results : Regression Models & Hypotheses Table..... 91

Chapter 6 : DISCUSSION OF RESULTS AND CONCLUSIONS 96

6.1 Overall Industry Results..... 96

6.2 Fashion Industry Segment Results 113

6.3 Overall Conclusions of the Research Study 121

6.4 Salient Findings 123

Chapter 7 : IMPLICATIONS FOR ACADEMIA AND PRACTICE 127

7.1 Implications for Academia..... 127

7.2 Implications for Practice..... 129

Chapter 8 : POTENTIAL WEAKNESSES AND LIMITATIONS..... 132

Chapter 9 : DIRECTIONS FOR FUTURE RESEARCH..... 137

Chapter 10 : CLOSING COMMENTS..... 142

References..... 145

Appendices 156

List of Tables

Table 1: Themes of Omnichannel Literature Review 7

Table 2: Gaps in Firm-Focussed Omnichannel Literature 24

Table 3 : Details of Organizations participating in Qualitative Research 45

Table 4 :Business Model of Organizations participating in Quantitative Research ... 47

Table 5: Details of Organizations participating in Quantitative Research 51

Table 6 :Details of Respondents participating in Quantitative Research 52

Table 7 : Summary of Variables, Measurements and Scales 65

Table 8:Organizational Profile by Retail Business Model and Core Industry 70

Table 9:Descriptive Statistics for Dependent Variable(s) 72

Table 10:Descriptive Statistics of Independent Variables 72

Table 11:Summary of Factors and their Raw Variables 77

Table 12: Correlation Coefficients for Outcome Variable vs Raw Variables 79

Table 13: Correlation Coefficients for Outcome Variable vs Latent Variables 81

Table 14 : Regression Results for Overall Industry 86

Table 15 : Regression Results for Overall Industry (Competitive Success) 88

Table 16 : Regression Results for Fashion Industry Segment 90

Table 17: Hypotheses Table 92

Table 18: Findings from Regression Model (Overall Industry) 97

Table 19: Findings from Regression Model (Fashion Industry Segment) 113

Table 20: Hypotheses Supported and Effect Direction 125

List of Figures

Figure 1: Theoretical Framework of factors impacting success in Omnichannel Retailing 29

Figure 2: Theoretical Framework depicting Hypotheses for testing 39

Figure 3 : Details of Respondents participating in Quantitative Research 53

Figure 4: Histogram of New Channel Share 20-21 74

Figure 5: Histograms of Technology-related raw variables 75

Figure 6: Box Plot of New Channel Share for Fashion vs FMCG Segments 83

Figure 7: Data Analysis of Technology Capabilities – Supply Chain Redesign 107

Figure 8: Empirical Model of Key Factors impacting Success of Omnichannel Retailing (Overall Industry) 112

Figure 9: Empirical Model of Key Factors impacting success of Omnichannel Retailing (Fashion Industry Segment) 121

List of Appendices

Appendix I: Discussion Guide Omnichannel Retailing: Corporate Executives 156

Appendix II a: Data Collection Questionnaire (Offline-first, Product Organization). 159

Appendix II b: Data Collection Questionnaire (Online-first, Product Organization). 166

Appendix II c: Data collection Questionnaire (Offline-first, Service Organization) .. 173

Appendix II d: Data collection Questionnaire (Online-first, Service Organization) .. 179

Appendix III a: Factor Analysis (Top Management) 185

Appendix III b: Factor Analysis (Strategic Intent) 186

Appendix III c: Factor Analysis (Product Portfolio Strategy) 187

Appendix III d: Factor Analysis (Retail Strategy) 188

Appendix III e: Factor Analysis (Technology Capabilities)..... 189

Appendix III f: Factor Analysis (People Capabilities) 190

Appendix III g: Factor Analysis (COVID Impact) 191

Appendix IV: Scatter Plots of Pairwise Correlations 192

Appendix V: Factor Correlations 196

Appendix VI a: Regression Model 1 (Linear, Overall Industry)..... 197

Appendix VI b: Regression Model 2 (Linear, Overall Industry)..... 200

Appendix VI c: Regression Model 3 (Logistic, Overall Industry)..... 202

Appendix VI d: Regression Model 4 (Linear, Fashion Industry Segment) 206

Glossary of Terms

B2B: Business to Business

B2C: Business to Consumer

BOPS: Buy Online, Pick up at Store

Brand Owner: Manufacturer / Supplier of brands to retailers

COVID-19: Disease caused by coronavirus starting 2019

CPG: Consumer Packaged Goods

CRM: Customer Relationship Management

DV: Dependent Variable

e-tailer: Digital retailer

FMCG: Fast Moving Consumer Goods

ICT: Information Communication Technology

IV: Independent Variable

Offline-First: Business model with physical channels used before digital channels

Online-First: Business model with digital channels used before physical channels

OLS: Ordinary Least Squares

PCA: Principal Component Analysis

ROPO: Research Offline/Online, Purchase Online/Offline

SBU: Strategic Business Unit

Acknowledgments

I started my PhD journey with my eyes set on a second career, viz. academia – it has been a roller-coaster ride with a fair bit of unlearning and relearning. I have been blessed to have had truly inspiring and compassionate guides. I will be forever indebted to my dissertation chair and supervisor Prof Srinivas K Reddy, who spontaneously agreed to my dissertation topic and patiently guided me through a few fits and starts that I had along the journey. He challenged me and helped me think, and he also kept me focussed while I kept trying to bite off more than I could chew. My sincere gratitude to Prof Shantanu Bhattacharya who was my go-to person, my sounding board, he listened to my ‘cribs’ ranging from processes and timelines to complex-sounding statistical techniques and helped make light of it. I appreciate the clear insights I received from my committee member Prof Alan Megargel which helped me with making the thesis and presentations crisper and reader friendly.

I am grateful to SMU for the resources and pedagogy of the PhDGM program and a sincere thanks to program administrator Louise Hu for always being around.

I would like to express my gratitude for all the senior management professionals who participated in my research – both quali and quanti. They not just made the time for my study, but also made me realise how useful it could be. A shout out to old colleagues and friends who helped me with connections – Bijou Kurien, Harsh Shah, Aneesh Reddy, Sandeep Bhushan, to name a few.

My sincere thanks to my current employer IIT Bombay and Prof Bhallamudi Ravi, Professor-in-charge, Desai-Sethi School of Entrepreneurship who constantly encouraged me and accorded me time and mind-space so I could finish my dissertation.

I would also like to thank my friends who helped me in many ways – from inspiring me to get started, providing me a working environment to learn digital skills, working with me through online stat courses, from doodling together to proof reading – Prakash Bagri, Shalini Degan, Mamata and Sandeep Asthana, Atul Shinghal, and the one-and-only Gagan Kumar. And to countless more for their support and encouragement.

My gratitude to my father-in-law Dr Amarnath Dikshit for patiently trying to understand where I have reached and how he could help. Respect for my role model, my mother Seetha Narasimhan for showing me that age and education have no correlation by doing multiple masters' programs after 75. I was fortunate to have my son Adi and my niece Priya to pace myself with – Adi started his undergrad program around the time I started my doctoral one and much as I would have liked to finish with him, I am now running alongside Priya who is on the verge of becoming a doctor, albeit a medical one. And firstly, lastly and everything in between, I am blessed to have Ashish Dikshit as my life partner – he kept showing me the light at the end of the tunnel and made sure I never gave up.

Chapter 1 : INTRODUCTION & STATEMENT OF THE RESEARCH PROBLEM

The evolvement of retailing strategy for brand organizations has taken the path from Single-Channel to Multi-Channel to now Omnichannel retailing.

1.1 Introduction

In a single-channel environment there were mostly brick and mortar entities, and consumers were targeted through a combination of advertising and high-street stores. Consumer experience at retail was the key driver to sale and the width and depth of assortment had a critical role to play in driving experience. In a multi-channel environment, there was a mushrooming of channel formats – malls, high street, hypermarkets, supermarkets, kiosks, convenience stores, mail order, and then 'the-new-kid-on-the-block' viz. online stores. Organizations saw these channels as either targeting different consumer segments or targeting combinations of consumer segments and purchase occasions. They tended to treat these channels differently from each other in terms of the consumer experience designed for and in terms of channel economics. From the early 2000's, there have been a slew of firms whose business model has been based on pure play digital channels. One of the drivers of a firm's multi-channel strategy to include online channels has been the fear of missing out on the consumer digital revolution. It has now been well established across product and service categories especially experience-goods categories that while online retail will drive growth, offline stores will continue to dominate overall sales and brand organizations have therefore developed offline and online business models, discrete as they may be. It is only in the last decade that organizations with the goal of sustained profitable growth are working towards integration of offline and online retail, viz Omnichannel retailing.

In 2011, Darrell Rigby a partner at Bain & Co wrote in the Harvard Business Review that digital retailing was so rapidly morphing that it deserved a new term, viz. omnichannel retailing. The omnichannel retail model is one where the consumer experience is connected and seamless. Here brand organizations develop customer experience strategies which are not discrete for offline and online channels but interconnected, as some parts of the consumer journey would be traversed in the physical world and some other parts in the virtual one. In an omnichannel retail model, consumers have a unified view of the brand across channels and the brand has a common unified view of consumers across touchpoints. These touchpoints could be through intermediaries and may not be owned, controlled, or managed by the brand organizations themselves. In the omnichannel world, channels cannot compete as they have traditionally done, they need to collaborate to deliver the experience that the consumer seeks. Consumers can choose to order from their home, from someone else's home, from the brand's store, from any other store, or from anywhere in the world using their phones, tablets, computers, or voice-enabled devices. In a similar vein, they could choose to receive the product at their homes, at one of the brand stores, at a different store, at a pickup location, or just anywhere that they desire. Between the events of consumers ordering product and receiving the same, fulfilment can be managed using brand stores, some other retail store, a company managed delivery centre or a vendor or some combination thereof. Omnichannel retailing needs to design for the entire domain from customer acquisition through to fulfilment and post-purchase as omnichannel consumers evolve from multichannel consumers by using different channels at the same time, for the same purchase.

Some of the omnichannel business models written about in academic and business research are BOPS (Buy online, pick up at store), OTO (Online to Offline) or Click and Collect, BSSD (Buy in Store, Ship Direct) etc.

Omnichannel strategies have become prevalent in developed markets and are beginning to be seriously adopted in emerging markets as consumers flit between offline and online stores in their journey to purchase and consumption of products and services (Verhoef, 2007). ROPO is a common acronym which originally meant Research-Online-Purchase-Offline, but in recent times can stand for the reverse, viz Research Offline and Purchase Online, also referred to as Webrooming (Kang, 2018) and Showrooming, respectively. Omnichannel retailing offers brand organizations a great opportunity to synergise between multiple channels to synchronize the brand experience across touchpoints for consumers. There exist four predominant themes in current literature on omnichannel retailing which will be detailed in the next chapter. One axis is that of consumer vs retailer, and the other is that of diagnostic studies vs prescriptive studies. A special issue on “Omnichannel business research: Opportunities and Challenges” was brought out by Elsevier in 2018 to document key studies along the two axes and to accelerate further research in a fast-developing area.

1.2 Statement of the Research Problem

This doctoral study seeks to explore the key factors that impact success of omnichannel strategy as we move from channel conflict to channel collaboration. The study will attempt to answer the following research questions:

1) What internal factors like strategic mindset, motivators for change, resources and capabilities, business partnerships and networks have a significant impact on success in omnichannel retailing?
2) How does the specific product category / market that the brand organization operate in impact the success of omnichannel retailing?
3) What external factors like consumer behaviour, competition intensity and behaviour, technology evolution and adoption, presence of horizontal e-tailers have the largest impact on omnichannel strategy success?
4) How has the COVID-19 pandemic accelerated the journey towards omnichannel and is the impact sustainable?

The objective of this study will be the development of an optimised model that looks at the combination of external and internal factors in brand and retail organizations that help drive shift from over-reliance on either offline or online channels towards an omnichannel approach. In addition to the quantitative model, another objective of the research will be to bring alive insights which will help add detail and nuance to the factors so that they do not remain at the level of a theoretical construct. This research study has implications for the nascent literature on omnichannel strategy, omnichannel business model, and could also add value to the literature on online consumer behaviour. It could add new facets to an older stream of literature about retail shopping itself. Omnichannel strategy is a key business imperative for every brand organization and retailer of today and this research could help guide them on specific action areas as they go about developing and furthering omnichannel business models.

In this study, we plan to study both offline-first and online-first brand organizations in a nascent yet fast-emerging ecommerce market – India. While the lens is that of brand organizations, some key understanding and analysis will come from studying retailers

– our hypothesis is that studying horizontal online retailers would give us significant inputs on both consumer behaviour as well as stage of nascency or development of product / service categories. We will partner with brand organizations and online retailers to obtain the information that we need since there are no published data sources capturing either the input factors or the success factors of omnichannel. While the earliest instances of omnichannel business model go back 20 years, most organizations in India are in their infancy to developing the model that best mirrors and serves their consumers in their journey.

While retailers and brands have traditionally looked at the consumer journey split in three phases – Discovery, Acquisition, Fulfilment, consumers think of their journey spread between exploring, shopping, buying, receiving, using, sharing. And these phases are not as linear as they have been hitherto thought of. Exploring and shopping can occur simultaneously where the consumer looks around and decides on what they wish to buy. In other cases, exploring can be done over an extended period and in concurrence of friends and family. Consumer behaviour evolution could precede evolvement of organizational behaviour creating gaps in understanding consumers. Specifically, there are significant gaps in the understanding that organizations have around omnichannel regarding both external and internal factors. Many of these gaps are to do with understanding the barriers within their own organization to a true omnichannel experience – the legacy mindset of the primary channel that the brand or retailer organization inherently knows best, the motivation for the shift to omnichannel experience delivery to consumers, the partnerships that need to be established with horizontal retailers and e-tailers, and the capabilities that need to be built to make this omnichannel business model viable and sustainable.

While a key reason to studying the omnichannel is the state of evolvement of consumers, the other one is purely internal and strategic. In the Indian environment, offline retail continues to be 95% of sales (Bain,2021) and hence cannot be ignored. Online retail however will be the driver for growth and cannot be ignored. Hence the need for product and service brand organizations to work with their retailer and etailer partners to deliver superior and differentiated consumer experiences across offline and online channels to facilitate and lead consumers along their discovery to usage journeys. Historically brands and retailers have always been known for managing portfolio mixes – categories, assortments, brands etc and it is time that they did the same with channels and created optimal channel mixes. A strategic, comprehensive firm level study of key drivers for omnichannel retailing is both new and an imperative to gain academic perspective and garner actionable insights for practice in a post-COVID world.

Before we detail the research model and the hypotheses developed, it is important that we review the academic literature relevant to the research study. We will also highlight the industry reports that are pertinent to the study. These are covered in the next section.

Chapter 2 : LITERATURE REVIEW

In this chapter, we will review the academic literature on omnichannel retailing organized along four themes : definitions and models of omnichannel retailing, consumer expectations and adoption of omnichannel retailing, strategies of brand-owners and retailers to win in omnichannel retailing, and the impact of COVID-19 and the future of retailing. It is estimated that one-half of retail sales will have digital touchpoints in a few years in the Western economies. The world leaders in omnichannel sales are the USA, UK, and Australia, although emerging markets led by China are fast catching up, as per Research and Markets; Global Omnichannel Commerce Trends 2018. In Jan 2021, the leader in digital sales was China, followed by the United States, and then India (Bain, 2021). The table below outlines the themes of the literature review.

Table 1: Themes of Omnichannel Literature Review

Section	Theme	Topics
2.1	Omnichannel Concept and Definitions	Channel Definitions Omnichannel Models
2.2	Consumer-Focussed Research	Research shopping Convenience and User Experience Pricing and Promotion Information transparency Service inconsistencies Personal innovativeness and consumer profile
2.3	Firm-focussed Research	ICT (Information, Communication, Technology) Supply Chain & Logistics Data and Analytics Sales & Channel Marketing
2.4	Omnichannel Future	COVID-19 Impact Future of Retailing

2.1 Definitions of Omnichannel

The word omnichannel comes from the Latin root 'omni' meaning all, and the usage of the word omnichannel means that retailers would be able to interact with consumers all the time through multiple channels - websites, physical stores, kiosks, direct mail, and catalogues, call centres, social media, mobile devices, gaming consoles, televisions, networked appliances, home services, and more (Rigby,2011). He predicted that if traditional retailers needed to survive, they would need to embrace the omnichannel approach. In 2013, Brynjolfsson et al. predicted that the entire retailing industry would evolve towards a seamless and connected omnichannel experience. And a year later, Bell et al. (2014) wrote in the MIT Sloan Review that the distinctions between physical and virtual stores would vanish. Together they predicted and envisaged the world as a showroom without walls - multichannel retailing models are moving to omnichannel retailing models (Verhoef et al., 2015). Omnichannel is about a broader outlook on channels and how consumers are impacted as they move through channels in their discovery and purchase process. A different perspective on the omnichannel definition was not just considering the multiple channels of distributing products to customers but also multiple channels of communicating with customers – owned, paid, and earned media (Ailawadi & Farris, 2017). As early as 2000, a term ‘cyber-enhanced retailing’ was proposed which postulated that e-commerce techniques be used in convergence with conventional retailing to deliver superior customer experience (Otto & Chung, 2000). Beck and Rygl (2015) took on the onus of categorizing multiple channel retailing into multichannel, cross channel and omnichannel within academia by means of a comprehensive literature review and defining a taxonomy. According to the new taxonomy, multi-channel retailing is when consumers cannot trigger interaction between channels and retailers do not control

integration. Omnichannel retailing is the ultimate form of connectedness and seamlessness - where consumers can trigger full channel interaction and retailers seek to integrate channels comprehensively. It was proposed that omnichannel retailing be used as a term for co-ordinated multichannel retailing that uses all of the retailer's multiple channels and offers seamlessness to the consumer (Levy et al., 2013) Neither consumers nor retailers would seek to or be able to distinguish between channels when a true omnichannel experience is designed and delivered (Gallino and Moreno, 2014). Akter et al. (2021) define omnichannel retail at play when organizations design their service delivery for the connected consumer. The three key channels that organizations will need to design for are shopping online, shopping using the mobile phone and shopping at a physical store.

Cross channel retailing is when consumers can trigger partial interaction and when retailers control integration partially. When channels are discrete and siloed it is referred to as multi-channel retailing. When a customer cannot redeem an e-coupon at a physical store, that's an example of multichannel retailing from the customer's point of view (Mosquera et al., 2017). Another example is when consumers can buy merchandise in one channel and cannot return it in another. From the retailer's viewpoint, multi-channel environment occurs when the retailer cannot share data across channels or integrate the inventory of the different channels. Visibility and integration are key to omnichannel delivery for brand owners and retailers. Every element of the organization that is consumer facing needs to have the transparency and integration dimension – traditionally we have seen product, pricing, merchandising, promotion, advertising as consumer facing but equally are transactions, product delivery and product returns. These have been built into a conceptual model (Saghiri et al., 2017) as Channel Types (social media, emailers,

phone, store, TV and other ads, word-of-mouth etc), Channel Stage (payment, delivery or pick up, returns) and Channel Agents (manufacturer, brand-owner, physical retailer, digital retailer, third party) and the case made for integrated product portfolio, promotion, pricing, transaction, order fulfilment, product returns etc for a retailer to be successful at omnichannel retailing.

Omnichannel Models

Gao and Su (2017a) study the Buy Online and Pick up in store (BOPS) omnichannel model. They find that this model is not best suited for experience products which sell well in stores like apparel. Retailers must use it as a means to reach new consumers. The biggest advantage of this model is the inventory transparency for the consumers and hence hassle-free shopping. In a different study of the BOPS model, Gallino et al. (2014) found that this model of omnichannel increases store sales by two routes - one is by the shifting of some consumers from online to brick-and-mortar store after they have experienced the physical store while picking up an online order from a store. The other is by having instore consumers order more while in the store using the BOPS functionality, this has also been referred to in omnichannel retailing as the endless aisle where the consumer has access to not just the physical inventory in the store but all online inventory too. A similar model termed OOPS (Order online, pick up at store) has been studied both at a conceptual and empirical level. Chatterjee (2010) concludes that OOPS is used by two segments of consumers – price conscious consumers who do not wish to pay for delivery and those with an urgent need for products. O2O models in omnichannel retailing refer to offline companies going online or online companies going offline. Li et al. (2020) study the benefits of a pure play online organization adding physical stores to help consumers get product fit information offline and buy online. Such a model is viable if the online retailer has a

high level of showroom feasibility. In the reverse example of a brick-and-mortar retailer also offering a digital channel, the retailer needs to defray the high cost of physical inventory with an added cost of customer acquisition online. In an empirical study on physical showrooms being opened by an online-first eyewear retailer, the findings suggest that adding showrooms increases demand at an overall level, improves operational efficiency and decreases returns (Bell et al, 2018). In a study on a high-value category of recreational vehicles in the United States, it was concluded that showcasing was critical to an omnichannel purchase – wherein the models in a store were an optimum combination of product features and consumers could gain a clear understanding of which model and what features to place an order for (Park et al., 2020) In a discussion with an online-first retailer in India selling high-value jewellery, it was cited that opening showrooms added to brand trust and consumer satisfaction and led to increase in online sales too. Yrjola et al. (2018) study customer value propositions offered in single-channel, multi-channel and omnichannel environments. They conclude that omnichannel retailers focus on the hedonistic requirements of consumers and use both the digital and physical channels to deliver on the pleasure of shopping.

2.2 Consumer-focussed Research

Taking the lens of consumer behaviour, the first aspect that can be mentioned is that the consumer today is in omnichannel mode. While they may not be familiar with the term omnichannel, they are omnichannel in their outlook as well as their behaviour and often use online and offline channels with equal ease. Even before omnichannel retailing was studied in academic research, the phenomenon of research-shopper was understood in the context of multichannel customer management. Research-shopping refers to the phenomenon where consumers do

research in one channel and shopping in the other. It used to be about research on the internet followed by purchasing instore because of the difference in product attributes perceived online vs offline, as well as a difference in trust levels but can be the reverse too. It is commonplace for consumers in a multichannel ecosystem to use one channel merely for information and another for purchase. This was termed as free-riding behaviour in a multichannel context (Van Baal & Bach, 2005). A popular omnichannel practice is webrooming where consumers research products and services online before buying at a physical store (Kramer, 2014). The reverse of this also referred to as free riding earlier, is now referred to as Showrooming (Ailawadi & Farris, 2017) and it is quite the bane of brick-and-mortar retailers in emerging markets like China and the Philippines. Consumers use showrooms to touch and feel and experience products but buy online lured by discounts and promotions.

It has been studied that consumers do not make brand and channel choices independent of each other. Hence researchers must study these in conjunction for best understanding (Neslin,2014). In omnichannel retailing, consumers are buying brands really speaking as they are ambivalent about channels which they see as seamlessly merging into one another. Consumers are rapidly gravitating towards omnichannel as their preferred behaviour, factors like ease of use, usefulness, and compatibility correlate well not just with high intention to try but actual use of the omnichannel too (Silva et al., 2018). What consumers like are features whether in online channels or offline that facilitate convergence by themselves without the consumer specifically needing to go look for it (Burke, 2002). One key driver for omnichannel adoption by consumers is information transparency and alignment on the product or service across offline and online channels. While retailers themselves provide information, what consumers often use and value is "social capital" - the

information that is shared by consumers within a community (Bell et al., 2014). It is imperative therefore to remove channel-based inconsistencies in key consumer attributes like after-sales service, promotions, discounts, customer relationship management, product returns et al.

Pricing and Promotion

Pricing policies across channels play a key role in determining channel preference for purchase. This is especially true in developing markets where the digital channel adoption is low and online shopping behaviour is nascent. Large online retailers in India like Amazon and Flipkart (now owned by Walmart) use a combination of everyday low price and big discount events (Big Billion Day of Flipkart, Great India Shopping Festival of Amazon, EORS End of Reason Sale of Myntra Fashion) to drive traffic and build adoption. One of the regular refrains from brand-owners has been about the need for uniform pricing across channels. An empirical study of consumer data across channels showed that consumers were willing to pay higher prices for home goods products at omnichannel retailers compared to pure play online retailers (Chatterjee & Kumar, 2017). The study differentiates between functional products and expressive products and the willingness to pay higher is more pronounced in the category of expressive goods.

Consumer profiles and attitudes

Consumer acceptance of omnichannel retailing as their natural and preferred choice is a function of their own experimental or innovative behaviour, and their perception of the effort required as well as the performance delivery by retailers (Juaneda-Ayensa et al., 2016). Personal innovativeness refers to consumers who are experimentative and early adopters of technology, this factor is one of the biggest factors in driving

omnichannel consumer behaviour. Omnichannel shopping intention and product sharing intention are predictors of omnichannel adoption by consumers (Kang, 2019). They focussed their study on lifestyle characteristics of SoLoMo consumers - consumers who are predominantly social-local-mobile. They found that consumers who are favourably inclined towards the showrooming and webrooming concepts are more inclined to be omnichannel shoppers. These consumers are more likely to share product reviews online and are less likely to be influenced by brand prestige. Product reviews by SoLoMo consumers, especially those with visual content like videos and pictures, are instrumental in driving sales in an omnichannel way.

Omnichannel Consumer Behaviour and Expectations

Consumer preference to purchase in an omnichannel manner is influenced by their personal innovativeness and by retailer deliverables like effort needed to use the new channel, and the convenience, time and value rewards gained by shopping in those channels. Omnichannel consumers demonstrate engagement when they experience acceptable quality of channel integration. Some dimensions of channel integration that drive engagement and repurchase intention are breadth of channel-choice, transparency of channel-choice, content consistency and process consistency (Lee et al., 2019). In an exploratory study with consumers in Israel, purchase intentions were studied and themes that would impact consumer preference of omnichannel were derived. These included performance expectancy, effort expectancy, facilitating conditions, hedonic motivation, habit, and price value. Some new themes included situational factors, perceived risk, anxiety, perceived trust, need for interaction, and privacy concern (Kazancoglu & Aydin, 2018). Many of these themes are around transparency and consistency and value delivery.

It has been suggested that information is key to omnichannel experience for the consumer – information transparency as well as information consistency across channels. The same information needs to be provided in the same style across channels (Shankar et al., 2011). In an empirical study conducted with high-involvement female fashion consumers in the UK, the researchers note that consumers have higher expectations of their omnichannel experience – they expect seamless and glitch-free experiences across channels, they also expect free shipping, minimal lead times, ease of exchange and returns irrespective of channel of purchase, and a consistent brand experience (Lynch and Barnes, 2020). Consumers in experience-centric categories are more likely to seek omnichannel retailing rather than pure-play online retailing. In a study done on zero-inventory-stores launched by an online-first apparel retailer wherein the store performed the function of an experience centre but not a fulfilment centre for the customer, it was found that the average consumer spent more on one visit, visited more often, and returned less merchandise than consumers who bought in an online-only setting (Bell et al., 2020). Factors affecting omnichannel acceptance by consumers were granularized and studied with Australian banking consumers – omnichannel integration quality is the mediating factor which is built as a combination of content and process consistency across channels, assurance of quality and how the channels are configured keeping consumer needs in perspective (Hossain et al., 2020).

2.3 Firm-focussed Research

The Forrester Research 2014 is titled Customer desires vs Retailer capabilities bringing alive the gap between the two and in this section of the literature review, we will focus on what retailers can do to integrate their channels to win in omnichannel retailing.

Information, Communication, Technology

Brynjolfsson et al (2013) argue that it is technology that is making omnichannel retail inevitable. Geography as a competitive advantage has been blunted and cannot be thought of as a shield by brick-and-mortar retailers. They see omnichannel retailing as an opportunity for savvy retailers and their supply chain partners if these organizations can use data and analytics in an agile manner to target consumers uniquely with customized products and advertising messages. Building on Brynjolfsson et al., Bell et al. (2014) argued that a combination of offline and online channels is best suited to deliver information to consumers. An example quoted is that of the eyewear company Warby Parker who saw a big jump in sales when their online sales model is supplemented with a few physical stores that showcase physical products for display but are not inventory for sale. In a reverse example where the retailer Crate & Barrel's starting point is in the traditional brick and mortar world, a better expression of product attributes in a digital environment helps increase overall revenue with consumers traversing some part of their discovery journey online and ending it at the store. The authors discuss how virtual fitting rooms reduce product returns, cut costs, and increase consumer satisfaction. Not just virtual fitting rooms, but a whole host of innovative technology aids omnichannel retailing and these include smart mobile devices with their corresponding apps and software, access to big data and cloud computing for customization and price optimization, smart in-store devices like intelligent self-service kiosks, virtual screens and virtual aisles, augmented reality (Piotrowicz & Cuthbertson, 2014). Retailers need to aid the customer journey of browsing, buying, and experiencing rather than seeing themselves as conducting transactions of selling and taking returns. One of the key means to do this is by data integration and technology for store staff – a unified view of customers, inventory and

transactions should be available across physical and e-stores, on mobile and on website (Cook, 2014).

Supply Chain & Logistics

Inventory management and fulfilment is a key factor for effectiveness of omnichannel business model. In a multi-channel retailing environment, retailers hold inventory which is dedicated to individual channels. However, as they move to the omnichannel retailing environment, they migrate to integrated inventory which allows for flexible and demand-driven inventory allocation (Hubner,2016). One of the key drivers to consumer satisfaction in online sales is the speed of delivery, and importantly commitment to a delivery schedule. The online shopping expedition only delivers a high when the product has been tried out in front of the mirror at home. Fisher et al. (2019) studied how rapid delivery in the online sales channel affected sales positively for the online channel and improved sales in the offline channel by improving brand metrics and bringing in new consumers to brick and mortar stores. Omnichannel retailing has a significant impact on a firm's supply chain. It can increase cost to serve by the need to develop owned offline and online stores. The fulfilment responsibility which was hitherto left to a wholesaler, or a horizontal online retailer could now be taken on by the firm itself - this also increases costs (Armstrong, 2017). In an exploratory study with retailers regarding how customers are guided to channels to minimize cost and maximise customer satisfaction, the findings indicate that retailers use product availability checks for guiding customers into the store, set inventory guidelines with the objective of preventing product returns (Wollenburg, 2019). As number of retail points increase for digital retailers, they need to devise the optimum inventory management strategies to ensure there is no sale lost, as well as to minimise costs.

Firm Competencies and Performance Metrics

Omnichannel consumers make the choice of where they will seek information and where they will make the purchase, and retailers need to provide offline and online information in a manner that facilitates omnichannel consumer behaviour. The two dimensions on which customers seek information transparency are the value of the product (by touch, feel, look) and the availability of the product – a gap on the product value information leads to returns and a lack of availability information leads to dissatisfaction (Gao & Su, 2017b). A specific aspect of information especially in developing markets with low online adoption and prevalent price-shopping consumer behaviour is transparency of pricing information (Harsha, 2019). In developed markets with retailers higher up the curve on omnichannel business models, pricing tends to be at parity across channels.

Firms also need to redesign stores to manage online order fulfilment, they also need to figure the optimum network of three types of physical locations – only for display, for display and fulfilment, only for fulfilment to optimize consumer reach and profitability. Stores that have display are referred to as ‘lit’ stores and those that are only meant for fulfilment are referred to as ‘dark’ stores. While there are no studies on profitability’s of multi-channel and omnichannel retailers, what has been studied is customer satisfaction and intention to repurchase. Chatterjee (2006) concludes that retailers are more likely to integrate channels if they completely own all of their channels and understand that store and web consumers are similar in frequency of visits and average dollar value. While there is a need to build a deeper understanding of profitability of omnichannel vis a vis multichannel, there is also a need for a robust set of performance metrics to guide their progress. A set of metrics for Omnichannel retailing including the classical distribution measures of width and depth as well as

measures of brand owner – retailer relationship have been postulated (Ailawadi & Farris, 2017).

Omnichannel Case Studies of Firms

Omnichannel retailing is not just a buzzword in retailing today, it is also understood that omnichannel retailing will be the route to deliver superior consumer satisfaction as consumers are able to navigate the purchase and usage journey in the manner that best works for them. The omnichannel case study for Hummel, a global B2B sportwear retailer is documented by Hansen and Sia (2015). The key milestones in this journey included defining ecommerce as a strategic priority, hiring a Head of Digital, aligning online branding globally, creating a B2B ecommerce platform and then integrating B2C onto it, and complementing the physical store experience with digital ones in-store.

Omnichannel retailing is also understood to be the route to lower costs and better financial returns for retailers in the long term. However, the process of transitioning from multichannel retailing to omnichannel retailing is fraught with challenges and risks. Larke et al. (2018) studied the Seven Eleven retail chain which was a key player in the Japanese convenience stores market. They had also started ecommerce in parallel and were trying to integrate channels. What they understood and documented was that transitioning to omnichannel comes with complexities related to considerable number of stock-keeping units, multiple small format retail stores, challenges of employee incentive structures, difficulty in attribution of sales to channels, investment in systems, technology, and people, and requires serious commitment from senior management to make this happen.

Some of the key challenges for successful omnichannel retailing identified were top management profile and the intent and ability to integrate traditional functions and

channels to deliver the omnichannel experience (von Briel, 2018). The factors of importance for the retailer are strategic implementation, the brand and product portfolio, and the imperatives and abilities for retail operations. In a qualitative study to identify factors impacting Omnichannel retailing adoption in Indian apparel firms, it was concluded that financial commitment is the most critical factor. It is followed by technological capability, training and development, performance metrics, supportive organizational structure, collaboration and knowledge sharing, offline-online information aggregation and an integrated tech platform (Mishra et al., 2021). In an empirical study done with consumers to demystify the factors influencing omnichannel preference (Hickman et al., 2020), they conclude that brand familiarity, customization, perceived value, and technology readiness are the factors that retailers would need to focus upon. Anita Andrews writes in Women's Wear Daily (2019) that omnichannel commerce is about meeting the expectations of consumers on channels and platforms of their choice. She warns retailers that it is not a one-size fits all and needs to be tailormade for each organization, data availability and usage is a key to understanding consumer needs and creating the right consumer experiences.

2.4 COVID-19 Impact and the Future of Retailing

In this section, we cover the impact of the COVID-19 pandemic on the retail sector from academic literature and from practitioners. The natural next step would be to capsule how the future of retailing is being envisaged in the post-COVID world.

COVID-19 Impact

COVID-19 has been the biggest factor driving change not just across businesses but life as we know it. As far as retailing is concerned, COVID-19 has impacted consumer behaviour, how brand owners and retailers are reaching consumers with their marketing activity, how supply chains have evolved and what new capabilities are being built in retailer and brand owner organizations. There have been several changes in consumer behaviour and attitudes – psychological ones like uncertainty, anxiety, and a sense of scarcity (Omar et al., 2021). Equally there have been those to do with retail spaces like safety, distancing, time spent in store etc. Consumers in the developed world have adopted omnichannel models like order online, pick up in store or rather curb side pick-up, and even developing countries have seen consumers adopting digital channels extensively for products ranging from food and medicines to high value purchases like apparel and electronics (Bain, 2021). COVID-19 has played a catalyst role in accelerating digital consumer behaviour and integrating e-commerce into the retail ecosystem and one senior retail executive who was part of the qualitative research said “COVID-19 did for digital commerce in India, what Demonetization did for digital payments in 2016”.

The second area of COVID-19 impact following that of consumer behaviour change is the area of retail marketing. Every element of the retailing mix being powered by technology is and will be the most powerful enabler for retailing – retail place and supply chain, product, pricing, promotion, personnel, and presentation (Grewal et al., 2021). The third area of COVID-19 impact has been on retail supply chains. Large retailers in the post-COVID world are redesigning supply chains to be resilient under uncertainty (Alikhani, 2021). Resilience under uncertainty has been a big learning after global supply chains ranging from toilet paper to semi-conductor chips collapsed in the

pandemic. It has been suggested that Collaboration Efficiency is a measure that organizations should track – it combines collaborative planning with sharing network resources (Sharma et al., 2021). This will be key to enhancing supply chain performance in a VUCA (volatile, uncertain, complex, ambiguous) world. Retailers and brand owners are trying to build some key capabilities as quickly as possible – digital customer acquisition, data science, redesign of customer journeys in the omnichannel environment, technology capabilities and all of this will be facilitated not by technology alone but by a change mindset.

Future of Retailing

From the point of view of this doctoral dissertation, the most substantial impact of the COVID-19 pandemic has been the rapid acceleration towards omnichannel retailing, with a thrust by traditional organizations to build capabilities needed for the digital world. “Retail stores will completely die” says tech investor Marc Andreessen (Shontell, 2013). Such headlines not just grab attention, but also make offline-first brand owners and retailers take a hard look at themselves to create digital channels, and leapfrog to omnichannel retailing. Even in developing markets, the future of retailing is an omnichannel one. There are several barriers to creating the omnichannel experience for consumers, and these are along three dimensions – supply chain, marketing mix elements like product portfolio and pricing, and organizational capabilities and resourcing (Ye et al., 2018). The other question that is often raised by academics and practitioners in the context of omnichannel retailing is whether offline and online channels need to be mirror images of each other. It has been argued that a successful omnichannel structure is one that creates channel experiences best delivered by that channel, products and tasks assigned to a channel are the ones it is best suited to deliver to (Chopra, 2015). Such experiences where consumer benefits

like breadth of choice, content consistency and customization outweigh the risks of data privacy and security are those that will be sought by consumers in the new world (Chatterjee et al., 2021). Brick and mortar retailers are an endangered species (Sheth, 2021) and retailers who do not reinvent themselves will find themselves losing in the marketplace. For physical retailing to stay, offline retailing needs to offer enhanced experiences and value-added services using high technology.

In the short section that follows, we present the summary of academic literature from a few meta studies on omnichannel retailing and the directions of research recommended. In a meta study of omnichannel literature (Mishra et al., 2021), it was found that the number of journal articles on omnichannel retailing had gone up significantly starting 2018, however most of the studies were focused on the Western world or China. The topics covered in these studies are largely on consumer behaviour and supply-chain or technology. There aren't many studies focussed on the firm and what retailers need to do to be successful in omnichannel retailing. Another literature review on omnichannel retailing has summarized existing academic literature along the four dimensions of multichannel retailing, mobile retailing and information and communication technology, omnichannel retailing and differences between omnichannel and multichannel retailing. One of the conclusions is for future research to focus on new retailing agendas from managerial perspectives and providing implications and learnings for practitioners (Huang, 2021). In the most recent study reviewing existing literature about omnichannel strategies the three drivers identified of omnichannel retailing are technologies integrating sales channels, mobile technology, and consumer demand (Asmare & Zewdie, 2022)

2.5 Gaps in Academic Literature

Omnichannel retailing has been studied for a little over a decade now and even with that studies have increased from 2018 onwards. Meta-studies on omnichannel retail literature conclude that more research is needed especially in the COVID and post-COVID era, to understand the drivers of success by studying firms and by studying consumers in diverse markets at different stages of evolution. Specifically with regard to firm-based studies, the following are the gaps identified (Mishra et al., 2021).

Table 2: Gaps in Firm-Focussed Omnichannel Literature

Direction	Research Needed
Topics	Impediments and drivers of omnichannel retailing with focus on balancing on different functional areas Impact of omnichannel on firm performance
Context	Expanding context to developing countries, current focus largely on Western world and China Measuring sectoral influence on omnichannel adoption
Methodology	Mixed-methods research needed to supplement survey-only studies

It is with this background that we embark on a firm-focussed research to derive the key factors from a firm's point-of-view that would drive success in omnichannel retailing.

Chapter 3 : RESEARCH MODEL AND HYPOTHESES

The stage of evolvement of brand and retailer organizations in India in omnichannel retailing is nascent. Having a model that links internal factors of the organization and the external factors of the marketplace and environment to the success of omnichannel retail would go a long way in aiding organizations create their own strategies along these dimensions. This section will elaborate on the theoretical framework for the strategic model for success of omnichannel retailing and present the different hypotheses to be tested in this dissertation. The first step to creating and detailing the framework would be to define what success in omnichannel retailing means. To help define success, we will list a couple of alternate ways that omnichannel itself has been defined.

From the consumer's point of view, an omnichannel retailing environment is one where all the channels are seamless and connected. Consumers have a single view of the assortment or merchandise, find themselves at ease in their discovery journey across channels or at any of them, complete the buying transaction in a safe and trustworthy environment and sign up for delivery of the product at a location of their choice, and take it for granted that if they wanted to exchange or return the product, they could choose a channel convenient to them. From the consumer's point of view, the operating term is that of triggering interaction with a channel of their choice at every step in the consumer journey. In such a scenario where consumers choose the channels for their utility and convenience, the choice that consumers are exercising is really of the brand or the specific product.

Given the context set above that consumers are already headed towards the omnichannel experience, the objective of the dissertation is to study what organizations need to do to deliver the experience that consumers desire. We attempt to define omnichannel using the brand or retailer's lens wherein it takes on a different nuance. We will start with traditional brands and retailers who have been offline-first in their business model. Organizations define omnichannel model as one where they have a single unified view of consumers across touchpoints – whether the consumer browsed a product at an online store and then came to a physical store to buy it or vice versa. Some of these touchpoints may not even be in the gamut of traditional channels where the product or service is retailed from. Organizations have historically seen discovery channels separated from transactional ones – advertising and sales channels have been seen as demarcated. Even within sales channels, brands have used multi-channel approaches like owned stores, franchised stores, multi-brand stores, multi-category large-format stores etc. and been most comfortable when they have a high degree of control over the channel, viz. owned and controlled retail stores. This is partly because organised retail itself is underdeveloped in the country as compared to Western markets or even emerging markets like China, the Middle Eastern markets, or the South-East Asian markets. With the advent of ecommerce, brand-owners have begun to treat online horizontal retailers e.g., Amazon, Flipkart etc like they used to treat physical large-format retailers. They are beginning to engage with them using joint business planning tools and coming to terms with online channels becoming a significant part of the consumer's discovery process and also becoming fulfilment channels.

3.1 Definition of Success in Omnichannel Retailing

In pursuit of the unified view of consumers across channels, brands need to make a big shift from their current siloed multi-channel strategy to the omnichannel one. As they detail the consumer journey from acquisition, through conversion to fulfilment, they need to devise consumer-facing strategies that aren't created from a consumer in a specific channel perspective but for the omnichannel-seeking consumer who is channel-agnostic. The operating term for brands and retailers to offer the omnichannel experience is to be responsible for channel integration. The term 'channel-integration' may not sit easy with offline-first brands as they have traditionally been in control of a third of their channels, while the rest of the revenue has come from managed-channels and partnered-channels. Such organizations have hitherto seen themselves as responsible for overall consumer-experience delivery only in the channels they controlled and involved only on some key strategies like pricing with the other channels.

On the other end of the spectrum are new-age brands that started their journey as online-first brands. We include multi-category online retailers along with online-first brands who started businesses as ecommerce entities. These online brands and retailers are adding brick and mortar stores of their own and retailing through physical multibrand retail outlets to be more relevant to the omnichannel consumer. Online-first retailers are also tying up with traditional retailers including mom-and-pop stores to ensure speedy delivery to consumers. While traditional retail brands are finding new alliances with online channels for consumer discovery, online-first entities are forging partnerships with physical retailers for fulfilment.

For both offline-first brands and retailers as well as new-age digital retailers and online-first brands, the goal of integrated channels delivering the desired omnichannel consumer experience is quite some distance away and they need to navigate through challenges at the organization end while designing for seamlessness in the consumer journey. In a sizeable proportion of organizations, the first step is to build competencies to service customers through a new channel – online channel for offline-first organizations and vice-versa – before they can start building integrated consumer journeys. Offline-first organizations that are higher up the curve on omnichannel retailing are building in the strategies for cross-channel retailing even as they are building throughput for their new channel. On the other hand, online-first brands which are primarily single-channel organizations are seeking to leapfrog to omnichannel by bypassing the multi-channel environment prevalent with traditional offline-first brands.

It is with this background and the significance of the new channel to an organization, that we define the success of omnichannel retailing by the following criterion:

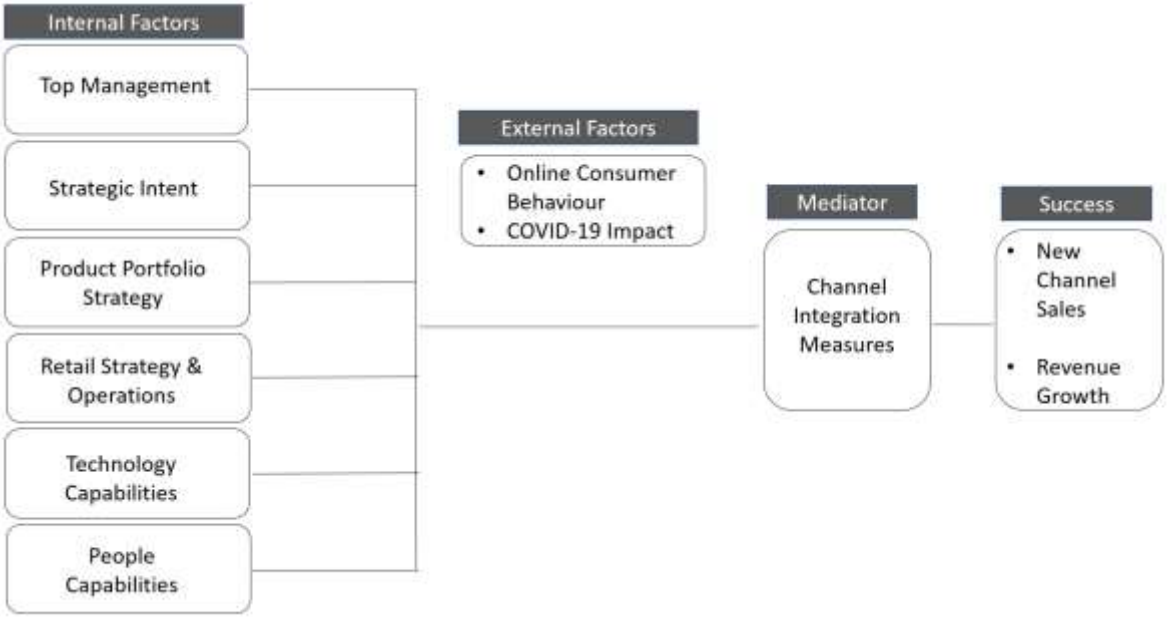
- Share of sales from the new channel

A big step in the journey towards omnichannel retailing for brands would be the reduction in dependence on the primary channel. For the stage of evolution of this market, it could be an effective indicator of success of omnichannel retailing. Offline-first organizations have not yet put in place processes for pristine measures like tracking of customer journey across channels or attribution of efforts and incentives to channels. Even the linkages to key organizational outcomes – revenue growth, competitive share, and profitability – are slightly farther away.

3.2 Conceptual Model for Omnichannel Retailing

The conceptual model is built with a set of internal factors that organizations can control, a couple of external factors that organizations need to keep abreast of, and one factor being detailed as a mediator factor, with all of these impacting the dependent variable, viz success in omnichannel retailing. The internal factors considered are (1) Top Management (2) Strategic Intent (3) Product Portfolio Strategy (4) Retail Strategy and Operations (5) Technology Capabilities (6) People Capabilities. These factors are broad enough to be categories or sub-categories and specific attributes and measures for the same will be detailed. We expect external factors like online consumer behaviour and COVID-19 to play a moderating role. We are also defining a mediator factor termed as Channel Integration Measures. Figure 1 represents the theoretical framework we are proposing for the omnichannel retailing dissertation study.

Figure 1: Theoretical Framework of factors impacting success in Omnichannel Retailing



3.3 Internal Factors and Hypotheses

In the following section, we shall detail the six major internal factors that could impact the success of omnichannel retailing.

3.3.1 Top Management

The Top Management factor would cover for the intent and capability of the top management of the organization to make a shift to omnichannel retailing. It has been cited by practitioners that receptivity of top management to technological advancements and their own change-orientation would set the pace for the adoption of new digital channels and the shift towards omnichannel retailing. If one of the CXO's in an organization is a digital specialist, it can help bring in the digital transformation impetus and culture to the organization. This factor would also include understanding if the role of the new channel in the company's business model has been understood and articulated by the top management. This factor seeks to understand if digital transformation and omnichannel retailing have been built into the top management's key priorities. The hypotheses for the factor of Top Management are as here:

H1a: The higher the top management's belief in the omnichannel business model, the higher will be its success.

H1b: An organization will be more successful at omnichannel retailing if its top management team is change-oriented.

H1c: An organization will be more successful at omnichannel retailing if its top management team is tech-savvy.

3.3.2 Strategic Intent

The second internal factor of study is Strategic Intent of the organization**.** This factor will be measured by the resourcing the organization has put behind the new channel. It will gauge for whether the organization has built a structure to propel itself in the direction of omnichannel by building a strategic business unit focussing on the channel which is new to them. It would be important to understand if the company has staffed digital channels with a senior resource and the appropriate profile of such a resource. Many traditional organizations may not have digital capabilities available within the organization and this would require lateral hiring and assimilating of the lateral resources. In addition to people resourcing for the new channel, the quantum of investments in technology, system innovations, online customer acquisitions, branding and marketing, supply chain and inventory systems will be key to delivering omnichannel success. The hypotheses for the Strategic Intent factor are as follows.

H2a: An organization will be more successful at omnichannel retailing if its new channel is resourced like a Strategic Business Unit

H2b: The more digitally experienced the head of the new retail channel is, the higher will be the probability of the organization's success in omnichannel retailing.

H2c: The more senior the head of the new retail channel is in the organizational hierarchy; the higher will be the probability of the organization's success in omnichannel retailing.

H2d: The higher the investments the organization has made in the new retail channel, the higher will be the probability of the organization's success in omnichannel retailing.

3.3.3 Product Portfolio Strategy

The third factor of study is Product Portfolio strategy. that firms devise and execute for customer acquisition and customer loyalty. In the case of organizations targeting to build long-term customer loyalty with consumers who switch channels effortlessly, the lead strategy would be that of assortment and merchandising. How do firms ensure that their assortment strategies target omnichannel consumers the right way at online and offline touchpoints? How do they ensure that the entire inventory is showcased to consumers irrespective of the channel they are shopping in? What role does price and promotional strategy play in targeting omnichannel consumers? How do firms manage price matching across different channels including those managed by their partners?

H3a: The better the product portfolio mapping to a channel, the higher will be the probability of the organization's success in omnichannel retailing.

H3b: An organization will be more successful at omnichannel retailing if it maintains parity pricing across its channels.

H3c: An organization will be more successful at omnichannel retailing if it is able to showcase all inventory to all consumers, without channel-created siloes.

3.3.4 Retail Strategy and Operations

The fourth factor is that of Retail Strategy and Operations which ensure superior consumer experience in digital channels and at physical stores. Some key dimensions here would be ease of navigation in the digital store, the layout of the physical store, skills and knowledge of front-end salespeople etc. Intricately linked to the consumer experience in the discovery phase is the experience post the purchase, which is product delivery, returns and exchange. Organizations are discovering that it is critical

for firms to design the customer journey seamlessly across channels, e.g., it is important to add social and digital channels for customer discovery in addition to the brick-and-mortar retail stores. Equally critical it is for them to build systems for returns and exchange of merchandise across their channels. Organizations are redesigning the layout of stores to facilitate localised delivery of online orders using store inventory. Organizations have also been piloting omnichannel models such as BOPS (Buy online, pick up at store) which is also referred to as Click and Collect. The reverse of this model is where a consumer visits a retail store and in the event of them not being satisfied with the store merchandise, they are offered the option of shopping from the brand's online store while being assisted by the store staff. This omnichannel model is referred to as Endless Aisle. Organizations need to build capabilities for such omnichannel models wherein offline and online channels are integrated by the firm, as much as possible. The hypotheses for Retail Strategy and Operations are here.

H4a: The higher the alignment of the retail operations of an organization to channel-specific consumer behaviour, the higher will be the success in omnichannel retailing.

H4b: The success of organizations in omnichannel retailing is linked to the number of omnichannel models they have piloted.

3.3.5 Technology Capabilities

The fifth internal factor of the omnichannel conceptual model is the Technology Capabilities of the organization- strategic design and deployment of the tech-stack. The tech-stack ensures a unified view of consumers, orders, and inventory across channels and through the entire supply chain of the organization. This involves deployment both at the front and back ends of the organization. At the front end, the

tech-stack supports consumers getting a unified view of merchandise across channels. At the back end, the tech-stack supports inventory systems that ensure a rule-based serving up of merchandise and delivery schedules. Innovative inventory systems are needed to minimize loss of sales at the most optimum costs. The hypotheses for Technology Capabilities are listed here.

H5a: The more integrated the tech stack of an organization, the higher its chances of success in omnichannel retailing.

H5b: The more 'warehoused' the legacy data systems of an organization and the more amenable they are for data mining, the higher its chances of success in omnichannel retailing.

3.3.6 People Capabilities

The sixth and final internal factor is People Capabilities of the organization. These are not just required at senior management but across the organization – skills for the digital world and competencies for collaboration. There are two areas of skills that are particularly critical – one is specific to the channel which is new for the organization. Offline-first organizations need to upskill their marketing teams for digital customer behaviour – for acquisition and for building loyalty. Marketing skills for the social and digital world are significantly different from the traditional marketing world. Similarly, online-first organizations need to upskill or hire for skills needed for physical retail and network building. One area of people skill building that cuts across offline-first and online-first organizations is that of Data Science and the reason for this is how consumers are traversing across channels, products, and brands. Data science skills along with the requisite investments in technology will help organizations understand

and leverage consumer behaviour in the connected world. The hypotheses for People Capabilities are listed here.

H6a: The higher the investments of an organization in channel-specific resourcing, the higher its chances of success in omnichannel retailing

H6b: The higher the investments of an organization in data analytics, the higher will be the probability of the organization's success in omnichannel retailing.

3.4 External Factors and Hypotheses

India has 140 million consumers shopping online third only to China and US. E-Retail grew by 25% in 2021 (Bain, 2021). This kind of rapid adoption has entailed that offline-first brands and retailers have some catching up to do in their journey towards an omnichannel business model. This and the other external factor, viz COVID-19 are detailed in the following section.

3.4.1 Online consumer behaviour of category

One key external factor in the omnichannel retailing conceptual model has been termed as Online Consumer Behaviour. This encompasses multiple facets but seeks to understand how the internet shopper is impacting the firm's journey towards omnichannel retailing. The stage of evolvement of consumers is an important antecedent to omnichannel success – how technology savvy consumers are, how experimental consumers are, how time-starved and convenience seeking they are, how trusting they are of digital infrastructure especially payments – all these and more have a role to play in omnichannel retailing success. Online consumer behaviour is category specific as evident from the Bain report: How India shops online 2021. The

report states that while online retail is 4.6% of the overall market, the number is much higher ex-grocery at 19-20%. Although not covered independently as a separate attribute, this factor also includes the channel evolution for the product category raising questions like presence and popularity of digital channels especially horizontal e-tailers and the consumer base and loyalty they have built. The regulatory framework for digital channels, electronic payment, social media marketing etc also impacts consumer adoption of online in a category and thereby affects omnichannel success. The hypothesis for assessing this factor is articulated below.

H7a: The higher the share of online consumers to the category the organization operates in, the higher will be its chances of success in omnichannel retailing.

H7b: Factors impacting success of omnichannel retailing will be different for different product / service categories.

3.4.2 COVID-19 Impact

COVID-19 is the black swan external factor that has hastened the adoption of digital channels both by organizations and consumers alike. In doing so, COVID-19 has accelerated the offline-first organization's journey to omnichannel retailing. As India went into its first lockdown in March 2020 and brick-and-mortar retailing was severely impacted, digital channels rose to the rescue. For experience goods companies, the first lockdown was a complete washout as their products didn't come into the essential goods category defined by the national and state governments. While waiting for COVID-19 to abate and for the lockdowns to be lifted, many experience goods companies started experimenting with new modes of servicing consumers – social commerce in the form of the WhatsApp medium for customer discovery of

merchandise became popular. As the lockdowns started being lifted from the stringent ones, hyperlocal channels mushroomed with store staff of retail stores engaging consumers through video-walkthroughs of their stores, and delivering merchandise with options of exchange and returns generously built in. While these new capabilities were being built ground-up, organizations were also moving into high-gear in a top-down manner to invest in technology, processes and skilling needed for a digital first world. The hypotheses for the external COVID-19 factor are listed here.

H8a: The higher the new-channel preparedness was for an organization pre-COVID, the higher is the probability of the organization's success in omnichannel retailing.

***H8b: In the post COVID world, organizations will investment more on their new retail channels to ensure overall business growth*.**

3.5 Mediator Factor and Hypotheses

Channel Integration is a potential Mediator factor - this factor measures for the intermediate phases that firms could have reached in their omnichannel journey. While several of the internal factors are related to strategies of the organization, the mediator factor measures for organizational behaviour. In a sense it measures for execution of the strategy and not the strategy itself. One visible dimension for the same could be the presence of an omnichannel evangelist at a senior level within the organization, or the number of years that the organization has been piloting omnichannel models. Has the organization reached a level whereby they have the intent and the capability for integrated CRM (Customer Relationship Management) and actively cross-promote channels to their consumers. One significant aspect of this mediator factor is the presence and effectiveness of networks and partnerships. Does the firm do joint

business planning with channel partners who are not directly controlled by them? While joint business planning came slightly downstream in the relationship journey with physical, large-format retailers, brand owners have started this early with e-tailers in their omnichannel journey. The hypotheses for the channel integration factor are listed here.

H9a: The lower the conflict between offline and online retail channels, the higher will be the probability of the organization's success in omnichannel retailing.

H9b: The more integrated an organization's CRM (Customer Relationship Management) systems across offline and online channels, the higher will be its chances of success in omnichannel retailing.

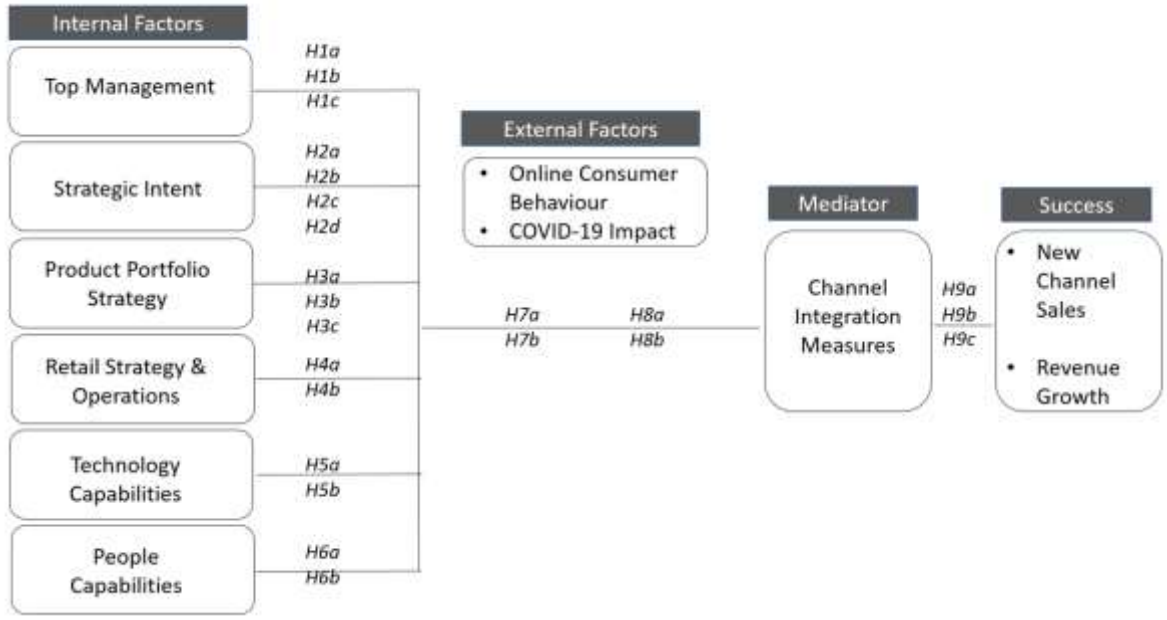
H9c: The higher the discipline within an organization for joint business planning / reviews with new-channel partners, the higher will be the probability of the organization's success in omnichannel retailing.

3.6 Success Factor

The Dependent Variable in this omnichannel study has already been defined as the share of the new channel. Annual Revenue Growths are another potential success outcome and will be sought in the research. There are other attributes which will be asked of respondents in the study – omnichannel share measured as revenue contribution where more than one channel was involved in the transaction, percentage of consumers shopping on both channels, percentage of digital marketing spends etc. However, some of this data could be confidential and may not be shared by respondents. Some of these metrics are also not yet tracked by organizations and the survey instrument will check for whether they are being tracked or not.

The figure below showcases the theoretical framework with the hypotheses being tested in the research study. A detailed survey instrument, breaking up the factors listed above into underlying attributes, has been designed after a robust literature review and qualitative interviews with twenty-five practitioners and subject matter experts.

Figure 2: Theoretical Framework depicting Hypotheses for testing



Chapter 4 : RESEARCH METHODOLOGY

The aim of my doctoral research is to develop a strategic model to link omnichannel success of an organization to the internal factors it can control and the external environment factors indicating the stage of evolvement of consumer, technology, product, or service category that the company plays in. We intend to derive the ranking and importance of factors through the empirical research model. Prior to the quantitative research, we undertook an exploratory qualitative research to gain insights and understanding about the attributes and factors that could potentially impact success in omnichannel retailing. It is through this exploratory research that we were able to design the survey instrument for the quantitative one.

This chapter discusses the research methodology followed and is divided into two parts.

- Qualitative Research: An exploratory study of brand organizations, retailers, and knowledge partners to understand the attributes and factors underlying effectiveness of omnichannel retailing.
- Quantitative Research: A closed-ended study of retailers and brand organizations using a self-administrable survey instrument to develop strategic model.

In both of the sections, we have detailed the data sample selection and data collection methodologies. For the qualitative section, we have shared some of the transcription and summarization processes. For the quantitative research section, we have also detailed the measures and analytical methods.

4.1 Qualitative Research

The first stage of the doctoral study was conducting exploratory qualitative research of brand organizations and retailers in a large, fast-growing, dynamic retail market - India. The objective of the qualitative phase of the dissertation was to uncover insights and postulate hypotheses about factors driving success of omnichannel retailing. In addition to the understanding from the literature review, it was important to hear corporate executives in their own words and get to a listing of the attributes that they considered instrumental in making omnichannel business models effective. The qualitative research was useful in defining success measures – what do practitioners measure today and what would the measures be as they reach a steady state in their omnichannel business model. The objectives of the qualitative research can be summarized as

- Defining the dependent variable – Success in omnichannel retailing and getting a set of measures / metrics for the same.
- Hypotheses generation – what could be the factors driving omnichannel success.
- Independent Variables – an understanding of the attributes which could be part of the survey instrument for the quantitative research.
- Constructs and Measures/Metrics – an understanding of potential constructs and measures.

The qualitative research stage further reiterated that the market we had chosen to do the dissertation study was indeed relevant since the rate of adoption of omnichannel retailing business models widely varied from organization to organization. The other big learning from the qualitative research stage was that both offline-first and online-

first brands believed that a combination of digital and physical channels will be needed to create superlative consumer experiences, thus lending credence for this dissertation study itself.

4.1.1 Data Sample

In this section, we describe how organizations for the qualitative research part of the omnichannel study were selected.

- Operating in the Indian market which is a fast-growing economy with a big thrust on digitization from both public and private sector.
- Organizations were defined as offline-first or online-first depending on the first channel that the organization created strategy and Go-to-Market for their brands and product merchandise. In the qualitative research, I interviewed both offline-first and online-first organizations.
- The sample set for the qualitative research included product and service organizations spanning categories like experience goods, fast moving consumer goods FMCG, banking and financial services etc. In the study, these are referred to brand-owners.
- There was special focus provided to retailers – both offline-first and online-first. Retailers were either horizontal, spanning multiple product categories or vertical, where they specialised on one or a few categories.
- In order to gain nuances and insights, it was critical for the sample to cover the spectrum of omnichannel behaviour even if it meant that outlier companies were also picked up for the exploratory study. This tagging of omnichannel readiness and delivery was evaluated through interviews with technology and knowledge partners to the retail industry. Retail experts

were hence a part of the sample set for the qualitative research of the omnichannel study.

4.1.2 Data Collection Methods

The primary data collection method for the qualitative research part of the omnichannel study was interviews with key decision makers in the organizations described in the data sample section above. These were depth interviews carried out online with a detailed discussion guide over the Zoom platform, these interviews were recorded with the consent of the interviewees and transcribed using an online AI service provider (Otter.Ai). Each interview ranged between 60 and 75 minutes. We found that the transcription service was not as accurate as we would like especially on account of accents and occasional multi-lingual conversation. Hence, I listened to individual recordings of interviews to make my own notes as needed.

Interviewees included CXO's who have been directly involved with the strategic thinking and evolvement of omnichannel strategy – Chief Executive Officer CEO, Chief Financial Officer CFO, Chief Revenue Officer, Chief Information Officer CIO, Sales Director, Marketing Director, Digital Transformation Director, Supply Chain Director, Merchandising Director etc. Interviews also included operating managers who are tasked with participation in the strategic thinking as well as driving execution. Designations of such managers are Online Business Head, Retail Sales Head, Planning Head, Brand Head, Digital Marketing Head, Online Fulfilment Head, Channel Lead for New Formats etc. These interviews were conducted through virtual meetings owing to the current social distancing norms the world over. All respondents accepted the terms and returned the requisite consent form for our records. I reached out directly to each respondent, explaining the nature and objective of the study – and there wasn't

a reservation about it, especially after the participant consent form was shared which had the confidentiality and data usage details. We used references from earlier interviewees, networks from my corporate career, as well as direct messages using social media to create a potential long list of interviewees. From this long list, we used key criteria like size of company, business model, industry segment, an external expert evaluation of stage in omnichannel journey to target respondents to ensure diversity and representation.

The discussion was around internal and external impetus to the omnichannel business model, and the capabilities being built by the organizations. The sections covered were as follows:

- Business highlights and challenges
- Business Model changes
- Drivers of business model changes – external and internal
- Strategic Priorities of top management
- Capabilities and Resources
- COVID-19 Impact

Specific questions revolved around where the organizations were in their journey to omnichannel retailing, the challenges being faced, the capabilities needing to be built, the technology solutions required, any experiments that the organizations were conducting or omnichannel models that were being piloted etc. There was a discussion around consumer behaviour in their industry segments; what consumer experiences were being sought. This exploratory research also gauged for the impact the COVID-19 pandemic has had in the adoption of the Omnichannel strategy. The discussion

guide used for the qualitative research is shared in Appendix I. The time period for the qualitative research was September to November 2020.

The qualitative research segment was leveraged to create a listing and exploratory understanding of the factors that could drive success of the omnichannel strategy, and the attributes going into the survey instruments needed for quantitative research.

The qualitative section of the thesis research included a set of twenty-five organizations with senior management personnel from these organizations participating in depth interviews conducted over an online platform (Zoom). They represented offline-first and online-first organizations as well as knowledge partners like strategy and tech consulting firms. It was clear from the interviews that there was a big interest in the topic – the interviewees did not always have crisp responses but were thoughtful in articulating them. Several interviewees mentioned that they would like a copy of the findings, and also sought the discussion guide itself as they felt it would help them brainstorm in their own teams.

The table below has the sample set achieved of the qualitative research.

Table 3 : Details of Organizations participating in Qualitative Research

	Brands		**Retailers**		**Experts**
	Offline First	Online First	Offline First	Online First	
Fashion & Accessories	5	2	1	2	
Electronics & Home Appliances	1			1	
Personal Care, Wellness, Beauty	1			1	
Services	1	3			
FMCG & Pharma	2	1			
Others / Pan Industry					4
Total	10	6	1	4	4

4.2 Quantitative Research

The objective of the quantitative study is to build a strategic model which explains the key set of internal and external factors driving omnichannel effectiveness. The model would be built one step at a time, starting with the individual hypotheses laid out in the research model and then sequentially aggregating till the optimal model is developed. This study would be done with product and service organizations as the focus as well as retailers who are on the omnichannel journey themselves. While we had included knowledge experts like strategy and technology consultants in the exploratory research, they were not included in the quantitative research since each respondent had to answer survey questions on behalf of the organization they worked with.

4.2.1 Sample Selection

As in the qualitative study, these organizations would be operating in the Indian market. They would include Indian companies as well as multinational companies who have businesses in India. The respondents selected for multinational companies would be employees in their Indian organizations. These companies may be primarily dependent on physical retail or could have started their business by being primarily online. The study would cover a multitude of B2C categories – experience goods like fashion and personal electronics, fast moving consumer goods, beauty and wellness, electronics and home appliances, digital products and services like travel, banking, financial services etc. The sample size of the quantitative study targeted was between ninety and hundred respondents.

The criteria used for targeting respondents for the quantitative research are as follows, they are similar to but not the same as the ones for the qualitative section.

- Operating in the Indian market.
- Offline-first or Online-first organizations.
- Product and Service organizations: The industry segments targeted were Fashion and Accessories, FMCG and Pharma, Services like Banking, Telecom etc, Beauty and Wellness, Electronics and Home Appliances.
- Offline-first and Online-first retailers: These could be horizontal retailers like Amazon or specialised retailers like Home Stop.
- Respondents within these organizations targeted were middle to senior managers involved in strategy and front-end operations of retail organizations.
- The sample resembling the population was more important to the study than for it to be comprehensive and include edge-cases. While inclusion of edge-cases was a criterion for the qualitative study, in the quantitative study respondents picked themselves rather than the researcher being in control of which respondents to take into study.

The four segments that respondents fall into are in the table below.

Table 4 :Business Model of Organizations participating in Quantitative Research

	Products	**Services**
Offline-First	Type 1	Type 2
Online-First	Type 3	Type 4

4.2.2 Data Collection Methods

The quantitative study was carried out using closed-ended survey instruments. This survey was activated on a software platform Qualtrics making data collection very user friendly for the respondents. Qualtrics also makes analysis easy by allowing

researchers to export the data into a spreadsheet. Using the criteria developed for the quantitative exercise, we started the research by directly reaching out to senior executives in the retail industry – either working with a retailer or with a brand selling through the retail channel. The first screen of the online questionnaire builds in the consent form and only those consenting are taken through to the questionnaire built in 10 short sections. As I reached out to middle and senior executives in the retail industry, I also got references from them about potential respondents. Since the respondent universe is limited by the number of brands / retailers who have interest and ability for omnichannel retailing, it was imperative for me to reach out to as many sources as possible. Social media like Linked In came in useful as I made a shareable post with the details of my research and included the online link to the survey. This Linked In post was shared by a few people in my network thus adding outreach to potential audiences. The research is also limited by the seniority of the respondents – junior managers would not have been in a position to provide the responses as they would have not had access to the strategic thinking and actions of the organization. The sweet spot of respondents was middle to senior management in companies selling through physical retail channels who have added online channels. The other potential sweet spot were founders / senior executives in online-first organizations who have started their offline journey by using physical retail channels either for consumer engagement or for fulfilment of orders. I reached out to the Retailers Association of India RAI (rai.net.in) which is a non-profit organization working with all retail stakeholders for creating the right environment for the growth of modern retail industry in India. I shared with RAI a small description of the research along with the Qualtrics survey link for them to share with the senior management group of their member organizations.

It should be noted that the research used anonymity and confidentiality as key incentives for participation. There are no names of companies or respondents which have been captured. It was explained to respondents that all data presented in the findings would be anonymised and presented at the aggregated level. The respondents were also offered an executive summary of the thesis as an incentive – a few of them have written emails requesting the same. The sample size reached was a combination of these data collection efforts and the specifics of which means were more effective than others is not known.

The questionnaire is closed-ended so that quantitative analysis can be carried out. We gathered insights and nuances from the exploratory research and will use that to explain the findings from the quantitative research data. The company's performance on internal factors as well as the impact of external factors will be answered by the same respondent on the survey instrument, as will be the measure of the dependent variable – the sales share of the new channel. We anticipate challenges in getting the data on the numeric dependent variables from a subset of the respondents since these are confidential for organizations and they may be hesitant to share despite the confidentiality and anonymity committed by the research. Care was taken to build in intermediary variables into the survey instrument.

The questionnaire was in 10 short sections with a total of 54 questions. The first two sections explored organization profile and respondent profile – which were mostly used as control variables or explanatory variables. One of the questions in this section was regarding the industry segment that the respondent's organization operated in and the contribution of the online channel to the industry revenue in their segment. This was used as an external variable. There were 6 sections for different internal factors, viz Top Management, Strategic Intent, Product Portfolio Strategy, Retail

Strategy and Operations, Technology Capabilities and People Capabilities. There were one section dedicated to an external factor viz COVID-19 Impact. The mediator factor termed as Channel Integration Measures in the conceptual model was broken up into attributes and the questions were asked as part of the Retail Strategy and Operations section. The last section in the questionnaire was regarding organizational trendline data – this included the chosen dependent variable (share of sales of new channel) as well as additional dependent variables like revenue growth, % of consumers shopping on both channels etc.

The survey instruments have been customized for the four segments of respondents – offline-first product organizations, offline-first service organizations, online-first product organizations, online-first service organizations. For example, the new channel for the offline-first organizations is listed out as online or digital in the questions while the new channel for online-first organizations is the physical channel. Questions relating to physical products have been suitably customized for service organizations where the product is a digital one. The survey instruments for each of the four respondent segments are shared in Appendix II.

The period of the quantitative research was July 2021 to February 2022 and the total sample size achieved is 146, with 123 organizations being offline-first and 23 being online-first. The following tables give organizational details for the sample achieved.

Table 5: Details of Organizations participating in Quantitative Research

Code	Industry Segment	Offline first	Online first
1	Fashion & Accessories	45	5
2	Electronics & Home Appliances	13	1
3	Personal care, Wellness, Beauty	5	2
4	FMCG & Pharma	38	6
5	Services	6	6
6	Others	16	3
		123	23
Code	**Length of life of organization**	**Offline first**	**Online first**
1	0-5	6	5
2	6-10	10	8
3	11-25	46	6
4	>25	61	4
		123	23
Code	**Pricing**	**Offline first**	**Online first**
1	Prestige	5	
2	Premium	65	10
3	Mass	44	9
4	Discount	4	2
5	Any other	5	2
		123	23
Code	**Organizational Revenue (Previous Year)**	**Offline first**	**Online first**
1	0-199	13	11
2	200-499	16	1
3	500-1999	36	5
4	2000-6999	28	3
5	>7000	28	2
		121	22

The following table give details about the respondents who participated in the quantitative research. The figure following the table is a word-cloud depicting the titles and roles of the survey respondents.

Table 6 :Details of Respondents participating in Quantitative Research

Code	Position in Hierarchy	Offline first	Online first
1	Top Mgt	83	19
2	Senior Mgt	33	4
3	Middle Mgt	6	
		122	23
Code	**Functional Alignment**	**Offline first**	**Online first**
1	Sales, Mktg, Retail	63	7
2	Supply Chain	2	2
3	Finance	3	1
5	Strategy, Planning, CEO office	49	12
6	Others	5	1
		122	23
Code	**Length of Service in Current Organization**	**Offline first**	**Online first**
1	0-3 years	43	15
2	4-6 years	41	5
3	> 10 years	39	3
		123	23
Code	**Total Work Experience**	**Offline first**	**Online first**
1	0-5 years		
2	6-10 years		
3	11-20 years	40	6
4	> 20 years	83	17
		123	23

Figure 3 : Details of Respondents participating in Quantitative Research

4.2.3 Measurements

In the earlier chapter titled Research Model and Hypotheses, we had given a high-level view of the conceptual model outlining different internal and external factors that impact the success of omnichannel retailing. To operationalize these factors, we used methods from prior academic research and developed attributes using the qualitative exploratory research carried out with senior executives across industries and retail business models. The dependent variable will be detailed separately as will be the control variables. There are sections below dedicated to internal factors, external factors, mediator factors. Before we go into the specific attributes underlying the factors, we would like to describe Likert scales that are used pervasively across the quantitative research, especially for the internal, external and mediator factors.

Likert scales

The Likert scale used in this quantitative research is a 7-point one from Strongly Disagree to Strongly Agree. Likert scales are easy to use for respondents in a self-administered survey and using a 7-point scale made the responses more discerning.

While Likert scales are considered ordinal data, they have been widely used for statistical analysis across fields like psychology, education, healthcare etc. To quote from a research paper on studies in the behavioural sciences, parametric statistics can be used with Likert data, with no fear of ‘‘coming to the wrong conclusion’’ (Norman, 2010).

4.2.3.1 Internal Factors

The internal variables that were built into the survey instrument were derived from an understanding of the factors within the control of organizations that could lead to their success in omnichannel retailing. The understanding came from literature review and from the exploratory qualitative research.

Top Management

The key business model change that CEO’s and top management are seeking to do in the current environment is Digitization. Omnichannel retailing is the front-end part of the digital transformation of organizations where the consumer gets a connected experience. Five key leadership competencies needed for digital transformation are digital vision, digital knowledge, failing fast, empowerment, and managing diverse teams (Faisal et al., 2020). As digital transformation is key to business success in the advanced technology and communication era, a critical requirement for organizations is change leaders. Only top management which is change-oriented can drive new business models through envisioning, planning and execution (Gilli et al, 2020). Top management profile has been operationalized by the attributes of tech-savviness and change orientation of the senior management with an additional dimension of having a digital specialist in the top management team. The factor of Top Management has also been operationalised into top management belief in digital channel, top

management definition of digital channel role and success, and top management's priority for the organization's digital channel. For online-first organizations, these questions use physical channel role definition, physical channel importance and priority.

Strategic Intent

Strategic intent is a construct which has been studied well in organizational behaviour literature – both academic and practice. It is related to organizational vision and strategy. Hamel and Prahalad (2010) argue that strategic intent is not just about a vision but focussed on winning in the marketplace and is achieved through putting strategy into action. They define strategic intent as setting organizational goals that need employee focus and as a process of allocating resources. Three broad dimensions of strategic intent have been identified in a meta study – shared vision, resource focus and foresight (O'Shannassy, 2016). In the context of omnichannel retailing, we have operationalised Strategic intent into two factors and eight attributes using the learnings on the construct from academic literature and dimensionalising it with practitioner speak from the exploratory study. The two factors are related to organizational structure and resource focus. The first one is termed as Digital Strategic Business Unit SBU and the second one is Digital Investments. The underlying attributes for digital SBU are whether there is a digital channel specific SBU with dedicated functional resources and the profile of the Digital SBU leader. The profile of digital SBU leader was explored under the questions of seniority in the organization, the length of experience in digital businesses, and also whether the digital SBU lead was a lateral hire or a homegrown talent. The Digital Investments factor includes investments in technology, supply chain and online customer acquisition. As explained in the earlier internal factor of top management profile and priorities, the survey

instrument targeted at online-first organizations would ask these for their new channel, viz. physical retail.

Product Portfolio Strategy

Product portfolio and pricing strategy are critical to consumer decision making – the choices made by the consumer include brand, product, price, channel. And brand owners have to facilitate the discovery process through their product and pricing strategies across channels so that this decision-making is as easy as possible for consumers. In an empirical study done with online and offline shoppers, it was found that product category congruence and pricing congruence led to favourable outcomes for the retail brand (Chang et al., 2019). This conclusion is easy to relate to as one of the most key drivers of purchase is consistency and brand familiarity. Product Portfolio Strategy was operationalised in the omnichannel quantitative research as relevant and curated portfolio for the new channel. The other dimension on which this was operationalized keeping in mind omnichannel experiences desired by consumers is cross-channel promotion of the product portfolio – was the organization able to showcase its online inventory to offline customers and vice versa so that the portfolio is maximised to the customer. This is referred to as Endless Aisle for offline customers – where in the event of a customer not being satisfied with store merchandise are proffered online shopping within the store itself. The reverse of this for online customers is called Click and Collect such that online customers can get their products faster by going to a retail store. As far as pricing is concerned, the empirical study referenced above was clear in its findings that consumers desired pricing congruence across channels and this drove positive retail brand behaviour. It is listed as an independent attribute in the survey instrument – pricing across channels is matched.

Retail Strategy and Operations

Most brand owners sell their products or services through offline and online channels today – these online channels could be brand assets, or they could be multi-brand, multi-category online retailers. Many offline retailers are also building impactful digital presence. The world of offline plus online retail is here to stay although there are pundits that are predicting the fall of physical stores completely (Shontell, 2013). The respondents in the exploratory research definitely did not concur with the statement but believed that stores would get redesigned to facilitate fulfilment of online purchases and also that physical footprint would include a combination of lit stores and dark stores – lit stores for consumer experience and fulfilment and dark stores purely for fulfilment. In a study on effect of multichannel and omnichannel retailing on physical stores, it was found that physical stores could reduce in size, or in numbers or their functionality – discovery, transaction and fulfilment done at the same time and the same place (Gao et al., 2021). This has been operationalised by two attributes, viz redesign of physical footprint / store design and enablement of social and digital channels for discovery, engagement, and fulfilment.

Another measure of online and offline retail channels co-existing for the retailer or brand owner is how the Customer Relationship Management (CRM) program is designed. Traditionally CRM programs recognized customer behaviour in one of the channels for loyalty rewards but increasingly organizations are integrating their CRM solutions across channels. A related dimension of channels being thought of as seamless for the customer leads to the company policy on product returns – can products bought in one channel be returned or exchanged in another one. It is not as simple as it sounds from the organization's point of view. There are regulatory nuances to invoicing, human resource dimensions like incentives and processes to be laid out

to ensure symbiotic relationship between channels. Clearly this is important to the customer as one of the drawbacks of online retailing as evinced by consumers is that they cannot see or try a product prior to purchase, which leads to a high rate of return (Zhang, 2018).

A final operationalizing of the Retail strategy and Operations internal factor is whether there is an omnichannel evangelist in the organization asked as a direct question with responses on the Agree-Disagree Likert scale.

Technology Capabilities

One of the big drivers of the changing retail landscape – offline and online is Technology. Technologies can be classified as customer or shopper facing like mobile devices, Augmented Reality AR, Virtual Reality VR, chatbots for customer experiences, smart mirrors, payment technologies etc (Shankar et al., 2016) or as supplier-facing which include Internet of Things IOT, RFID, payment technologies, block chain technologies all of which go a long way in improving efficiency, enhancing inventory control, and bettering supplier-retailer relationships through smart contracts. A third set of stakeholders for technology impacting retailing are the organization employees across the retail value chain. These include scanners, RFID, IOT, AR and several means to mine data for delivering superior customer experiences. Some new technologies have come up to serve retail employee needs in the work-from-home COVID-19 world. While there is a lot of academic literature regarding frameworks for technology adoption like innovation adoption and diffusion model, technology adoption model etc (Shankar et al., 2021), they are beyond the scope of this research.

The Technology Capabilities factor has been operationalised into four underlying attributes – firstly, the tech stack being integrated to provide a unified view of

customers, orders, and inventory. The second attribute especially relevant in older organizations is whether their legacy systems have been combined into a single data warehouse. The third dimension is of data mining – whether offline and online teams are able to mine data from the warehouse for actionable insights. And the final dimension was that of technology-enabled supply chain – speedy delivery while optimizing inventory. As in earlier factors, the questions taken on a different angle for online-first organizations, in this factor of technology capabilities these organizations are inherently higher up the curve.

People Capabilities

Academic literature doesn't seem to do justice to new skills required by employees in the omnichannel retailing business model. In addition to enhanced needs of customer experience, there are transformational skills to be acquired – digital marketing, digital customer acquisition, data science, social media etc. In the case of online-first companies going omnichannel, they need to acquire sales, distribution and retailing skills which their teams have not been familiar with. An added dimension of people capabilities in an omnichannel world is that of dynamism and adaptiveness.

4.2.3.2 External Factors

The external variables built into the survey instrument were derived from an understanding of the current environment factors impacting omnichannel retailing. Some of this understanding came from academic literature review but a significant part of it came from consultant and trend reports, the exploratory research and seminars and conferences.

Category-specific Online Consumer Behaviour

In the exploratory research, I discussed with senior corporate executives several external variables that could play a role in determining the success of omnichannel retailing. There were discussions around technology adoption by consumers which was key to digital channels – the omnipresent mobile phone with usage of over two hours per day (Shankar et al., 2016) combined with cheap data plans made the consumer find online browsing ever so easy and also interesting. While digital payments have also become streamlined with the Unified Payment Interface UPI, the adoption of ecommerce in India was spearheaded by the extremely popular cash-on-delivery model pioneered by the leading Indian ecommerce player Flipkart. Inevitably the discussions with corporate executives would move to the dynamic regulatory environment but the conclusion on that topic was that it was not a deal-breaker. Blitzkrieg activities of deep-pocket horizontal retailers like Amazon and Flipkart, later acquired by Walmart, were instrumental in making ecommerce reaching high levels of adoption not just by metro Indians but by residents of Tier-2 and Tier-3 cities – four out of five new online shoppers are from Tier 2 and Tier 3 cities (Bain, 2021). The impact of all of these external factors is captured in one single external variable – the contribution of the online channel to the sales of the category or industry segment. It is a category specific factor and ranges from low single-digits for FMCG and Pharma companies to the high twenties for some segments of mobile phones. This variable was self-reported in percentage terms by the respondents for their category or industry segment.

COVID-19 Impact

COVID-19 has been a black swan event for the retailing industry. It has hastened the adoption of digital channels since a combination of lockdown restrictions, social distancing norms and fear for health - made the physical retail spaces shopping unfriendly. The pandemic was a watershed moment for India's e-retail market, driving a 12-month acceleration in e-retail penetration, while the overall retail market shrunk by 5%, the e-retail market grew by 25% and reached a contribution of 4.6% including the grocery category (Bain, 2021). At the consumer end, there have been changes in behaviour and on the retailer end, there have been changes in retail strategy and marketing channels (Fortuna & Musso, 2021). COVID-19 has favoured the integration of physical and online channels and accelerated omnichannel delivery on the part of brand owners and retailers. COVID-19 has made retailers look at physical channels differently, no longer as a point of convenience but a high-tech environment to offer product and value-added services to customers (Sheth, 2021). In a study conducted in South Africa (Weber, 2021) there were several disruptions cited by retailers on account of COVID-19 - these included consumer migration to online channels, supply chain shortages, systems, and technology constraints at the front and back ends. We have operationalised the external black swan COVID-19 factor into 3 underlying variables – the level of preparedness for omnichannel retailing that an organization had done prior to the pandemic, the belief of the organization that omnichannel business models are here to stay and going forward that they would invest in both physical and digital channels, and a direct question about the change in New Channel Share during the pandemic (Alternate Dependent Variable).

4.2.3.3 Mediator Factors

The retail strategy and operations section of the omnichannel quantitative research had a set of 8 questions for respondents. Of these, a couple of questions were related to actions being taken by organizations regarding redesign of physical store design and retail footprint and similarly about design of online experiences. Another set were to do with treating offline and online channels as two sides of the same coin – and here we tracked the product returns policy of companies and their policies for Customer Relationship Management.

A couple of variables were identified which were more downstream of the ones listed above. What this means is that companies need to have addressed some of the internal retail operations factors before they could move to the mediator factor, referred to as Channel Integration Factor. What this factor seeks to measure is the level of channel integration between offline and online channels the organization has achieved or is achieving. This mediator factor has been operationalized with three underlying variables – the first variable is whether the organization has policies and incentives for cross channel promotion, promoting online to offline customers and vice-versa. The second variable which we have operationalised the Channel Integration Mediator Factor into is Joint Business Planning – whether the organization plans and reviews with horizontal e-tailers (for offline-first companies) and horizontal brick-and-mortal retailers (for online-first companies). The third variable is a direct question regarding the number of years that the organization has been piloting omnichannel models for. In a sense, the mediator factor is really retail strategy being put into action.

4.2.3.4 Control Variables

The quantitative research is based in one market – India in the time period July 2021 to February 2022. The macroeconomic conditions in the period were influenced by COVID-19 related lockdown restrictions, work-from-home guidelines, and general scepticism of the public to be out in the markets shopping as they would normally have done. These would have influenced different industry segments in differential ways and hence we are using industry segment as a control variable. There are a few other parameters about the organizations that we are seeking as survey responses – length of existence of organization, the organization's revenue and the pricing approach of the organization be it prestige, premium, mass or discount. We will use one or two of these as control variables in the model as needed.

In the survey instrument, we have also sought details about the respondent – level in management, length of service in the organization, total experience etc., however we do not see these as control variables.

4.2.3.5 Dependent Variables

The primary dependent variable that has been built into the quantitative model is the Share of New Channel. For offline-first organizations this is the digital channel share – the questionnaire seeks for 3-year data on the same. For online-first organizations this is the share of the physical channel. This fundamentally stems from the belief that before an organization becomes truly channel-integrated and in omnichannel business model mode, it has to ensure a threshold level of adoption for its new channel. Some of this acceptance will come from customers – existing and new customers for the organization. And equally so, some of the acceptance and behaviour change has to come from within the organization. Strategic intent and priorities articulated by the

CEO and Top Management, and strategy operationalized into execution by middle and junior management and translated to frontline employees. New channel share data is internal and confidential to an organization, and we expect a subset of the sample to not share this data.

There was an alternate dependent variable that we sought from the respondents – this is termed Digital Channel Share – COVID. We asked them to respond on a 5-point Likert scale about whether their organization's digital channel share increased or decreased during COVID-19 time. The scale for Digital Channel Share is as here: 1) Significantly Decreased 2) Decreased 3) Neither Increased nor Decreased 4) Increased 5) Significantly Increased. We felt that more respondents would respond to this Likert-scale dependent variable question rather than the numeric question on *New Channel Share* for their organisation.

While we have sought data on percentage of customers shopping on both channels and pristine omnichannel share (% of transactions which started in one channel and were fulfilled in another), it is clear from the qualitative research that these measures are beyond the scope of organizations today. It is beyond the current process and technology capabilities of most of the organizations to capture this data.

The omnichannel quantitative research survey instrument also seeks revenue growth for 3 years from respondents – 18-19 (pre-COVID), 19-20 (start of COVID), 20-21 (COVID-19 year). We anticipate two challenges with this variable – one that this is seen as confidential and may not be easily shared by respondents. The other and perhaps larger challenge is that the three years under consideration have had wide variations in revenue growth rates with some industry segments declining by close to

50% in the COVID-19 year owing to lockdown restrictions and the negative impact on the economy.

Table 7 : Summary of Variables, Measurements and Scales

Variable	Measurement	Scale
Dependent Variables		
New Channel Share *Digital Channel Share* - *COVID* – Alternate DV *Competitive Success* – *Derived DV*	Self-reported Difference between Organization & Industry	Percentage Likert Scale Categorical 1 or 0
Independent Variables		
Top Management	Attribute statements (6)	7-point Likert Scale
Strategic Intent	Attribute statements (8)	7-point Likert Scale
Product Portfolio Strategy	Attribute statements (5)	7-point Likert Scale
Retail Strategy & Operations	Attribute statements (5)	7-point Likert Scale
Tech Capabilities	Attribute statements (4)	7-point Likert Scale
People Capabilities	Attribute statements (4)	7-point Likert Scale
COVID-19 Impact	Attribute statements (2)	7-point Likert Scale
Online share of category	Self-reported channel contribution	Percentage
Potential Mediator Variable		
Channel Integration	Attribute statements (3)	7-point Likert Scale
Descriptor Variables		
Organization Details	Questions (5)	Categorical and Interval Variables
Respondent Details	Questions (6)	Categorical and Interval Variables
Control Variable		
Core Industry Segment	Question (1)	Categorical Variable

4.2.4 Analytical Methods

The analytical methods used were Factor Analysis, Pearson's Correlation and Linear and Logistic Regression. They were sequentially undertaken and helped build the empirical model for success in omnichannel retailing.

4.2.4.1 Factor Analysis

In Factor Analysis, what we model are observed variables and their covariance, and this results in a smaller number of underlying, unobservable latent variables, or factors. The factor model is akin to a set of multiple regressions which predicts each of the observable variables from the values of the unobservable factors. The partial slopes or the regression coefficients for all of these multiple regressions are called factor loadings.

$$X_1 = \mu_1 + l_{11}f_1 + l_{12}f_2 + \cdots . l_{1m}f_m + \epsilon_1$$

$$X_2 = \mu_2 + l_{21}f_1 + l_{22}f_2 + \cdots . l_{2m}f_m + \epsilon_2$$

$$X_p = \mu_p + l_{p1}f_1 + l_{p2}f_2 + \cdots . l_{pm}f_m + \epsilon_m$$

Where

$X_1,\ X_2, \ldots . . X_p$ are observed variables.

$\mu_1, \mu_2, \ldots \mu_p$ are intercept terms

$l_{11}\ to\ l_{pm}$ are regression coefficients and called factor loadings

The Factor Analysis method being used is Principal Component Analysis combined with Varimax rotation to reduce the dimensionality as well as to align the latent variables along dimensions that explain maximum variation.

4.2.4.2 Pearson's Correlations

Correlation is a statistical measure for determining the relationship between two measurement variables – usually a dependent variable and an independent one. It is a descriptive statistical measure to explain how close to a linear relationship two variables have. Correlation coefficient is a single number that quantifies both the strength and the direction of the relationship between a dependent and an independent variable. Correlations are depicted using scatter plots, best-fit lines, and captured in the Pearson's coefficient. In our analysis, we use Pearson's correlation coefficients to find support for the hypotheses made in Chapter 3 before we build the regression model.

4.2.4.3 Multiple Linear Regression Models

After factor analysis and pairwise correlation, this section postulates the empirical model based on independent internal and external factors. The equation is as follows.

$$
\begin{aligned}
&New\ Channel\ Share \\
&\quad = \alpha + \beta_1(Top\ Management\ ) + \beta_2(Strategic\ Impact\ ) \\
&\quad + \beta_3(Product\ Portfolio\ Strategy\ ) + \beta_4(Retail\ strategy\ operations) \\
&\quad + \beta_5(Technology\ Capabilities\ ) + \beta_6(People\ Capabilities) \\
&\quad + \beta_7(COVID\ Impact) + \beta_8(Online\ Consumer\ Behaviour) \\
&\quad + \beta_9(Channel\ Integration) + \beta_{10}(Online\ Consumer\ Behaviour)
\end{aligned}
$$

Here α stands for the intercept in the equation and β_{1-m} stand for the coefficients of the factors or latent variables to be estimated.

I use multiple linear regression to analyse the data and build the conceptual model for omnichannel retailing. The intent of the regression is to estimate the ranking and

importance of the latent variables in determining success in omnichannel retailing. Two types of linear regression models have been used – linear and logistic

- Model 1 Overall Industry: Multiple Linear Regression to test the effects of the independent latent variables on the dependent variable. Here the dependent variable used is the *New Channel Share* and this is a continuous variable. The principle of Ordinary least squares (OLS) is utilized for the linear regressions, with the latent variables (factors) [1]as the independent variables.
- Model 2 Overall Industry: Multiple Linear Regression Models to determine how the multiple independent latent variables affect the alternate Dependent Variable – *Digital Channel Share - COVID*. The alternate DV was one of the questions that the survey participants responded to on a 5-point Likert scale from Significantly Declined to Significantly Increased. We performed regression analysis vis-à-vis independent latent variables – the number of responses for the Alternate DV was 122 as against 77 for the numeric Dependent Variable in Model 1.
- Model 3 Overall Industry: Binary Logistic Regression Model to determine how the multiple independent latent variables affect the derived Dependent Variable of *Competitive Success* in omnichannel retailing. *Competitive Success* is defined as the difference between *New Channel Share* and *Online Share of Category* (self-reported) for each respondent. It takes on a value of 1 if the organization's *New Channel Share* is higher than the self-reported *Online Share of Category* it operates in, and 0 if it is lower than the self-reported *Online Share of Category*.

[1] The terms latent variables and factors are used interchangeably in this dissertation document

- Model 4 Fashion Industry Segment: We carry out multiple linear regressions with *New Channel Share* for the subset of the fashion industry segment. This helps determine factors specific to this segment and understand the differences vis-a-vis the overall industry.

Chapter 5 : DATA ANALYSIS & RESULTS

We follow a sequential, bottom-up model building process for the data analysis and interpretation of results. We start the analysis with the description of the sample set, we detail the results of Factor Analysis, Pearson's correlations, Linear and Logistic Regressions, and end with the results table of the set of hypotheses finding support.

5.1 Description of the Sample Set achieved

The following table provides the details for the sample set of 146 respondents.

Table 8:Organizational Profile by Retail Business Model and Core Industry

Code	Organization Business Model	Count	%
1	Offline-First	123	84.25%
2	Online-First	23	15.75%
Code	**Org Profile (Industry Segment)**	**Offline first**	**Online first**
1	Fashion & Accessories	45	5
2	Electronics & Home Appliances	13	1
3	Personal care, Wellness, Beauty		2
4	FMCG & Pharma	43	6
5	Services (Financial, Telecom, Education, Others)	6	6
6	Others	16	3
		123	23

As anticipated, the distribution of offline-first and online-first organizations in the sample follows the distribution within the population, with offline-first organizations making up almost 85% of the overall sample. The two core industry segments that comprise a significant part of the omnichannel retailing quantitative research are the industry segments of Fashion & Accessories and FMCG & Pharma. The five respondents in the personal care, wellness and beauty segment were reclassified into

the FMCG segment since these segments are often sold by FMCG companies and sit together on shelves.

We have focussed the data analysis on the subset of offline-first organizations. Inferences from results will be presented for organizations with offline-first business model.

5.2 Descriptive Statistics of Dependent and Independent Variables

The success outcome of omnichannel retailing being used in the data analysis is Share of Sales of New Channel. Since sample set for data analysis is offline-first organizations, the dependent variable is the sales share or contribution of the online channel to the organization's revenue. The survey instrument had sought this measure as percentages, for years 18-19, 19-20, 20-21 and a forward projection for the year 21-22. Time periods in the studies are defined as April-March which is the Indian statutory financial period as against calendar years used by global organizations. The forward projection has not been shared by most of the respondents. It was learnt from exploratory research that the omnichannel journey for a majority of the organizations started close to the end of the 2010-2020 decade and has accelerated during COVID-19 time thanks to lockdown restrictions and poor access to physical retail. The right choice of the dependent variable therefore is *New Channel Share 2020-21*. An alternate dependent variable used a 5-point, Likert-scale question regarding change in digital channel share during COVID.

Descriptive statistics for both the dependent variables are presented in the table below followed by a table with the descriptive statistics of all the independent variables.

Table 9:Descriptive Statistics for Dependent Variable(s)

Dependent Variable	**Count**	**Mean**	**Std Dev**	**Minimum**	**Median**	**Maximum**
New Channel Share (%)	77	17.05	13.59	0	14	55
Digital Channel Share - COVID Likert Scale	122	4.648	0.538	2	5	5

Table 10:Descriptive Statistics of Independent Variables

Independent Variable	**Count**	**Mean**	**Std Dev**	**Min**	**Med**	**Max**
*OrgProfile_CoreInd***	123	3.000	1.820	1	4	6
*OrgProfile_LifeLen***	123	3.317	0.823	1	3	4
*OrgProfile_ProdPricing***	123	2.504	0.803	1	2	5
*OrgProfile_LastYrRev***	121	3.347	1.270	1	3	5
*OrgProfile_OnlinePerc***	122	12.390	12.660	0	10	85
*OrgProfile_RetBizMod***	123	1.000	0.000	1	1	1
*RespProfile_HierPos***	122	1.369	0.578	1	1	3
*RespProfile_Function***	122	2.877	2.019	1	1	6
*RespProfile_LenInOrg***	123	4.968	0.819	4	5	6
*RespProfile_TotalWorkex***	123	6.675	0.470	6	7	7
TopMgmt_TechAdvance	123	5.016	1.180	1	5	7
TopMgmt_ChangeOrnt	123	5.756	1.059	1	6	7
TopMgmt_DigSpec	123	5.130	1.367	1	5	7
TopMgmt_DigRoleDefined	123	5.870	1.152	1	6	7
TopMgmt_OnlineAdop	122	6.148	1.096	2	6	7
TopMgmt_DigChannelPrio	123	6.203	1.000	2	6	7
StratIntent_DigSBU	123	5.390	1.805	1	6	7
StratIntent_DedicatedFnRes	123	5.537	1.575	1	6	7
StratIntent_DigHeadSeniority	123	2.073	0.801	1	2	4
*StratIntent_DigHeadExpr***	123	3.171	0.837	1	3	4
*StratIntent_DigHeadHire***	122	1.303	0.462	1	1	2

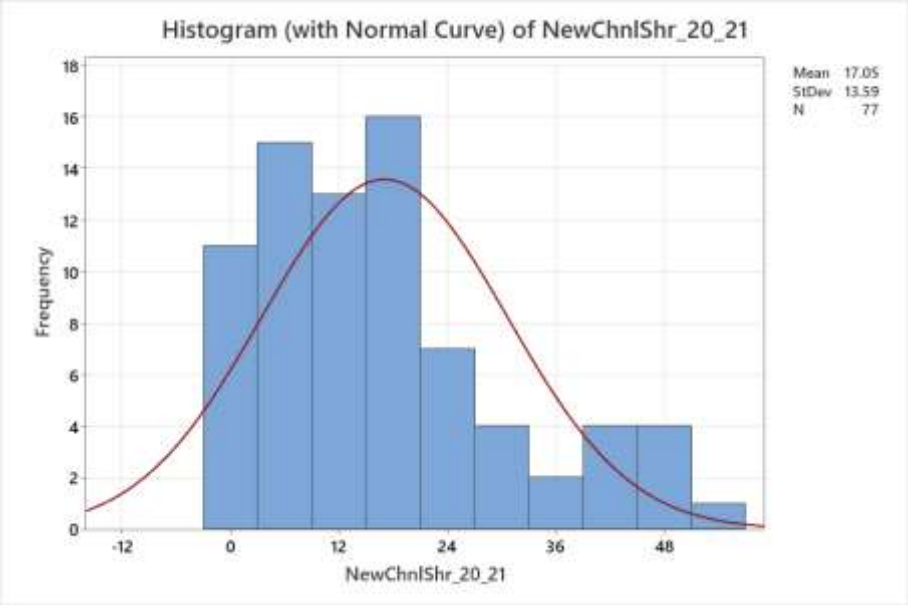
Independent Variable	Count	Mean	Std Dev	Min	Med	Max
StratIntent_TechInvstmt	123	5.195	1.458	1	6	7
StratIntent_OnlineCustAcqInvstm	123	5.163	1.416	1	5	7
StratIntent_SCMInvstmnt	123	4.797	1.741	0	5	7
ProdPrtStrat_ChnSpMerch	122	5.066	1.464	1	5	7
ProdPrtStrat_OnlineCuration	121	4.967	1.426	1	5	7
ProdPrtStrat_PricingParity	122	5.361	1.575	1	6	7
ProdPrtStrat_OnInvOff	123	4.382	2.075	0	5	7
ProdPrtStrat_OffInvtOn	123	4.772	2.149	0	6	7
RetailStratChanInt_StoreRedign	123	4.634	1.611	1	5	7
RetailStratChanInt_SocDigChanEn	123	5.423	1.102	1	6	7
*RetailStratChanInt_SystOmniPilo***	123	1.846	0.810	1	2	3
RetailStratChanInt_SnrOmniEvngl	123	5.203	1.624	1	6	7
RetailStratChanInt_EcommPlnRvw	122	5.557	1.521	1	6	7
RetailStratChanInt_CRMIntegrati	123	4.602	1.658	1	5	7
*RetailStratChanInt_OmniChanProm***	123	5.154	1.449	1	6	7
RetailStratChanInt_OmniChanRetr	123	4.309	2.053	0	5	7
TechCap_IntegTechStack	123	4.366	1.710	1	5	7
TechCap_OmniDW	123	4.472	1.651	1	5	7
TechCap_OmniDMInf	123	4.504	1.651	1	5	7
TechCap_InvOptm	123	4.659	1.868	0	5	7
PplCap_OnlinePpl	122	5.115	1.287	2	5	7
PplCap_DigMktg	121	5.832	2.127	1	6	7
PplCap_DataSc	122	4.197	1.660	1	5	7
PplCap_InDigTech	122	4.574	1.781	1	5	7
*CovidImpct_DigShrInc**	122	4.648	0.574	2	5	5
CovidImpct_DigChnPrep	122	4.803	1.670	1	5	7
CovidImpct_DigFutInvst	123	6.382	0.741	4	7	7

*: Variable on 5-point Likert Scale

**: Variables not on the Likert Scale

From the descriptive statistics, it is clear that the dependent variable *New Channel Share* is widespread from a minimum of 0% to a maximum of 55% for offline-first organizations. It must be qualified that the year this data is reported for is 2020-21 which was the pandemic year and there was a critical need for online sales because of lockdown restrictions on physical movement including shopping. The measures for central tendency indicate the current state of the market - mean of 17.05% and median of 14%. The standard deviation for the dependent variable is 13.59%.

Figure 4: Histogram of New Channel Share 20-21



The independent variables which are on the 7-point Likert scale (Strongly Disagree to Strongly Agree) are more clustered as evident from the descriptive statistics. In a visual scanning, the means seem to lie mostly between 4 and 6 on the Likert scale.

The histograms for a few representative raw variables are shared below – we have picked an attribute which is about organizational orientation (Q 4.6 – Adequate investments in technology) and also shared a couple of raw variables that measure organizational action on the same dimension (Q 7.1 – Integrated Tech Stack and Q 7.2 – Data Warehousing)

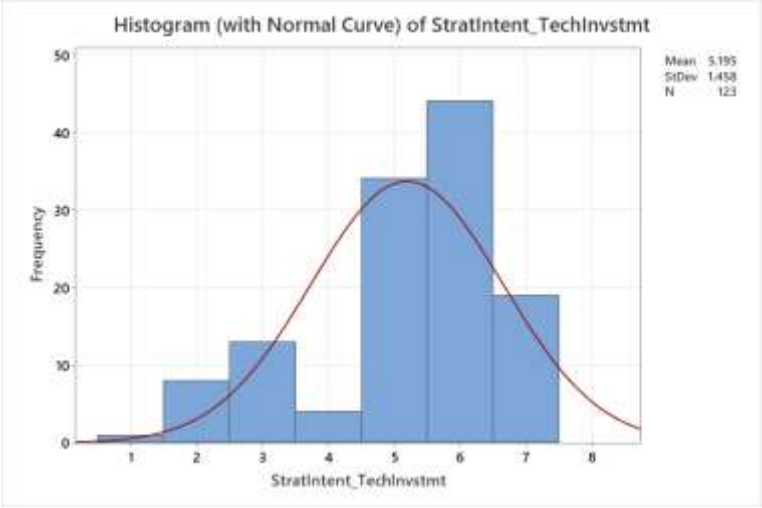
Q 4.6 – Your organization's investments in technology are in line with the need of the online business model

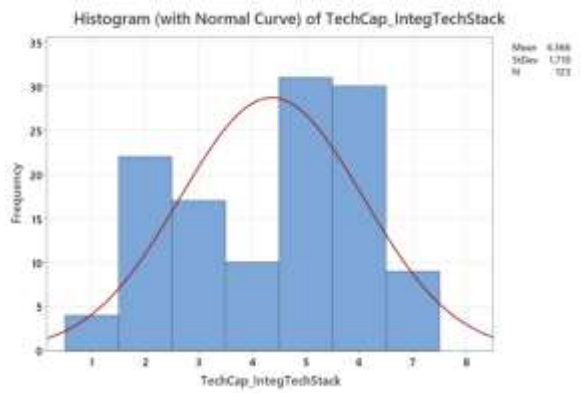
Q 6.1 – The tech stack of your organization is integrated and enables a unified view (consumers, orders, inventory)

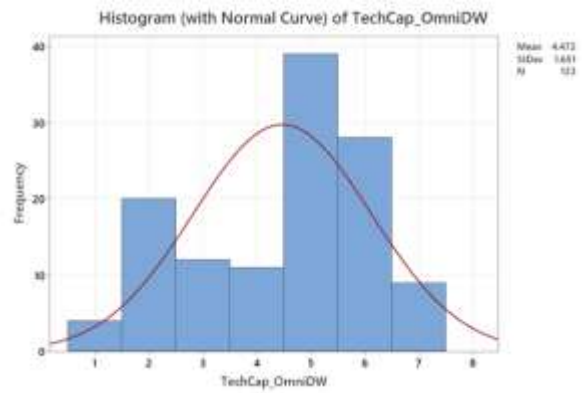
Q 6.2 – Your organization has combined its legacy IT systems across offline and online into a data warehouse to facilitate data mining.

It is clear from these histograms that the respondents give a higher score on orientation measures than action measures – indicating perhaps a gap or a lag between strategy and action. This theme we come across on several parameters.

Figure 5: Histograms of Technology-related raw variables







5.3 Factor Analysis

The survey instrument in the omnichannel retailing study had 10 sections aligned with the conceptual model. These sections were Top Management, Strategic Intent, Product Portfolio Strategy, Retail Strategy and Operations, Technology Capabilities, People Capabilities, COVID-19 Impact, Online Share of Category, Channel Integration as Mediator and Omnichannel Success as the Dependent Variable.

Given that we had identified 39 independent variables, we decided to reduce the dimensionality by condensing the information in these variables into logical Latent Variables (factors) using Factor Analysis (based on Principal Component Analysis). Since the majority of the variables are on a similar scale (Likert scale) with the values ranging along same orders of magnitude we used the Covariance matrix instead of Correlation matrix for calculating the Eigen values and Eigen vectors of the Principal Component Analysis.

Factor Analysis routines - using the Covariance matrix, PCA method and Varimax rotation - were used to calculate the Eigen vectors and Eigen values. We used the Scree plots to choose appropriate number of factors that explained a significant percentage of variation in the dependent variable. We multiplied the Eigen vectors and the Rotation matrix generated by the above routine to determine the weights that were applied to the attributes /raw variables, to calculate the latent factors. Based on the loadings thus calculated, the latent variables were named appropriately.

The results of the factor analysis are shared in Appendix III and the summary table is as follows.

Summary of Factor Analysis

The table below has the summary of the factors derived from the Factor Analysis which have captured the dimensionality in 16 factors as against 39 raw variables and aligned the latent factors along dimensions that explain maximum variation.

Table 11:Summary of Factors and their Raw Variables

Factor No	Factor / Latent Variable Name	Attributes / Raw Variables represented
1	*TopMgt_Profile*	*TopMgmt_TechAdvance* *TopMgmt_ChangeOrnt* *TopMgmt_DigSpec*
2	*TopMgt_DigFocus*	*TopMgmt_DigRoleDefined* *TopMgmt_OnlineAdop* *TopMgmt_DigChannelPrio*
3	*StratIntent_DigiSBU*	*StratIntent_DigSBU* *StratIntent_DedicatedFnRes* *StratIntent_DigHeadSeniority* *StratIntent_DigHeadExpr* *StratIntent_DigHeadHire*
4	*StratIntent_DigInvstmnts*	*StratIntent_TechInvstmnt* *StratIntent_OnlineCustAcqInvstm* *StratIntent_SCMInvstmnt*
5	*ProdPrtStrat_CrssChnl*	*ProdPrtStrat_PricingParity* *ProdPrtStrat_OnInvOff* *ProdPrtStrat_OffInvtOn*
6	*ProdPrtStrat_OnlineChnl*	*ProdPrtStrat_ChnSpMerch* *ProdPrtStrat_OnlineCuration*
7	*RetailStrat_OmniPrep*	*RetailStratChanInt_StoreRedign* *RetailStratChanInt_SocDigChanEn* *RetailStratChanInt_SystOmniPilo* *RetailStratChanInt_SnrOmniEvngl* *RetailStratChanInt_CRMIntegrati* *RetailStratChanInt_OmniChanProm*
8	*RetailStrat_JtBizPlng*	*RetailStratChanInt_EcommPlnRvw*

Factor No	Factor / Latent Variable Name	Attributes / Raw Variables represented
9	*RetailStrat_Returns*	*RetailStratChanInt_OmniChanRetr*
10	*TechCap_Omni*	*TechCap_IntegTechStack* *TechCap_OmniDW* *TechCap_OmniDMInf*
11	*TechCap_SCRedesign*	*TechCap_InvOptm*
12	*PplCap_DigiMktg*	*PplCap_DigMktg* *PplCap_InDigTech*
13	*PplCap_Tech*	*PplCap_OnlinePpl* *PplCap_DataSc*
14	*CovidImpct*	*CovidImpct_DigChnPrep* *CovidImpct_DigFutInvst*
15	*%ShareOnlineCat*	
16	*OrgProfile_CoreInd*	
17	*CovidImpct_DigShrInc (DV)*	
18	*New_Chnl_Share_20_21(DV)*	

5.4 Pairwise Correlations

The table below detail the Pairwise Correlations for each of the raw independent variables and latent variables with *New Channel Share 20-21* which is the dependent variable. Table 11 also maps the question number from the survey instrument as well as the hypothesis presented in Chapter 3. Counts for most of the correlations are either 76 or 77, out of the total sample size of 123 – the dependent variable count is 77. It has not been shared by all respondents since it is a confidential internal metric. In addition to Pearson's correlation coefficients, the tables also include the 95% confidence intervals and the p-values. We have highlighted values that show moderate to 'decent' correlation (~ 0.20) and / or low p-values (< 0.10) indicating statistical significance. Scatter plots and best fit lines for the overall industry sample and subsets of industry segments are presented in Appendix IV.

Table 12: Correlation Coefficients for Outcome Variable vs Raw Variables

Dependent Variable = NewChnlShr_20_21

Q. No	Hypothesis No	Independent Variable	Count	Correlation	95% CI for ρ	P-Value
3.1	H1c	*TopMgmt_TechAdvance*	77	0.047	(-0.179, 0.268)	0.687
3.2	H1b	*TopMgmt_ChangeOrnt*	77	-0.088	(-0.306, 0.139)	0.448
3.3		***TopMgmt_DigSpec***	**77**	**0.215**	**(-0.010, 0.419)**	**0.061***
3.4		*TopMgmt_DigRoleDefined*	77	0.086	(-0.141, 0.304)	0.456
3.5	H1a	*TopMgmt_OnlineAdop*	77	0.134	(-0.092, 0.348)	0.244
3.6		*TopMgmt_DigChannelPrio*	77	0.128	(-0.099, 0.342)	0.266
4.1	H2a	*StratIntent_DigSBU*	77	-0.004	(-0.228, 0.220)	0.973
4.2		*StratIntent_Dedicated FnRes*	77	-0.137	(-0.350, 0.090)	0.236
4.3	H2c	*StratIntent_DigHead Seniority*	77	-0.049	(-0.270, 0.177)	0.67
4.4	**H2b**	***StratIntent_DigHead Expr***	**77**	**0.233**	**(0.009, 0.434)**	**0.042****
4.5		*StratIntent_DigHeadHire*	76	-0.076	(-0.296, 0.152)	0.515
4.6		*StratIntent_TechInvstmt*	77	0.027	(-0.198, 0.250)	0.813
4.7		*StratIntent_OnlineCustAcqInvstmt*	77	0.073	(-0.154, 0.292)	0.528
4.8		*StratIntent_SCMInvstmnt*	77	-0.074	(-0.293, 0.153)	0.524
5.1		***ProdPrtStrat_ChnSpMerch***	**77**	**0.268**	**(0.046, 0.464)**	**0.019****
5.2		***ProdPrtStrat_OnlineCuration***	*76*	***0.236***	*(0.011, 0.438)*	***0.04****
5.3	H3b	*ProdPrtStrat_PricingParity*	77	0.009	(-0.216, 0.232)	0.94
5.4		*ProdPrtStrat_OnInvOff*	77	-0.153	(-0.364, 0.074)	0.185
5.5		*ProdPrtStrat_OffInvtOn*	77	-0.084	(-0.302, 0.143)	0.469
6.1		*RetailStratChanInt_StoreRedign*	77	0.171	(-0.056, 0.380)	0.138
6.2		*RetailStratChanInt_SocDigChanEn*	77	0.021	(-0.204, 0.244)	0.854
6.3	H4b	*RetailStratChanInt_SystOmniPilo*	77	-0.058	(-0.278, 0.168)	0.617
6.4		*RetailStratChanInt_SnrOmniEvngl*	77	0.054	(-0.172, 0.275)	0.638

Q. No	Hypothesis No	Independent Variable	Count	Correlation	95% CI for ρ	P-Value
6.5	**H9c**	***RetailStratChanInt_EcommPlnRvw***	**76**	**0.27**	**(0.047, 0.467)**	**0.019****
6.6	H9b	*RetailStratChanInt_CRMIntegrati*	77	-0.165	(-0.375, 0.061)	0.151
6.7	H9a	*RetailStratChanInt_OmniChanProm*	77	0.143	(-0.084, 0.355)	0.216
6.8		*RetailStratChanInt_OmniChanRetr*	77	-0.105	(-0.321, 0.122)	0.363
7.1	H5a	*TechCap_IntegTechStack*	77	-0.048	(-0.269, 0.178)	0.681
7.2	H5b	*TechCap_OmniDW*	77	-0.129	(-0.343, 0.098)	0.263
7.3		*TechCap_OmniDMInf*	77	-0.143	(-0.356, 0.084)	0.214
7.4		***TechCap_InvOptm***	**77**	**-0.191**	**(-0.398, 0.035)**	**0.097***
8.1	H6a	*PplCap_OnlinePpl*	77	0.069	(-0.157, 0.288)	0.551
8.2		*PplCap_DigMktg*	76	-0.081	(-0.301, 0.147)	0.486
8.3	H6b	*PplCap_DataSc*	77	-0.048	(-0.269, 0.178)	0.681
8.4		*PplCap_InDigTech*	76	-0.084	(-0.304, 0.144)	0.469
9.1		*CovidImpct_DigShrInc*	77	0.105	(-0.122, 0.321)	0.364
9.2	**H8a**	**CovidImpct_DigChnPrep**	**77**	**0.232**	**(0.008, 0.433)**	**0.042****
9.3	H8b	CovidImpct_DigFutInvst	77	0.106	(-0.121, 0.322)	0.361

Table 13: Correlation Coefficients for Outcome Variable vs Latent Variables

Dependent Var = NewChnlShr_20_21

Hypothesis	Latent Variable	N	Correlation	95% CI for ρ	P-Value
	TopMgt_Profile	77	0.096	(-0.131, 0.313)	0.406
H1a	*TopMgt_DigFocus*	77	0.156	(-0.071, 0.367)	0.176
H2d	*StratIntent_DigInvstmnts*	76	-0.029	(-0.253, 0.197)	0.802
	StratIntent_DigiSBU	76	0.033	(-0.194, 0.257)	0.775
H3c	*ProdPrtStrat_CrossChnl*	76	-0.113	(-0.330, 0.116)	0.332
H3a	***ProdPrtStrat_OnlineChnl***	**76**	**-0.229**	**(-0.432, -0.004)**	**0.046****
	RetailStrat_OmniPrep	76	0.021	(-0.205, 0.245)	0.858
	RetailStrat_Returns	76	-0.09	(-0.310, 0.138)	0.437
H9c	***RetailStrat_JtBizPlng***	**76**	**0.332**	**(0.115, 0.519)**	**0.003*****
	TechCap_Omni	77	-0.116	(-0.331, 0.111)	0.315
	TechCap_SCRedesign	77	-0.184	(-0.392, 0.042)	0.11
	PplCap_DigiMktg	76	-0.084	(-0.304, 0.144)	0.47
	PplCap_Tech	76	0.044	(-0.184, 0.266)	0.709
	CovidImpct	**77**	**0.235**	**(0.012, 0.436)**	**0.04****

The following four hypotheses find support in the Correlation Analysis. The first three hypotheses presented here have positive correlation giving support to the hypotheses as articulated.

H2b: The more digitally experienced the head of the new retail channel is, the higher will be the probability of the organization's success in omnichannel retailing.

	Pearson's Coeff	CI (95%)	p-value
StratIntent_DigHead Expr	0.233	(0.009, 0.434)	0.042

H8a: The higher the new-channel preparedness was for an organization pre-COVID, the higher is the probability of the organization's success in omnichannel retailing.

	Pearson's Coeff	CI (95%)	p-value
CovidImpct_DigChnPrep	0.232	(0.008, 0.433)	0.042

H9c: The higher the discipline within an organization for joint business planning / reviews with new-channel partners, the higher will be the probability of the organization's success in omnichannel retailing.

	Pearson's Coeff	CI (95%)	p-value
RetailStratChanInt_EcommPlnRvw	0.27	(0.047, 0.467)	0.019

The fourth hypotheses that finds support, viz. Product Portfolio mapping has a negative Pearson's correlation indicating that the product portfolio mapping to a channel is a detractor to success in omnichannel retailing. Although this seemed counterintuitive at first glance, this is indeed quite relatable. We will explain the same in the next chapter, Discussion of Findings and Conclusions.

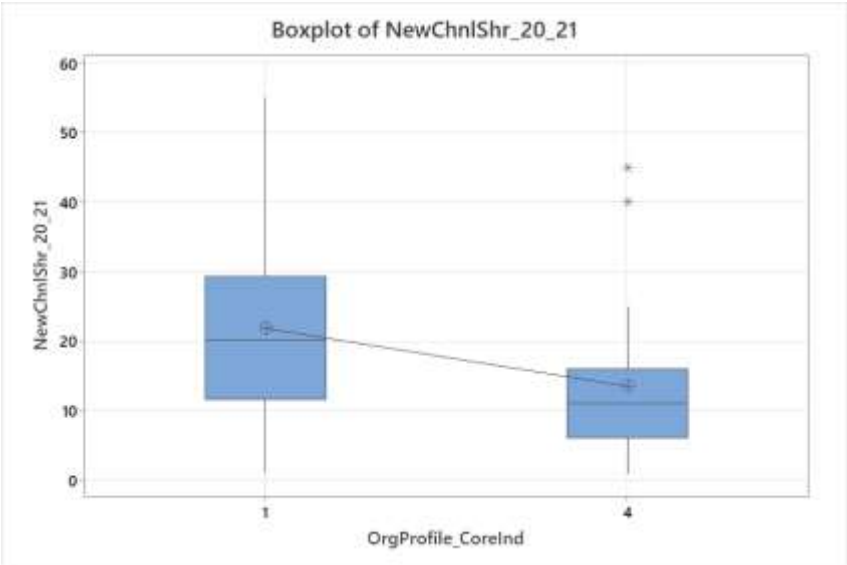
H3a: The better the product portfolio mapping to a channel, the higher will be the probability of the organization's success in omnichannel retailing.

	Pearson's Coeff	CI (95%)	p-value
ProdPrtStrat_ChnSpMerch	-0.229	(-0.432, -0.004)	0.046**

5.5 Effects of Categorical Variable - Core Industry Segment

One of the independent variables in the dissertation study is *OrgProfile_CoreInd* which is a categorical variable indicating the industry segment that the respondent's organization is a part of. In addition to the overall sample which we refer to as Overall Industry, we also focussed on the two industry segments with valid sample sizes – Fashion and FMCG. The two-sample t-test confirms that the difference in the means (of *New Channel Share*) of the Fashion and FMCG segments is statistically significant and hence individual industry segments are worth studying. We will present a deep dive into the Fashion industry segment with a data analysis of this specific subset. The two-sample t-test indicated that the FMCG industry sample is significantly different from the Fashion industry segment, however the data for the numeric dependent variable *New Channel Share* is available only for a statistically insignificant sample and hence we didn't pursue data analysis for the FMCG industry segment subset.

Figure 6: Box Plot of New Channel Share for Fashion vs FMCG Segments



5.6 Multiple Linear Regression: Overall Industry

The focus of this data analysis is offline-first organizations as has been stated earlier. The overall sample achieved for offline-first organizations is 123, with the numeric dependent variable *New Channel Share 20-21* available for a sample of 77, and the Likert-scale dependent variable *Digital Channel Share – COVID* available for a sample of 122. The raw data from our quantitative research had 39 variables which were condensed into 16 latent variables or factors. These were the inputs into the multiple linear regression model(s) for the overall industry and fashion industry segment samples.

We ran two linear OLS regression models – Model 1 and Model 2 – on the data for the overall industry with different dependent variables. Model 1 used *New Channel Share 20-21* and Model 2 used *Digital Channel Share – COVID*. For each of these OLS regression models, we analysed the data using Best Subsets method and validated with the Stepwise Regression method. We satisfied ourselves that the same variables were getting picked up. We used a combination of metrics (RSq[2](adj), Mallows' Cp [3]and AICc[4]) to select the appropriate candidate models. We further ran individual Multiple Regression routines to analyse the p-values (and other metrics) for the candidate independent variables. We looked at Pearson's correlations for the

[2] RSq value increases whenever a predictor is added to a model. Rsq(adj) defined as $R_a^2 = 1 - (\frac{n-1}{SSTO})MSE$ makes us pay a penalty for adding more predictors to the model. Therefore, we can just use the adjusted value outright. That is, according to the criterion, the best regression model is the one with the *largest adjusted -value.*

[3] An underspecified model yields biased regression coefficients and biased predictions of the response. Mallows' Cp -statistic estimates the size of the bias that is introduced into the predicted responses by having an underspecified model. A good model would Identify subsets of predictors for which the Cp value is **near** p (number of predictors). The statistic is defined as $C_p = p + \frac{(MSE_p - MSE_{all})(n-p)}{MSE_{all}} = \frac{SSE_p}{MSE_{all}} - (n - 2p)$ where *MSEp* is the mean squared error from fitting the model containing the subset of *p*-1 predictors (which with the intercept contains *p* parameters).

[4] Akaike Information Criteria. This statistic combines information about the *SSE*, number of parameters in the model, and the sample size. The preferred model is the one with the lower AICc value.

variables under consideration and selected those that had modest to high correlations. We finally used out judgement and business intuition to select the set of independent variables for regression Models 1 and 2.

The results of the Model 1 and Model 2 regression analysis are presented in the table below. Model 1 explains close to 42% of the variation of the dependent variable with the independent latent variables as listed in the table below, Model 2 explains close to 40% of the total variation. All the variables in the regression equations have acceptable p-Values indicating that these variables are all significant in impacting the dependent variable. We tested for multicollinearity using the Variance Inflation Factors (VIF) in each regression model and since they were well below the accepted threshold of 20, we concluded there wasn't multicollinearity (Nachtsheim et al., 2004).

We will explain the results and inferences from the regression models for the overall industry in Chapter 6 titled Discussion of Results and Conclusions.

Table 14 : Regression Results for Overall Industry

	Model 1	Model 2
Variables	New Channel Share_20_21	Digital Channel Share - COVID
Top Management		
TopMgt_Profile	-4.68***	
TopMgt_DigiSpecialist	5.96***	
TopMgt_DigFocus		0.1417***
Strategic Intent		
StratIntent_DigInvstmnts		-0.0609**
StratIntent_DigiSBU		
Product Portfolio Strategy		
ProdPrtStrat_CrossChnl		
ProdPrtStrat_OnlineChnl	-1.926*	
Retail Strategy		
RetailStrat_OmniPrep		
RetailStrat_Returns		0.00451*
RetailStrat_JtBizPlng	1.673*	
Technological Capabilities		
TechCap_Omni	-3.17***	
TechCap_SCRedesign		
People Capabilities		
PplCap_DigiMktg	-1.666***	
PplCap_Tech	2.98**	
COVID Impact		
OrgProfile_CoreInd	Constant 1	Constant 2
R-Square	**41.57%**	**39.49%**

Notes

*p<0.10,*p<0.05,***p<0.01

OrgProfile_CoreInd	Constant 1	Constant 2
1	16.42	3.78
2	12.6	3.096
4	8.63	3.679
5	7.9	3.244
6	5.36	3.136

5.7 Binary Logistic Regression Model (Derived Dependent Variable)

In this model, we use a derived dependent variable. We term it *Competitive Success* and it is explained here. The objective of the binary logistic regression is to determine how different independent latent variables affect the probability of competitive success. We introduce the measure of competititive success which is the difference between online channel shares of the organization and the industry segment it belongs to. The construct of *Competitive Success* is a categorical variable, taking on a value of 1 if the organization's *New Channel Share* is higher than online share of the industry segment and taking a value of 0 if the organization's *New Channel Share* was lower than the industry segment's. Online shares for the organization as well as its industry segment are self-reported by the respondent.

We use stepwise selection of terms for the binary logistic regression and the results of the regression are presented below. We used the latent variables that had come up as having moderate to decent correlations as well as those that came up in the linear regression that we have done earlier.

The binary logistic regression has an R-square of 37.2% and the set of variables picked up by the logistic regression model are different from the linear regression models. It is important to highlight that the Derived Dependent Variable used in the logistic regression is conceptually a different one, it is about omnichannel performance in a competitive context.

Table 15 : Regression Results for Overall Industry (Competitive Success)

	Model 3 - Competitive Success	
Variables	Coefficient	Odds Ratio
Top Management		
TopMgt_Profile	-0.571*	0.5647
TopMgt_DigSpecialist		
TopMgt_DigFocus		
Strategic Intent		
StratIntent_DigInvstmnts	0.688**	1.9895
StratIntent_DigiSBU		
Product Portfolio Strategy		
ProdPrtStrat_CrossChnl		
ProdPrtStrat_OnlineChnl		
Retail Strategy		
RetailStrat_OmniPrep		
RetailStrat_Returns	0.499**	1.6475
RetailStrat_JtBizPlng		
Technological Capabilities		
TechCap_Omni		
TechCap_SCRedesign		
People Capabilities		
PplCap_DigiMktg		
PplCap_Tech	-0.696*	0.4988
COVID Impact	0.452*	1.5708
OrgProfile - CoreInd	Constant 3	
R-Square	**37.32%**	

Notes

*p<0.10, **p<0.05,***p<0.01

OrgProfile_CoreInd	Constant 3
1	0.28
2	**-0.99**
4	-1.657
5	4.6
6	-3.06

5.8 Mutiple Linear Regression: Fashion Industry Segment

We ran linear regression model for the industry segment of Fashion & Accessories(*OrgProfile_CoreInd* =1) and the results for the same are presented below. The sample size for this industry segment is 45, with the data for the dependent variable *New Channel Share* being available for 34 records. The OLS regression model for the fashion industry segment explains 55.09% of the variation in the dependent variable – *New Channel Share 20-21*. It was heartening to note that the factors for the fashion industry segment were different from those picked by the regression models for the overall industry. Another key observation for the fashion industry segment are that a fewer set of factors were selected and this set of factors explained a higher variation in the dependent variable vis-à-vis the regression model for the overall industry.

Table 16 : Regression Results for Fashion Industry Segment

		Model 4 (Fashion Industry Segment)
	Variables	*New Channel Share_20_21*
Top Management	*TopMgt_Profile*	
	TopMgt_DigSpecialist	
	TopMgt_DigFocus	
Strategic Intent	*StratIntent_DigInvstmnts*	
	StratIntent_DigiSBU	
Product Portfolio Strategy	*ProdPrtStrat_CrossChnl*	-4.17***
	ProdPrtStrat_OnlineChnl	
Retail Strategy	*RetailStrat_OmniPrep*	
	RetailStrat_Returns	
	RetailStrat_JtBizPlng	1.78*
Technological Capabilities	*TechCap_Omni*	-2.78**
	TechCap_SCRedesign	
People Capabilities	*PplCap_DigiMktg*	-1.579*
	PplCap_Tech	5.4***
COVID Impact	*CovidImpct*	2.05*
Industry segment (Constant)	*OrgProfile_CoreInd*	31.7
R-Square		55.09%

Notes
*p<0.10, **p<0.05,***p<0.01

5.9 Summary of Results : Regression Models & Hypotheses Table

We started the study with the intent of building a strategic model for omnichannel retailing, we had postulated a total of twenty-three hypotheses. These hypotheses were either directly associated with an attribute asked in the survey instrument or rolled upto a construct intuitively combining a few of the attributes. Correlation Analysis was used to support hypotheses where the raw variables or direct attributes were involved. Regression Analysis has been used to support hypotheses involving factors or latent variables.

We built the empirical model bottom up and the inputs from the earlier stages were used to decide the set of variables going into the latter stages. We used logic and intuition in addition to pure-play mathematics to differentiate between the three models. We would say that Model 1 is an input-outcome oriented model, Model 2 is potentially a perception-oriented model, and Model 3 is a competitive outcome oriented model. Model 4 is the regression model for the fashion industry segment.

A total of 13 hypotheses find support across correlation and regression models and 4 additional insights get thrown up by the model which weren't originally postulated as hypotheses (with regard to the Overall Industry)

These hypotheses are detailed in the table below with indicators on whether on not they were supported by the data analysis. We will explain the results and inferences for the overall industry and for the fashion industry segment in the next chapter titled 'Discussion of Results and Conclusions'.

Table 17: Hypotheses Table

Number	**Hypothesis**		**Support from Correlation Analysis**		**Support from Regression Analysis**		
		Raw Variable /Attribute		Latent Variable /Factor	New Channel Share	COVID-19 Impact DigShareInc	Competitive Success
H1a	The higher the top management's belief in the omnichannel Business Model, the higher will be its success	*TopMgmt_ Online adoption*	Yes	*TopMgt_DigFocus*		Yes	Yes
H1b	An organization will be more successful at omnichannel retailing if its top management team is change-oriented	*TopMgmt_ ChangeOrnt*		*TopMgt_Profile*	Yes (negative)		
H1c	An organization will be more successful at omnichannel retailing if its top management team is tech-savvy	*TopMgmt_ TechAdvance*					
H2a	An organization will be more successful at omnichannel retailing if its new channel is resourced like a Strategic Business Unit	*StratIntent _ DigSBU*		*StratIntent_DigiSBU*			
H2b	The more digitally experienced the head of the new retail channel is, the higher will be the probability of the organization's success in omnichannel retailing.	*StratIntent _ DigHeadExpr*	Yes				
H2c	The more senior the head of the new retail channel is in the organizational hierarchy; the higher will be the probability of the organization's success in omnichannel retailing	*StratIntent_ DigHeadSeniority*					
H2d	The higher the investments the organization has made in the new retail channel, the higher will be the probability of the organization's success in omnichannel retailing			*StratIntent_DigInvstmnts*		Yes (negative)	Yes

Number	Hypothesis		Support from Correlation Analysis		Support from Regression Analysis		
		Raw Variable /Attribute		Latent Variable /Factor	New Channel Share	COVID-19 Impact DigShareInc	Competitive Success
H3a	The better the product portfolio mapping to a channel, the higher will be the probability of the organization's success in omnichannel retailing	*ProdPrtStrat _ ChnSpMech*	Yes	*ProdPrtStrat_OnlineChnl*	Yes (negative)		
H3b	An organization will be more successful at omnichannel retailing if it maintains parity pricing across its channels	*ProdPrtStrat _ PricingParity*		*ProdPrtStrat_CrssChnl*			
H3c	An organization will be more successful at omnichannel retailing if it is able to showcase all inventory to all consumers, without channel-created siloes						
H4a	The higher the alignment of the retail operations of an organization to channel-specific consumer behaviour, the higher will be the success in omnichannel retailing			*RetailStrat_OmniPrep*			
H4b	The success of organizations in omnichannel retailing is linked to the number of omnichannel models they have piloted	*RetailStratChanInt_ SystOmniPilo*					
H5a	The more integrated the tech stack of an organization, the higher its chances of success in omnichannel retailing	*TechCap_Integ TechStack*		*TechCap_Omni*	Yes (negative)		
H5b	The more 'warehoused' the legacy data systems of an organization and the more amenable they are for data mining, the	*TechCap_ OmniDW*					

Number	Hypothesis		Support from Correlation Analysis		Support from Regression Analysis		
		Raw Variable /Attribute		Latent Variable /Factor	New Channel Share	COVID-19 Impact DigShareInc	Competitive Success
	higher its chances of success in omnichannel retailing						
H6a	The higher the investments of an organization in channel-specific resourcing, the higher its chances of success in omnichannel retailing	*PplCap_OnlinePpl*		*PplCap_Tech*	Yes		Yes (negative)
H6b	The higher the investments of an organization in data analytics, the higher will be the probability of the organization's success in omnichannel retailing	*PplCap_DataSc*					
H7a	The higher the share of online consumers to the category the organization operates in, the higher will be its chances of success in omnichannel retailing.	*OnlineProfile _ OnlinePerc*		*OnlineProfile _ OnlinePerc*			
H7b	Factors impacting success of omnichannel retailing will be different for different product / service categories	*OrgProfile_CoreInd*		*OrgProfile_CoreInd*	Yes	Yes	Yes
H8a	The higher the new-channel preparedness was for an organization pre-COVID, the higher is the probability of the organization's success in omnichannel retailing.	*CovidImpct_ DigChnPrep*	Yes	*CovidImpct*			Yes
H8b	In the post COVID world, organizations will investment more on their new retail channels to ensure overall business growth	*CovidImpct_ DigFutInvst*					

Number	Hypothesis		Support from Correlation Analysis		Support from Regression Analysis		
		Raw Variable /Attribute		Latent Variable /Factor	New Channel Share	COVID-19 Impact DigShareInc	Competitive Success
H9a	The lower the conflict between offline and online retail channels, the higher will be the probability of the organization's success in omnichannel retailing	*RetailStratChanInt_ OmniChnlProm*					
H9b	The more integrated an organization's CRM (Customer Relationship Management) systems across offline and online channels, the higher will be its success in omnichannel retailing	*RetailStratChanInt_ CRM Integrati*					
H9c	The higher the discipline within an organization for joint business planning / reviews with new-channel partners, the higher will be the probability of the organization's success in omnichannel retailing	*RetailStratChanInt_ EcommPlnRvw*	Yes	*RetailStrat_JtBizPlng*	Yes		

Chapter 6 : DISCUSSION OF RESULTS AND CONCLUSIONS

In this chapter we discuss the results from the data analyses and draw conclusions about key factors impacting success in omnichannel retailing first for the overall industry and then for the fashion industry segment. We discuss inferences and insights for the overall industry from the results of Regression Model 1 and 2 where the dependent variable was *New Channel Share* or *Digital Channel Share (COVID)* measured numerically (Model 1) and measured on a Likert scale (Model 2). Since Regression Model 3 had a different construct, with the dependent variable of *Competitive Success* and a binary logistic regression, it is not being used for the discussion on findings and conclusions. We interpret the findings by bringing back insights from the qualitative interviews done in the exploratory study. The following section details the findings for the overall industry first and then for the fashion industry segment. We follow the dimensions postulated in the conceptual model in Chapter 3 for this section.

We would like to highlight here that the data for the dependent variable, *New Channel Share* in this study is for the Indian financial year April 2020 to March 2021 when the COVID-19 pandemic was raging unabated – needless to say, responses would be influenced by this disruptive event.

6.1 Overall Industry Results

Regression Equations

$$NewChnlShr\_20\_21 = \alpha 1 - 4.68\ TopMgt\_Profile - 1.926\ ProdPrtStrat\_OnlineChnl + 1.673\ RetailStrat\_JtBizPlng - 3.17\ TechCap\_SCRedesign - 1.666\ PplCap\_DigiMktg + 2.98\ PplCap\_Tech + 5.96\ TopMgmt\_DigSpec$$

$$CovidImpct\_DigShrInc = \alpha 2 + 0.1417\ TopMgt\_DigFocus - 0.0609\ StratIntent\_DigInvstmnts + 0.0451\ RetailStrat\_Returns$$

CoreInd	α1	α2
1	16.42	3.780
2	12.6	3.096
4	8.63	3.679
5	7.9	3.244
6	5.34	3.137

Model Summary - NewChnlShr_20_21

S	R-sq	R-sq(adj)
11.3179	41.57%	31.20%

Model Summary - CovidImpct_DigShrInc

S	R-sq	R-sq(adj)
0.466218	39.49%	35.56%

Factors with regression coefficients of greater than 2, negative or positive, have been qualified as strong impact and factors with regression coefficient less than 2 have been qualified as having modest impact. Factors impacting success in omnichannel retailing for the overall industry with modest or strong impact are listed in the table below.

Table 18: Findings from Regression Model (Overall Industry)

	Modest Impact	Strong Impact
Positive Coefficient	*RetailStrat_JtBizPlng* *RetailStrat_Returns* *TopMgt_DigFocus*	*OrgProfile_CoreInd* *TopMgt_DigiSpecialist* *PplCap_Tech*
Negative Coefficient	*StratIntent_DigInvstmnts* *PrdPrtStrat_Online* *PplCap_DigiMktg*	*TopMgt_Profile* *TechCap_SCRedesign*

The table above has the findings from Regression Models 1 and 2 for the overall industry. Even before we explain the factors that influence success in omnichannel retailing, we would like to call out the 'missing' factor – which is COVID. We expected that COVID-19 would have a significant impact on driving *New Channel Share* but the regression model for the overall industry hasn't picked it up. We dug deeper and ran a few correlations and regressions and came to the realisation that when we take the overall industry sample, the *COVID-19 Impact* variable gets subsumed in the categorical variable *OrgProfile_CoreInd* and doesn't get picked up as a separate one. When we do a regression model for a segment or category, then COVID-19 is a factor that gets picked up as we will share in the findings of the fashion industry segment.

"COVID-19 heightened the category difference, especially in the digital / omnichannel space. Hygiene became very high and sanitizers, handwashes went through the roof. Lifestyle products got hammered the most in terms of sales declining. We could see that even within fast moving categories like soaps – hygiene soaps vs say beauty soaps. The key question the consumer was asking was "Are you going to help solve my COVID-19 problem."

Sales Director, Fast Moving Consumer Goods, Offline-First

We follow the dimensions postulated in the conceptual model in Chapter 3 for this section on understanding and detailing the findings and drawing conclusions from it.

Top Management Effects

DV	IV	Coeff	p-Value
NewChnlShr_20_21	*TopMgt_Profile*	-4.68	0.010
NewChnlShr_20_21	*TopMgmt_DigSpec*	5.96	0.009
CovidImpct_DigShrInc	*TopMgt_DigFocus*	0.1417	0.024

We start building our conceptual model with measuring the effects of top management. Hypotheses H1a (Top Management belief in Omnichannel Business Model), H1b (Change orientation of Top Management team) and H1c (Technology Savviness of Top Management team) together test the effects of top management's digital channel

focus and top management's profile on success of omnichannel retailing. The regression models pick up the latent variables of *Top Management Profile*, *Top Management Digital Specialist* and *Top Management Digital* focus as having an impact on success in omnichannel retailing.

"We started our digital presence as a means to reach customers and tell them the stories of the luxury brands, each of them has a soul. We couldn't use mass media for this because of the exclusivity of the brands. We moved from digital as a communication medium to digital as a commerce medium. And don't see how the ecommerce business is different from our regular business. We built our methods for fulfilment, customer service and returns one customer at a time and today our channels are seamless"

Brand Head, Luxury Retailer, Offline-First

"Now the sales process is an advice process. So, I help you buy, yes, I understand your needs, I give you options, I do all these things. Once you have decided, operations kicks in, which is getting the documentation done. Ops processes are fully digital, customer sales process has a cognitive element, it is hard to become fully digital. Computation power has become very cheap. The cognitive part of technology hasn't moved that much at all. So, I would say that when we are doing omnichannel we have to put that framework in our mind. What is a cognitive element and what is a computation element?

CEO, Banking & Financial Services, Offline-First

Model 1 picks up *Top Management - Digital Specialist* as a variable with strong impact on the dependent variable. *Top Management - Digital Specialist* is a component raw variable of *Top Management - Profile*, along with *Top Management – Change Orientation* and *Top Management - Technologically Advanced*. We understand them to be working in tandem with the *Top Management- Digital Specialist* taking on a positive coefficient and *Top Management - Profile* having a negative coefficient. The positive coefficient for *Top Management – Digital Specialist* is a multiple of the negative coefficient for *Top Management – Profile*. All these indicate that having a digital specialist in the top management team is the driving variable, seeking for the entire top management team to be tech-savvy or change-oriented is a detractor. It has been pointed out by senior management respondents in the qualitative research that when CEOs believe that they can bring in the technology transformation by

themselves without the need for a digital specialist in the top management, it has not been enough to drive change.

"Human Change Management mindset is an imperative– What helps is that digital and omnichannel are glamorous today. Came with a halo around it, you are a primitive guy if you are not doing ecommerce."

CEO, Apparel Business, Offline-First

"When you start talking about metrics and ROI coming out of omni channel, yeah, 30% of the effort probably is technology. And, you know, kind of IT technology and 70% is hardcore change management challenges we're talking about is mindsets, behaviors, the underbelly of retail, right, that doesn't get touched by technology"

Retail Industry Expert

"Omnichannel comes with mindset and culture challenges. Upskilling of the entire organization was left to the Digital teams and hence we need specialists. We have hired laterally from digital-first organizations"

Digital Channel Head, Beauty Business, Offline-First

The *Top Management - Digital Focus* factor gets picked up in Model 2 with the alternate DV, *Digital Share Increase – COVID* with a modest coefficient, providing support to Hypotheses H1a which is about top management's belief and priority in the Digital business model. This was as we expected it to be – senior management believes that their focus on the digital channel has helped drive up New Channel Share. Hypotheses H1b (change-orientation of top management) and H1c (tech-savviness of top management) find support jointly albeit in a negative direction.

Strategic Intent Effects

DV	IV	Coeff	p-Value
CovidImpct_DigShrInc	*StratIntent_DigInvstmnts*	-0.0609	0.067

The second dimension that we take up for gathering inferences is that of Strategic Intent. Here factor analysis threw up two factors which we termed as *Strategic Intent – Digital Investments* and *Strategic Intent – SBU*. While we had included Digital Strategic Business Unit as a key line of questioning, qualitative research indicated that

rather than the new channel being a siloed business unit, having an exchange of ideas with common goals and deliverables was more important to omnichannel retailing than a Digital SBU. The factor of *Strategic Intent – Strategic Business Unit* does not have even a modest correlation with the dependent variable and does not get picked up in the regression models.

"You start out by putting exclusive people, then you realize that the business is growing, it needs more functions to engage with the retailer. So, you start bringing in you know within the product teams and within the marketing teams then within the supply chain teams."

Marketing Head, Electronics, Offline-First

". we had siloed business units. There was a standalone digital unit which did digital marketing. That didn't work, we divested of that concept and merged the teams back with Marketing."

Channel Head, Jewellery, Offline-First

"You must correct the science for attribution, but you must not tolerate the thought of conflict and fiefdoms."

Co-founder, Home Products, Online-First

The factor *Strategic Intent – Digital Investments* gets picked up as a key factor by the Regression Model 2. In Model 2 which we have termed the 'perceptual' model since it measures both inputs and outcomes on a Likert scale, *Strategic Intent – Digital Investments* has an extremely modest negative coefficient. We understand this to mean that respondents have indicated that a significant increase in *New Channel Share* can happen with low digital investment. They have perhaps experienced digital share going up significantly in 20-21 even with low to no change in investment in customer acquisition, supply chain etc thanks to other internal and external factors along with other digital inputs being put in. We feel the need to do better justice to this parameter by measuring and understanding it in steady state, non-COVID time, it is our belief that this factor will have a positive coefficient and impact *New Channel Share* positively.

I think as most organizations have started taking steps towards omni channel, they realize that it's not just an e commerce thing. I think they need to align everything from store ops to IT to customer acquisition to talent so much so as to processes by which you do reconciliation across your channels. Everyone needs to be sort of aligned to ensure that the omni channel model works.

Retail Industry Expert, Co-founder Fashion Online-Platform

Hypotheses H2b (Digital Channel Head being digitally experienced) finds support through the pairwise correlation analysis and H2d (Quantum of digital investments) finds modest support, albeit negative in the regression model. Hypotheses H2a (Organization having a Digital SBU) and H2c (Seniority of Digital Channel Head role in organizational hierarchy) do not find support.

Product Portfolio Strategy Effects

DV	IV	Coeff	p-Value
NewChnlShr_20_21	*ProdPrtStrat_OnlineChnl*	-1.926	0.056

After decoding the effects of Top Management and Strategic Intent, we move to consumer-facing dimensions, with the first one being Product Portfolio Strategy. Here we measure for the effects of product merchandising and pricing policies on New Channel Share. The two factors derived from the five raw variables were *Product Portfolio Strategy – Online Channel* and *Product Portfolio Strategy – Cross Channel*. The *Product Portfolio Strategy – Online Channel* was a construct that measured for special merchandise and curated assortment for the online channel. The other factor *Product Portfolio Strategy – Cross Channel* measured for intent and ability of the organization to be agnostic to channels – both pricing and product inventory being transparent and consistent across channels is what this factor measured for.

In Regression Model 1, the factor *Product Portfolio Strategy – Online Channel* gets picked up with a modest negative coefficient. The negative coefficient is easily

explainable since omnichannel consumers are not looking for channel-specific merchandise. In omnichannel retailing, consumers are seeking to do part of their journey in one channel and another part in another channel – they find it disconcerting if products and prices are not the same across channels.

We used to sell all our offline products also online, and we are now starting to create specific assortment for ecommerce but that I am not sure it is the right strategy. We will have to keep fighting for these specialised products to come up in the algorithm of the ecommerce players and it won't since consumers don't know them. The other strategy we are working on is high-margin products online otherwise it is not sustainable.

Digital Channel Head, Beauty Business, Offline-First

Hypothesis H3a about online channel specific merchandise driving omnichannel success is modestly supported with a negative coefficient – indicating that separating merchandise separately for offline and online channels is a detractor for success of omnichannel retailing. The other hypothesis H3b (Ability of organization to showcase cross channel inventory and having pricing parity driving omnichannel success) is not supported.

Retail Strategy and Operations / Channel Integration Effects

DV	IV	Coeff	p-Value
NewChnlShr_20_21	*RetailStrat_JtBizPlng*	1.673	0.07
CovidImpct_DigShrInc	*RetailStrat_Returns*	0.0451	0

Sales and Marketing professionals refer to their consumer-facing strategies as marketing mix elements where product, pricing, promotion, and channel strategies are clustered together. In this omnichannel study, we have separated the product portfolio strategy from the retail strategy and operations so as to focus on the channel dimensions in depth. Factor analysis threw up three factors for the retail strategy and operations – **it kept the factors of *Retail Strategy - Product Returns* and *Retail***

Strategy - Joint Business Planning **almost pure to the base raw variables** and grouped all the other raw variables along a single dimension – this third factor we have termed as *Retail Strategy – Omnichannel Preparedness*. This factor included having an omnichannel evangelist, piloting omnichannel models, redesigning of retail stores and footprint, serving online consumers through a multitude of discovery channels, cross-channel promotion to consumers, and channel-integrated CRM policies and processes.

Consumers used to hate waiting to be rung up at small-format supermarkets and grocery retailers like are finding these locations good for fulfilment. This is helping Omni – Order and deliver, so these stores became dark stores.

CEO, Grocery Retailer, Offline-First

Model 1 picked up *Retail Strategy - Joint Business Planning* and Model 2 picked up *Retail Strategy – Product Returns* as factors with a modest impact on the dependent variable, *New Channel Share*. In practitioner interviews, there was a distinction highlighted between strategy attributes and execution ones – an integrated CRM, a cross-channel Product Returns execution ability and Joint business planning with ecommerce retailers are all examples of strategy into action variables while Digital SBU is an example of a strategic variable. On the dimension of Retail Strategy and Operations, the results of these regression models suggest that the executional ability of organizations demonstrated by factors like *Retail Strategy - Product Returns* and *Retail Strategy - Joint Business Planning* contributes to success in omnichannel retailing. These are indicative of companies not just realising what needs to be done but moving along that path. In the conceptual model, we had highlighted these as potential mediator factors and they get borne out.

Our model has detailed Channel Integration measures as playing a mediator role in the omnichannel conceptual model. There were three hypotheses measuring channel

integration. Hypothesis H9a measured if reduction in channel conflict supported omnichannel success, Hypothesis H9b measured for integrated CRM processes driving omnichannel success and Hypothesis H9c measured for the discipline of systematic planning and reviews with ecommerce retailers driving omnichannel success.

COVID-19 made one more change – need for home delivery – the consumer wasn't coming to any shop and their risk of ordering wrong was managed by brands by taking product returns often as high as 25-30%.

CEO, Apparel Business, Offline-First

Upstream retail hypotheses like H4a (Alignment of channels to consumer specific needs) and H4b (Length of time piloting of omnichannel models) did not find support either in the correlation analysis or in the regression models run and perhaps they are par for course. Execution variables found modest to strong support, validating the role of mediator variables in the regression model. Hypothesis H9c (Organizations with the rigour and discipline of Joint Business Planning with e-retailers meeting with success in omnichannel retailing) found strong support in the correlations and modest support in the regression models. While the policy and ability of cross-channel Product Returns was not articulated as a specific hypothesis, the model throws it up as a significant factor driving success in omnichannel retailing.

Technology Capabilities Effects

DV	IV	Coeff	p-Value
NewChnlShr_20_21	*TechCap_SCRedesign*	-3.17	0.003

After understanding the effects of organizational strategy and consumer-facing strategies, we will study the effects of capabilities on success in omnichannel retailing.

We will first look at the effects of Technology Capabilities on *New Channel Share*. There were four raw variables –

- Integrated Technology Stack for unified views of customers, transactions, inventory,
- Data Warehouse between legacy and new systems for supporting Omnichannel,
- Access to inferences for Data Mining, and
- Technology for Supply Chain Optimization.

The two factors derived for technology capabilities are termed as *Technology Capabilities – Omnichannel* and *Technology Capabilities – Supply Chain Redesign*. We expected the factor of Technology Capabilities which condensed the first three raw variables above to have an impact on the dependent variable and it was counterintuitive that the *TechCap_Omni* factor was not picked up in the correlation analysis or any of the regression models. One reason for that could be that technology is par for course for digital channel but that is not yet true in a nascent market like India. The other reason could be that with an overpowering stimulus like COVID-19 where consumers couldn't go to their regular markets to shop, retailers and brand-owners did not focus on building full-fledged technology capabilities inhouse but sought external support for the omnichannel business model.

"It took almost two and a half years for us to implement the new Tech module because the whole system had to undergo a complete change. And the system that we've implemented now is not as flexible as the system earlier used to be. It took a long time because there was resistance to that change, obviously. Yeah, so cost, time, and resistance to change all are barriers to technology implementation."

CEO, Apparel Business, Offline-First.

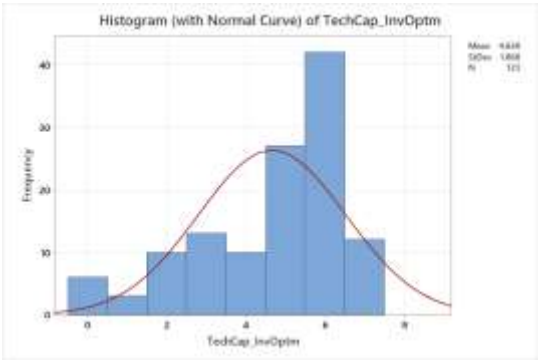
"There was a lot of resistance to whole-sale tech change, I chose at that time, let's actually first get technology into the front end, rather than now going in changing the back-end manufacturing and accounting systems. So, let's just let that be and build the consumer facing stuff. So that, you know the inventory is common, you have one data warehouse, your reporting is instant, you can see where the product. So, if a consumer walks in and we don't have your size, I can ask you 15 minutes, if you wait,

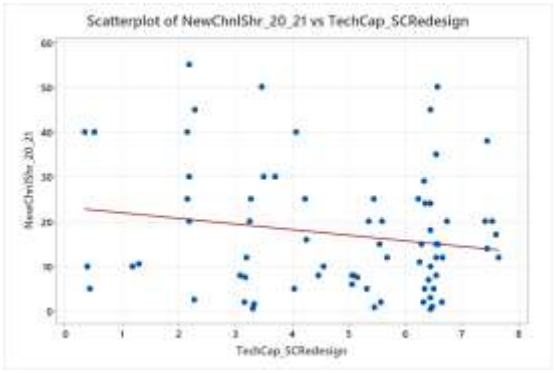
I will get it from the next store. If you don't have 15 minutes, I book an order and I deliver it to your home. Your replenishment becomes real time rather than having to wait and wait for batch processing"

CEO, Footwear, Offline-first

The second factor in Technology Capabilities is *TechCap_SCRedesign* which aligns with the raw variable of redesign of inventory system to optimize maximum assortment and speedy delivery. This factor has a negative correlation with *New Channel Share* and a negative coefficient in the Regression Model 1. The histogram below captures the responses to the variable – from strongly disagree to strongly agree on a 7-point scale and the correlation of the variable with the dependent variable is also shared below.

Figure 7: Data Analysis of Technology Capabilities – Supply Chain Redesign





The question in the survey instrument which got dimensionalised as the *Technology Capabilities – Supply Chain Redesign* was "Your organization's inventory system has been redesigned to **optimise** maximum assortment and speedy delivery." The element that was missed in the optimization was the cost of sales or profitability element. In the COVID-19 pandemic year of 20-21, organizations didn't attempt to 'optimise' for their offline and online channels with assortment and delivery. They were maximising, not optimising – servicing every single order at any cost since the largest concern in a low-to-declining-revenue-growth year was to maximise sales. However, as organizations have been thinking through the long lockdowns and strategizing

about the road ahead for their omnichannel business model, they realise that they need technology to optimise assortment and delivery in a sustained profitable way. Technology capabilities for supply chain redesign are critical for both customer satisfaction and long-term profitability and will need to continue being studied as we emerge out of the pandemic.

"Another reason we are happy with ecommerce and Omni is our long tail. We are able to manage the supply chain for our long tail and make consumers happy thanks to ecommerce. But one key challenge for omnichannel is profitability. We have a sense for physical retail profitability. We are seeing that price discounting is the primary hook for online acquisition and that can be a red flag for us, and we want to make sure we have a path to profitability"

Sales Director, FMCG, Offline-first

"The most important aspect of supply chain is inventory management and high-margin sell through"

Business Head, Apparel, Offline

Hypotheses H5a (Organizations with Integrated Tech Stack having a better chance of being successful in omnichannel retailing) and H5b (Organizations which have created Data Warehouses including legacy and new systems having a better chance of being successful in omnichannel retailing) do not find support. The factor of *Technology Capabilities – Supply Chain Redesign* wasn't highlighted as a hypothesis but is a factor driving *New Channel Share*.

People Capabilities Effects

DV	IV	Coeff	p-Value
NewChnlShr_20_21	*PplCap_DigiMktg*	-1.666	0.009
NewChnlShr_20_21	*PplCap_Tech*	2.98	0.047

Technology and supply-chain capabilities are just one side of the coin – without human capabilities, organizations cannot deliver on their business performance metrics. The outcome being tracked in this dissertation is the success in omnichannel retailing –

measured by New Channel Share. The raw variables under the dimension of People Capabilities are Online Channel People Resourcing, Digital Marketing Capabilities, Well-resourced Data Science team and Inhouse Digital Tech Teams. Two factors were derived from these attributes, viz. *People Capabilities – Digital Marketing* and *People Capabilities -Technology*. Regression models picked up both these variables, Model 1 picks up both *PplCap_DigiMktg* and *PplCap_Tech*. As expected, *People Capabilities – Tech* has a strong positive impact on *New Channel Share*.

"…*the whole world is about Data. We need Data Scientists in the Marketing team. Shucks, we need data scientists in the senior management team. We will be uncomfortable with the profile, but we need that*. *All you need for tracking customer journeys is a phone number but more importantly the intent and training of store sales personnel to engage with the customer and put in the information into a tablet quietly, discreetly. We earlier used it to track customers who didn't buy, now we can use the same processes to track omnichannel journeys."*

Business Head, Jewellery, Online-First

On the other hand, *People Capabilities – Digital Marketing* has a negative coefficient implying for every unit increase in Digital Marketing capabilities, there would be a commensurate decline in *New Channel Share*. This could happen on account of two reasons – the first reason is that Digital Marketing is one of the earliest skills that organizations thought they needed even when omnichannel or digital channels was just a 'FOMO' (fear of missing out) concept, and the talent hired inhouse was perhaps sub-par compared to externally-available talent. The other reason is that the digital marketing skills which in-house talent had been hired for was social media, reputation management, website development etc. whereas the skills needed for digital or omnichannel are really about performance marketing and funnel management in an ecommerce world of marketplaces. The responses to Digital Marketing related questions would be in this context and hence has a negative coefficient to success in omnichannel retailing.

The biggest skill gaps that we identified were in the Digital marketing space. We needed performance marketing more than anything else – the social media skills were not what was needed. We needed our marketing teams to ensure clickthrough rates higher than industry and be focussed on conversion in the customer funnel – we also realised that ecommerce platforms were enabling this more than the social media marketing where we didn't have sight of the end funnel.

Sales Director, FMCG, Offline-First

The marketing department changed completely. Now we have a separate digital marketing department or retail marketing department and above the line, you know, the brand marketing continues. Well, Brand Building and Performance Marketing. The targets of the retail marketing person are more oriented towards conversion, the traffic responsibilities will be with the ATL marketing.

CEO, Apparel, Offline-First

Hypotheses H6a (Organizations making high investments in people-resourcing for the Online Channel would be successful at omnichannel retailing) and H6b (Organizations making high investments in resourcing for Data Analytics Science) both find support under the factor of *People Capabilities – Tech*.

COVID-19 Effects

COVID-19 has been the biggest disruptor event that humankind has witnessed in a century – in terms of disrupting human life and disrupting businesses. For the dissertation on omnichannel retailing, it was critical to measure effects of the *COVID-19 Impact* factor on the *New Channel Share* of offline-first organizations. There were two raw variables – preparedness of organizations for digital channel before COVID-19 and future investments planned by organizations both on digital and physical channels. As expected, these aligned to one factor which we have termed *COVID-19 Impact*. We expected the *COVID-19 Impact* factor to be a key one in driving *New Channel Share* and while the preparedness attribute showed a high correlation to the dependent variable, this factor was not picked up by Regression Model 1 or Regression Model 2. Digging deeper into this counterintuitive result using Model 3 where the competitive success measure is used as the dependent variable and

COVID-19 Impact factor has a strong effect on the outcome, as well as doing regression runs for industry segments like Fashion, we came to the realisation that this external variable is perhaps subsumed in another variable, viz. *OrgProfile_CoreInd.* Different industry segments have been affected differently by COVID-19 with expressive categories affected significantly higher than functional categories.

So that's what's happened in the COVID-19 era, which is people have consciously broken-down consumer journeys category by category for every category and created business processes for archetype consumers…the reason consumers won't go back to old normal is because businesses responded, and consumers have found value

Industry Expert – Digital

In a sense COVID-19 has transformed our retail systems to where the US has been. Since our cost of labour is low, we haven't taken to digitization so fast. But COVID-19 came and changed all that.

Industry Expert – Digital

So, changing consumer behavior is something that has been forced and once the inertia is overcome, then it's phenomenal because like our organization is nine years old, we had used high profile television and celebrities and all that, yeah, that didn't deliver, we grew at a certain pace, but just one random virus, we are more than doubled in three months right. I don't see it coming down significantly even after COVID

Investor, Grocery Business, Online-First

Hypothesis H8a (Organizations that were better prepared for the online channel pre-COVID had a better chance of being successful at omnichannel retailing) finds support in correlation analysis. And *COVID-19 Impact* latent variable finds support in the fashion industry segment.

Industry Segment Effects

The previous explanation for COVID-19 effects alludes to the industry segment effect. We have discussed this already where we have demonstrated through two-sample t-tests that *Organizational Profile – Core Industry* is a key factor impacting success in omnichannel retailing. Since we didn't run a structured equation modelling, or run

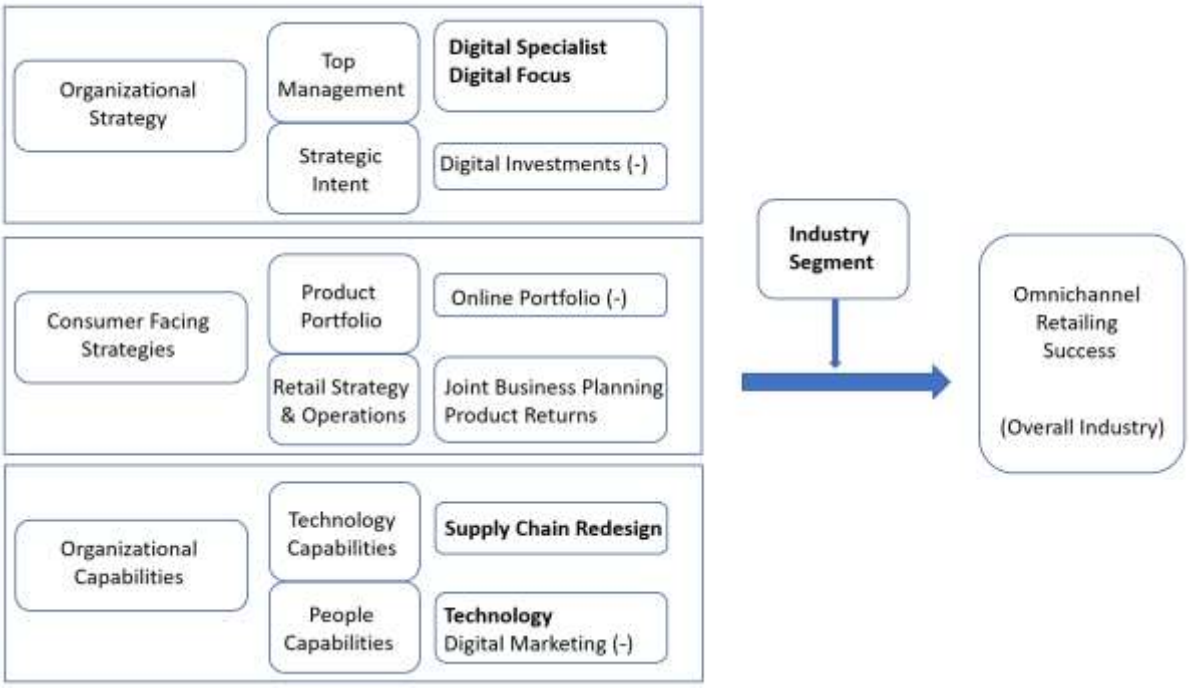
regressions with interactions variables, it cannot be gauged whether the industry segment had a moderating effect but was a critical factor. When we used Best Subsets or the Stepwise Regression as model selection techniques, *OrgProfile_CoreInd* was among the earliest variables to be picked up and it wasn't replaced in the later steps indicating that it is a key factor impacting *New Channel Share* for offline-first organizations. *OrgProfile_CoreInd* variable gets picked up in each of the three regression models 1, 2, and 3.

Hypothesis H7b which states that factors impacting success of omnichannel retailing will be dependent on the industry segment is strongly supported.

There was a leader board of categories for ecommerce and then omnichannel – digital products is one category; expressive goods is the other and now even functional categories are joining the bandwagon. COVID-19 impacted them all in different ways.

Retail Industry Expert

Figure 8: Empirical Model of Key Factors impacting Success of Omnichannel Retailing (Overall Industry)



6.2 Fashion Industry Segment Results

Regression Equation

NewChnlShr_20_21 = 31.7 - 4.17 ProdPrtStrat_CrossChnl
+ 1.78 RetailStrat_JtBizPlng
- 2.78 TechCap_Omni - 1.579 PplCap_DigiMktg
+ 5.40 PplCap_Tech + 2.05 CovidImpct

Model Summary

S	R-sq	R-sq(adj)
9.79462	55.09%	45.11%

As had been shared in the earlier section on the overall industry, factors with regression coefficients of greater than 2, negative or positive, have been qualified as having strong impact on the dependent variable and factors with regression coefficient less than 2 have been qualified as having modest impact. Factors impacting success in omnichannel retailing for the fashion industry segment with modest or strong impact are listed in the table below.

Table 19: Findings from Regression Model (Fashion Industry Segment)

	Modest Impact	Strong Impact
Positive Coefficient	*RetailStrat_JtBizPlng*	*PplCap_Tech* *COVID_Impact*
Negative Coefficient	*PplCap_DigiMktg*	*PrdPrtStrat_CrossChnl* *TechCap_Omni*

In this section, we will explain the factors that impact success in omnichannel retailing as far as the fashion industry is concerned. The table above categorises these factors along the axes of modest to strong impact and positive or negative coefficients. The linear regression models showed that 55% of the variation in the dependent variable of New Channel Share can be explained by a combination of 6 factors – *People Capabilities – Tech*, *Retail Strategy – Joint Business Planning, COVID-19 Impact, Product Portfolio Strategy – Cross Channel*, *Technology Capabilities – Omni* and *People Capabilities – Digital Marketing*.

We are now going to pick up the effects of different strategy and execution factors one at a time. Even though it is a smaller number of factors, they are from different domains of Technology Capabilities, Product Portfolio Strategy, Retail Strategy and People Capabilities, all of which are execution areas and not in the Organizational vision or strategy areas of Top Management or Strategic Intent. For us, this is a signal that perhaps the fashion industry segment has been slightly ahead of the curve vis-à-vis other industry segments, and they have been on the strategy into action journey longer. Hence the regression model picked up execution areas as the key factors determining success in omnichannel retailing for the fashion industry.

"The fashion industry is higher up the curve on omnichannel retailing partly to do with the channel structure of physical and digital retail, and the adoption by consumers. It could also be to do with margins in the business. We have been working on digital transformation for over 2 years before COVID-19 and omnichannel got a fillip with COVID."

CEO, Apparel Business, Offline-First

Key factors like *Top Management – Digital Specialist*, *Top Management – Digital Focus*, *Strategic Intent – Digital Investments* etc get picked up for the overall industry but not for the fashion industry segment, indicating the higher state of maturity of the fashion industry segment in digital and omnichannel retailing.

For the fashion industry segment, three of the factors have strong impact, three of them have negative coefficients and we will deep dive into each of these now.

COVID-19 Impact

DV	IV	Coeff	p-Value
New Channel Share	*CovidImpct*	2.05	0.089

We are going to start with *COVID-19 Impact* wherein the raw variables in the survey instrument were about preparedness for digital business model prior to the COVID-19 pandemic, and the future intent to invest both in digital and physical channels. While *COVID-19 Impact* was not picked up as a critical factor in the regression models for the overall industry sample, it is picked up with a strong impact for the fashion industry segment. The fashion industry segment was one of the hardest hit segments during COVID-19 – lockdown guidelines by central and state governments clearly demarcated essential goods and discretionary products. With uncertainty, economic downturn, lockdown restrictions on physical shopping as well as occasions for dressing-up, the fashion industry segment had to focus on affluent customers and the digital channel for sheer survival. As mentioned earlier, the fashion industry Segment was ahead of the curve on omnichannel retailing with a *New Channel Share* mean of 21.79% as against 14.05% for the overall industry. The COVID-19 impact of organizational preparedness reflects in the effect on success in omnichannel retailing for the fashion industry segment, those organisations that were better-prepared rode the external COVID-19 digital adoption wave.

"Brands were used to seeing digital retailers as ways to liquidate old season stock by discounting, but COVID-19 changed all that. COVID-19 caused a panic in brand organizations that they needed to adapt to digital or perish. Even if brands are using COVID-19 opportunistically, that is fine, they are moving in the right direction, this shift cannot be dialled back."

Channel Head, Jewellery, Offline-First

"And especially during the pandemic, you know, it came out very, very loud, and clear that the companies who had invested in technology and omnichannel early are the ones who are able to kind of hold on to their regular business. So, at this point in time, I know all my stores are alive and kicking"

Business Head, Apparel, Offline-First.

People Capabilities – Tech

DV	IV	Coeff	p-Value
New Channel Share	*PplCap_Tech*	5.4	0.007

This is clearly a key factor for driving omnichannel success with the raw variables including resourcing for online personnel and a focus on data scientists. One of the respondents in the qualitative research said, "after oil and bandwidth, the war is about Data." As far as the offline-first fashion industry segment is concerned, they have always understood the lifetime value of a customer and put in processes to be able to understand consumer behaviour better. As digital channels became relevant from the consumers' point of view and significant in size and scale from the firms' point of view, they needed people, processes, and technology to be able to track consumer journeys on owned channels and partnered channels. And here's where data scientists and performance marketing specialists for online channels come in. Clearly this factor of *People Capabilities – Tech* has a strong impact on omnichannel retailing.

Customer Data is so key to the omnichannel business. Digitization, Data Analytics, Algorithms. We had to hire our data and analytics teams from outside the company, the digital world.

Channel Head, Beauty, Offline-First

"Pre-pandemic less than 20% of our physical stores were omni-enabled, and now after the pandemic 100% of our stores are. Employees who are on-ground and those generating leads through the website have become aware of how to leverage technology."

CEO, Watches & Wearables, Offline-First

After strategy and culture, the second factor for omnichannel success is Technology. Tech action is at multiple levels – integrate, synchronize, enhance, speeden up. Not as channel but as a way to reach consumers. We learnt to treat Data Analytics as different from Technology Infrastructure.

CEO, Apparel, Offline-First

Tech Capabilities – Omni

DV	IV	Coeff	p-Value
New Channel Share	*TechCap_Omni*	-2.78	0.025

The latent variable *Tech Capabilities – Omni* measures for three different raw variables to dimensionalise technology capabilities - an integrated tech stack presenting unified views of customers, transactions, and inventory; combination of legacy systems with new systems to facilitate data mining; ability of offline and online teams to access inferences from data mining. While we expected this factor to have a positive effect on *New Channel Share*, it was perplexing to see a negative coefficient. As we dug deeper and listened to industry experts, it became clear that organizations trying to do the technology overhaul was a slow-burn and did not serve well in disruptive circumstances like the COVID-19 pandemic. What was needed for a shake-up like the one caused by the COVID-19 pandemic was swift and nimble action and organizations found these with third-party technology providers who were able to supplement existing technology with those needed for omnichannel.

"Just do it. It is not about how well you do it, it is about how speedily you build the model. You don't have to do the full tech-stack yourself. There are multiple, small, bright agencies who can help you get going quickly"

Channel Head, Jewellery, Offline-First

The factor of *Technology Capabilities – Omni* therefore has a negative coefficient, but this factor will need to be watched for and studied as the industry comes out of the pandemic effect.

Retail Strategy – Joint Business Planning

DV	IV	Coeff	p-Value
New Channel Share	*RetailStrat_JtBizPlng*	1.78	0.089

The factor of *Retail Strategy - Joint Business Planning* shows up as having an impact on *New Channel Share* in the regression model for the overall industry sample as well as the fashion industry Segment, albeit with a modest impact. This is a factor particularly of significance in the Indian environment as a few e-tailers with deep pockets control the digital landscape. Amazon, Flipkart (owned by Walmart) and Ajio (Reliance Retail) are the large horizonal e-retailers while there are a few fashion category verticals like Myntra, Nykaa, Reliance Ajio, Tata Cliq etc. Brand owners can deliver to consumer expectations only by co-creation and key partnerships with these retailers as marketplace partners. This attribute of planning and reviewing with retailers for digital and omnichannel customer experiences has been coined as the factor of *Retail Strategy – Joint Business Planning*. This factor is the resultant of other retail strategies being drawn out as well as technology and people capabilities being in place, and in our original conceptual model, we had this as a Mediator factor. For the fashion industry segment, *Retail Strategy – Joint Business Planning* has a modest effect on *New Channel Share*, the dependent variable for success in omnichannel retailing.

In the early days, discounting horizontal retailers were treated like wholesalers with stock liquidation being key but today we are servicing customers directly on their platforms as a marketplace player. We have long term 3- year JBP's with partnered ecommerce players and the swing between input and sales can be huge.

CEO, Apparel, Offline-First

People Capabilities – Digital Marketing

DV	IV	Coeff	p-Value
New Channel Share	*PplCap_DigiMktg*	-1.579	0.06

The factor of *People Capabilities – Digital Marketing* shows up as a key factor affecting *New Channel Share* in the Regression Model for the overall industry sample as well as the fashion industry segment. In both these regressions it has a negative coefficient implying that over investing in digital marketing resourcing can detract from *New Channel Share*. As explained earlier, the digital marketing skills that are desirable are not to do with social media as earlier understood but to do with performance marketing and key interventions along the customer journey or funnel as it is referred to in performance marketing and this need is heightened for the fashion industry segment on account of partnerships with digital retailers. The factor of *People Capabilities – Digital Marketing* hence has a negative effect on *New Channel Share*, albeit a modest one.

Digital Marketing is about Customization, Speed, Agility. It is targeted and precision communication. Controlling wastage. Offline Communication is for Awareness Generation. Communication online is for conversion. We had new skills to learn, especially Performance Marketing.

Channel Head, Beauty, Offline-First

We have had the facility of an in-house cataloguing team. So, the market reaction was really really fast. Fortunately, we also had the capabilities of an internal team young which is very savvy and active on Twitter, Instagram etc.

Business Head, Apparel, Offline-First

I think fundamentally, a very large extent of retail is about discovery. One of the challenges is that in a lot of these discussions it is assumed discovery happens at the digital store. But discovery can be all the way from advertising. You can click through an ad to see the catalogue, click through further, etc.

Industry Expert, Digital

Product Portfolio Strategy – Cross Channel

DV	IV	Coeff	p-Value
New Channel Share	*ProdPrtStrat_CrossChnl*	-4.17	0.002

The factor *Product Portfolio Strategy – Cross Channel* measures for intent and ability of the organization to be agnostic to channels – both pricing and product inventory being transparent and consistent across channels is what this factor measures for. In the regression model for *New Channel Share* vis-à-vis the latent variables, *Product Portfolio Strategy – Cross Channel* has a negative coefficient. The specific questions that align to this factor are "Is pricing consistent across channels," "Do you showcase your offline inventory to your online customers?" and "Do you showcase your online inventory to your offline customers?" This factor is the true essence of omnichannel retailing for product organizations and while it may not be easy for organizations to be achieving this today, the only reason why this has a negative effect is to do with online channels still deploying deep-discounting pricing vis-à-vis offline channels and also the inability to showcase entire inventory across offline and online channels. This factor will need studying going forward.

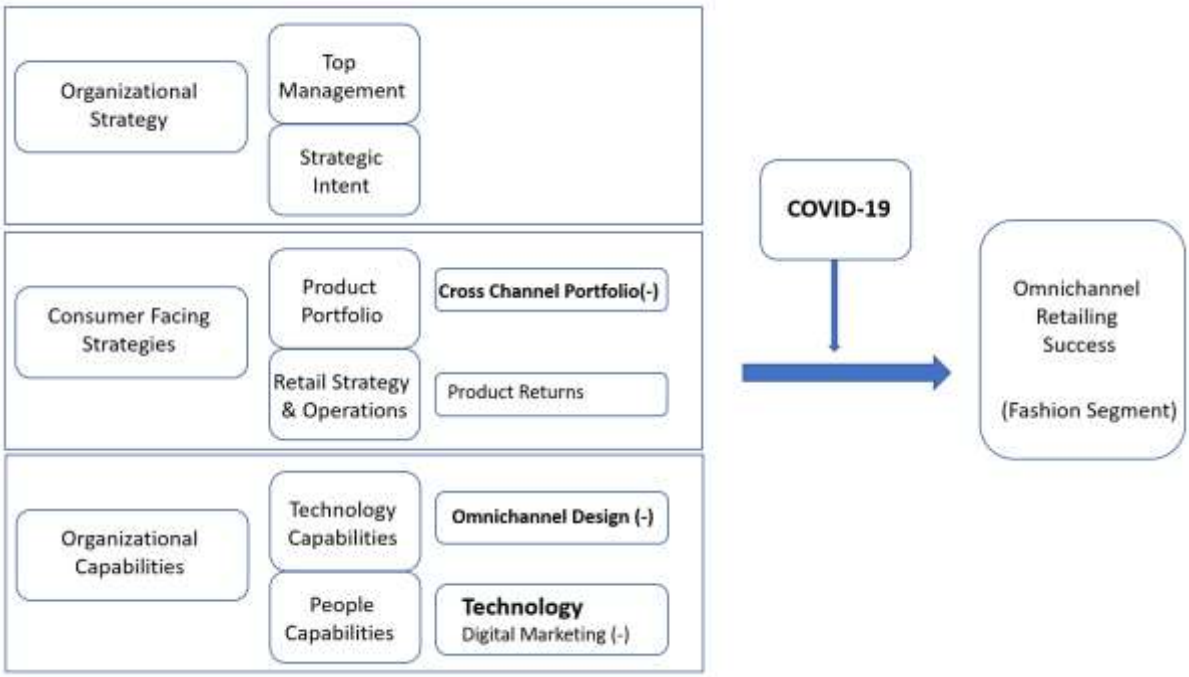
Omni-Models – There are no big omni models. It is about showcasing the entire merchandise to all customers, whether they are in a physical store or online. That's all.

Business Head, Jewellery, Online-First

As an organization what we've decided is we will have price parity across the channels we operate in. There will be no additional discounts or markdowns given so that's very clear strategy.

Business Head, Apparel, Offline-First

Figure 9: Empirical Model of Key Factors impacting success of Omnichannel Retailing (Fashion Industry Segment)



6.3 Overall Conclusions of the Research Study

We had set out to understand the set of internal and external factors with impact on success in omnichannel retailing – these were research questions 1 and 2 from Chapter 3. We specifically sought to understand the impact of COVID-19 and the effect of the industry segment on success in omnichannel retailing – these were research questions 3 and 4 from Chapter 3.

Using the results from the data analysis presented in Chapter 5 and the discussion of the results presented above in this chapter, the findings and conclusions from the research study conducted on omnichannel retailing are as follows:

- ***Internal Factors***: A small set of factors covering both strategy and execution elements impact success in omnichannel retailing. Top Management having a Digital Specialist and a Digital Focus, organizations building People

Capabilities in the Technology domain, and organizations having competencies of Cross-Channel Product Returns and engaging in Joint Business Planning with digital retailers as part of its retail strategy into action - all these have a direct, positive impact on success in omnichannel retailing. There are some key negative coefficients, and these provided insightful learnings. If organizations focus on maximizing supply chain deliverables like inventory and speedy delivery, it has a negative impact on omnichannel retailing, instead they need to optimize these supply chain metrics with costs in check and long-term profitability in mind. When senior managers believe that omnichannel success can be achieved without significant digital investments, they are shooting themselves in the foot. Creating and curating online-specific product portfolios has a negative effect on omnichannel retailing – consumers want transparency and consistency of product and pricing across digital and physical channels. When organizations overfocus on digital marketing capabilities of an inhouse team at the cost of other more critical capabilities, it leads to a negative impact on omnichannel retailing.

- ***External Factors***: The external factors studied were COVID-19 and online consumer behaviour in the industry segment and the findings suggest that the core industry segment, *OrgProfile_CoreInd* has a moderating effect in success in omnichannel retailing. The other two external factors – *COVID-19 Impact*, and *Online Consumer Behaviour* get subsumed in this factor.
- ***Industry Segment Impact***: Needless to say, the factors impacting success in omnichannel retailing are category specific as evident from the case study of the fashion industry segment vs the overall industry and has been detailed in an earlier section. It would have been interesting to have had a robust sample

size in another industry segment like Services to be able to compare and contrast.

- ***COVID-19 Impact:*** The effect of COVID-19 can be seen in the effects on omnichannel retailing after removing for the effects of Core Industry Segment, as demonstrated in the case study of the fashion industry segment. COVID-19 had an external effect on omnichannel share by driving digital adoption by consumers. Organisations that had a better preparation for digital and omnichannel commerce could ride the external wave and achieve higher success. However, one of the limitations of this study is that COVID-19 accelerated digital adoption both by consumers and firms alike, and the timing of the study precludes the understanding of impact after the pandemic. Further studies are needed to understand long-term impact of COVID-19 on omnichannel behaviour of consumers and omnichannel retailing success of firms.

6.4 Salient Findings

The following are the salient findings from the doctoral dissertation study.

- A small set of factors influence success in omnichannel retailing – factors are different for different industry segments
- Key factors relating to organizational strategy like *Top Management Profile* especially top management having a digital specialist and *Top Management Digital Focus* are critical drivers of omnichannel business model success, and these factors haven't been studied earlier in the academic literature.
- Some key factors showed up as critical as expected – organisational skills in technology and people skills in technology, especially data science.

- Some counter-intuitive factors also were thrown up – those that were expected to be critical for success, but the data analysis indicated that they were detractors instead. These included over-focussing on digital marketing skills, maximising supply chain deliverables at the cost of profitability and creating merchandise specifically for the digital channel.
- Two retail strategy variables were picked up in their raw form as factors driving omnichannel success – joint business planning with e-retailers and the competence of cross-channel product returns.

The table below summarizes the hypotheses that found support along with the proposed and actual effects.

Table 20: Hypotheses Supported and Effect Direction

Number	Hypothesis	Proposed Effect	Supported	Actual Effect
H1a	The higher the top management's belief in the Omnichannel Business Model, the higher will be its success	+	Yes	+
H1b	An organization will be more successful at omnichannel retailing if its top management team is change-oriented	+	Yes	-
H1c	An organization will be more successful at omnichannel retailing if its top management team is tech-savvy	+	Yes	-
H2a	An organization will be more successful at omnichannel retailing if its new channel is resourced like a Strategic Business Unit	+		
H2b	The more digitally experienced the head of the new retail channel is, the higher will be the probability of the organization's success in omnichannel retailing.	+	Yes	+
H2c	The more senior the head of the new retail channel is in the organizational hierarchy; the higher will be the probability of the organization's success in omnichannel retailing	+		
H2d	The higher the investments the organization has made in the new retail channel, the higher will be the probability of the organization's success in omnichannel retailing	+	Yes	-
H3a	The better the product portfolio mapping to a channel, the higher will be the probability of the organization's success in omnichannel retailing	+	Yes	-
H3b	An organization will be more successful at omnichannel retailing if it maintains parity pricing across its channels	+		
H3c	An organization will be more successful at omnichannel retailing if it is able to showcase all inventory to all consumers, without channel-created siloes	+		
H4a	The higher the alignment of the retail operations of an organization to channel-specific consumer behaviour, the higher will be the success in omnichannel retailing	+		
H4b	The success of organisations in omnichannel retailing is linked to the number of omnichannel models they have piloted	+		

Number	Hypothesis	Proposed Effect	Supported	Actual Effect
H5a	The more integrated the tech stack of an organization, the higher its success in omnichannel retailing	+	Yes	-
H5b	The more 'warehoused' the legacy data systems of an organization and the more amenable they are for data mining, the higher its success in omnichannel retailing	+	Yes	-
H6a	The higher the investments of an organisation in channel-specific resourcing, the higher its success in omnichannel retailing	+	Yes	+
H6b	The higher the investments of an organization in data analytics, the higher will be the probability of the organization's success in omnichannel retailing	+	Yes	+
H7a	The higher the share of online consumers to the category the organization operates in, the higher will be its success in omnichannel retailing.	+		
H7b	Factors impacting success for omnichannel retailing will be different for different product / service categories	+	Yes	+
H8a	The higher the new-channel preparedness was for an organization pre COVID-19, the higher is the probability of the organization's success in omnichannel retailing.	+	Yes	+
H8b	In the post COVID-19 world, organizations will investment more on their new retail channels to ensure overall business growth	+		
H9a	The lower the conflict between offline and online retail channels, the higher will be the probability of the organization's success in omnichannel retailing	+		
H9b	The more integrated an organisation's CRM (Customer Relationship Management) systems across offline and online channels, the higher will be its success in omnichannel retailing	+		
H9c	The higher the discipline within an organization for joint business planning / reviews with new-channel partners, the higher will be the probability of the organization's success in omnichannel retailing	+	Yes	+

Chapter 7 : IMPLICATIONS FOR ACADEMIA AND PRACTICE

This dissertation study used a mixed methods approach with a robust sample size to develop an strategic model for key factors impacting success in omnichannel retailing. This is a quantitative study, and the data analysis and model building has been done using statistical techniques like linear and logistic regression and the results are statistically significant. It would therefore be safe to say that the findings are robust akin to an academic study. The qualitative research with founders, senior management professional and industry experts helped us unearth nuances and insights. Given the real-world nature of both the qualitative and quantitative components of the research, this study could serve as a bridge between academia and practitioners. Specific implications for academia and for practice are detailed below.

7.1 Implications for Academia

This research study which has identified key factors for omnichannel retailing success could be of potential use to academia since each of these factors could be delved into and form the basis of individual studies. Omnichannel retailing itself is a nascent area in academic research with the earliest studies as recent as 2011 and the studies on the topic increasing significantly only from 2018 onwards. Within the realm of omnichannel retailing, academic research has focussed on omnichannel definitions and omnichannel consumer behaviour. There are few firm-focussed studies and most of these study one or two factors like technology and supply chain in depth, there are no firm-focussed studies in the context of developing markets. This doctoral research does all of that and is able to identify a set of critical factors on the firm-side which impact success in omnichannel retailing. Factors like Top Management profile needing

a digital specialist, top management's focus on digital business model, people skills in technology especially data science are factors that have hitherto not been studied in omnichannel literature.

Academic literature over the last couple of years has seen studies on different omnichannel models – BOPS (Buy Online, Pick up at Store), OOPS (Order Online, Pick Up at Store), BOSS (Buy online ship from store) BSSD (Buy in Store, Ship Direct) etc and these form the basis for understanding of firm-level strategies and actions towards effectiveness in omnichannel retailing. Even these studies focus on the specific drivers of these models but do not study organizational mindset and behaviour as an antecedent to actions. This doctoral study studies firm-level strategies, consumer-facing strategies, and capabilities of the firm to come to conclusions about which of these are critical in affecting success in omnichannel retailing. In addition to strategies and capabilities, this research studies strategy into action as an intermediary to outcomes – the specific mediators studied are the ones associated with retail strategy and operations and two of the mediator factors, viz. Joint Business Planning with e-tailers and ability for Cross-Channel Product Returns are picked up by regression models as critical to success in omnichannel retailing.

In the international context, omnichannel retailing refers to offline and online channels owned and managed by the same party, most often the retailer. This study has expanded the context to both retailers and brand owners. As far as brand owners in the Indian context are concerned, the proliferation of channels is much wider both in the physical and in the digital world than in international markets. Physical channels include single-brand stores, multi-brand mom-and-pop stores, multi-brand large-format stores, kiosks, and pop-ups booths at exhibitions et al. Digital channels are not just the pristine 'brand.com' assets, but more often than not they are sold through

horizontal and vertical e-tailers and through digital marketplaces where multiple sellers offer the same products. The qualitative and quantitative studies for success in omnichannel retailing have been carried out in such a diverse and complex context in the Indian market. This research therefore gives a snapshot of how developing markets behave with the advent of digital channels and this snapshot could be very different from the understanding in developed markets.

The other contribution of this research to academic literature would be the raw variables and constructs derived from an in-depth understanding of firm behaviour and how these constructs were operationalised for an online, self-administrable quantitative study. These constructs and measures were subject to rigorous regression models and yielded satisfactory results.

7.2 Implications for Practice

This dissertation had two phases of research – qualitative and quantitative, both of which are rooted firmly in the real world. After a thorough understanding from the academic literature about multi-channel and omnichannel retailing, the qualitative research was conducted with twenty-five industry practitioners and retail / technology experts and covered a diverse set of offline-first and online-first organizations. Care was taken to cover different industry segments and companies at different stages of their omnichannel retailing journey. The sample set of qualitative research respondents proved to be a goldmine for insights and areas of enquiry for the quantitative phase. The questionnaire developed after the qualitative research was a robust representation of the attributes that could potentially have an impact on success in omnichannel retailing. The survey instrument covered the entire customer journey – discovery, transaction, and fulfilment. It also covered the firm-level journey of change

from strategy to execution – organizational strategies, consumer-facing strategies, and internal capabilities. The survey instrument also covered multiple outcome variables like Revenue Growth, New Channel Share, percentage of customers shopping on both channels, percentage of transactions needing both channels to be completed etc. While all of this data was not tracked and/or shared by respondents, it will help practitioners with an understanding of the potential performance metrics. Practitioners could consider putting in place technology and systems to start measuring these outcome metrics as a guidepost to success in omnichannel retailing. Several respondents have sought the survey instrument since they felt that it would help them look at their businesses and discuss with their teams how to move the needle on each of these dimensions. It would be fair to say that this doctoral research did a comprehensive job of listing the independent internal variables which could have an effect on omnichannel retailing – that's the first contribution to practice.

The more significant contribution made by this doctoral research to practice was the development of the strategic omnichannel model highlighting the ranking and importance of factors driving omnichannel success. This would help practitioners identify their gaps to become more effective and this would also help early-in-the-journey organizations decide where they would focus scarce resources to get a higher bang for their buck. Based on this model developed empirically, an omnichannel playbook for transitioning from multi-channel to omnichannel retailing can be developed for offline-first organizations. Depending on the stage of the omnichannel retailing journey that organizations are that they can do a self-audit of the factors in the strategic model and choose to concentrate on strategy formulation or capability building or driving execution.

A third dimension of contribution comes from the case study of the fashion industry segment where the model selected a set of factors which were markedly different for the fashion industry segment from the overall industry. A smaller set of factors explained a larger variation in the dependent variable in the case of the fashion industry segment. The fashion industry segment was more evolved in omnichannel strategies and results. This study could thus help guide an organization depending on whether they are nascent in their omnichannel journey or more advanced.

While this research didn't analyse the data from the online-first organizations on account of a small sample size, the survey instrument developed did a sound job of understanding challenges and triggers for an omnichannel business model for organizations looking to set up physical channels for consumers. The other reason that research on online-first organizations was not pursued was because the COVID-19 pandemic had put a pause to physical retailing plans of online-first retailers. However, the survey instrument specifically developed for online-first practitioners is appended to this study and could be of use to them.

In summary, this dissertation study has made positive contributions to academia and practice at both the research design level and the strategic model developed.

Chapter 8 : POTENTIAL WEAKNESSES AND LIMITATIONS

There are weaknesses and limitations to my research study – these are to do with the research methodology as well as data collection.

Firstly, the study focusses on one geography India and therefore would not be indicative of all emerging markets. India is a fast-growing digital market with a fair representation of Indian and multinational organizations. The original e-tailer in India is Flipkart (now part of Walmart) who set up shop in 2007 and they are primarily responsible for driving digital adoption in India using many processes which are most appropriate for developing markets like cash-on-delivery etc. In the last decade, large digital retailers like Amazon have set up operations in India and brought in global best practices for digital adoption. While India represents a large digital and potential omnichannel market, its consumer diversity make it very different from other Asian markets which are a little more homogeneous in nature. Hence the study being focussed only on the Indian market is a weakness.

Secondly, there could be a convenience bias to the qualitative research. As we embarked on the qualitative research, it was felt that being inclusive was more critical than being statistically representative of the market. Hence, I set about listing organizations across the product-service, offline first – online first spectrum who I could reach out to and gain access for an interview. While the diversity of the respondents and organizations is a strength in developing understanding the nuances of the omnichannel business model and developing the survey instrument for quantitative research, there is a definite weakness associated with the convenience of the sample. It was necessary at the time to use my networks to ensure that I got consent from a top management professional to a recorded, online interview lasting

an hour and more. While there was no method of directly validating the responses, we gauged for the reliability and validity of information supplied by brand organizations through other respondents in the study, viz retailers and technology service providers.

Thirdly, there could be a potential weakness which comes from the sample size and sample composition achieved in the quantitative study. The quantitative study was conducted using an online, self-administered survey-instrument with closed-ended questions in a manner that it would take not more than 20 minutes for the respondent to finish the questionnaire. The shorter time duration was necessitated by the quantitative research seeking senior to middle managers as participants. It was felt that junior managers may not have access to the strategic thinking and some of the data we sought in the questionnaire. 100% of the respondents are from middle, senior and top management with over 95% of them belonging to senior to top management. The online tool used for the surveys Qualtrics recommended a target time of 10 to 12 minutes to complete the survey, which we felt would not do justice to the study at all. The target sample size for the quantitative study was ninety to hundred respondents and we achieved a sample of 146 respondents with 85% of the respondents from offline-first companies. The sample is likely to have mirrored the population as far as business model, revenue of organization, length of existence of organization is concerned. However, as I posted the survey details and online link to my social media handles, with a header stating ‘Omnichannel Retailing’ and this would have attracted respondents from categories that think of themselves being in the ‘retail’ business. For example, financial services may not see themselves as being in the retail business – but they are truly in the omnichannel business with a digital product. We got less than 5% of the responses from non-product organizations. This meant that the study derived insights and inferences about offline-first, product organizations going into the

omnichannel retailing business model and didn't do justice to either online-first organizations or service organizations going omnichannel.

Continuing on the weakness of the sample size of the quantitative study, there was a finite industry that this research was targeting, and we could hope to get the largest, most-diverse sample from this finite universe. While the overall sample size was 146, the sample size of offline-first organizations was 123 and those who had provided the data for the numeric, organization-specific dependent variable (New Channel Share) was 77. While this sample size is statistically significant, there could be some limitations on account of it. We were able to carry out statistical analyses including multiple regressions with sound statistical results. We were also able to analyse the fashion industry segment independently and got nuanced inferences from the same. A larger sample size in FMCG (for the dependent variable) and for Services (overall) would have helped in understanding the similarities and differences better.

Fourthly, a limitation of the research study is to do with self-reporting bias, since the primary method for data collection was survey-instrument based. This could be a weakness since the respondents participating in the study were senior managers mandated with both strategy creation and execution of strategy. There were two ways of mitigating this – the first being anonymity. Since neither the name of the respondent or the organization was sought anywhere in the study, it is expected that the responses are fairly authentic. We were also able to validate some of the internal data provided from external sources – for example, some of the questions were regarding annual revenue growth and online channel share, and this could be ballparked for the industry segment that the respondent belonged to using external data.

Finally, and perhaps most importantly, one of the significant limitations of this research study could be its timing and the impact of the COVID-19 pandemic. This study was conducted in the period July 2020 to February 2022. The first wave of the COVID-19 pandemic in India was in March-June 2020, the second wave with the deadly Delta variant was in April to June 2021, and the widespread third wave with the Omicron variant was in December 2021 to February 2022. The COVID-19 pandemic was a disruptor event that impacted human lives in general and business operations in specific, both of which were key to this study as it involved consumer behaviour and organizational action. Some of the early effects of the COVID-19 pandemic on the retail industry were lockdown restrictions and an inability to go out or shop in a normal environment. It meant that this study was conducted almost in a simulated environment – where organizations were doing whatever they could to service an online consumer since brick-and-mortal retail was shut down for long periods at a stretch, and even when they were open, consumers weren't flocking to malls and shopping centres like they would normally do. Even as we speak malls in big cities like Mumbai require visitors to carry double-vaccination proof to be allowed into them.

The COVID-19 impact is also a big limitation of this study because of the differential nature of its effects on omnichannel retailing in different categories. There were distinctly different COVID-19 governmental guidelines for functional products like FMCG and Pharma categories, and for discretionary products like Fashion and Accessories. Owing to small sample sizes for individual industry segments and the differential COVID-19 impact, it is difficult to gauge from the closed ended questions alone what the omnichannel retailing trajectory prior to COVID-19 was and the acceleration quantum on account of the pandemic. I did several of the exploratory interviews when COVID-19 was the most looming aspect of retail in the participant's

mind. While we cannot take away the timing impact of this study, a positive contribution has been the ability to study the effects as they happened.

Given the weaknesses and limitations described above, we have taken utmost care to interpret the findings from the different empirical models. Using the principles of statistical significance for correlations as well as regression analysis, it is safe to state that many of the hypotheses found support and the empirical model for key factors impacting success in omnichannel retailing was built. Needless to say, further studies are needed for determining the predictive power of the mathematical models derived in the study since that was beyond the scope of this research.

Chapter 9 : DIRECTIONS FOR FUTURE RESEARCH

We would like to start this chapter about directions for future research by highlighting broad research areas that were brought out by two meta-studies in 2020 and 2021. In a paper titled Literature Review on Omnichannel Retailing, Huang (2021) focusses on the technology of consumer adoption and applications in omnichannel, consumer behaviour, omnichannel definitions and seamless integration by leveraging data and concludes that future research should focus on retailing agendas with managerial implications. A meta-study on omnichannel retailing in 2020 focussed on consumer decision-making in omnichannel retailing and listed out these themes for future research – linkages of omnichannel retailing to theoretical foundations, consumer focussed studies on consumer profiles and archetypes and factors driving consumer behaviour, firm-based studies focussing on changes needed in different functional areas and optimization across these for a sustainable omnichannel business model (Mishra et al., 2021). The study highlighted the need for different methodologies including mixed-methods studies, it highlighted the need to study multiple categories in depth, and also highlighted the need to expand research to developing countries.

This dissertation study addressed practically all the future research needs identified – it is a firm-focussed study, it focussed on offline-first organizations and was able to delve into the fashion industry segment. It focusses on one large market, India - which is close to the bottom of the S-Curve as far as omnichannel retailing is concerned but rising rapidly up the curve. The contributions of the research in terms of the methodology, the constructs and measures, and the empirical model have been

shared in the earlier sections. The directions for future areas of academic and practitioner research are as follows.

Firm-focussed studies on Internal Factors

This research study helped identify the key factors internal to a firm that had effects on the success of omnichannel retailing. Since this study focussed on width of factors and modelling them at an overall level, it couldn't do justice to understanding the factors in depth and several of these merit further and deeper research. We will start with organizational strategy development which is a function of both Strategic Intent – Digital Focus as well as Top Management Profile. These are key areas which according to this study are critical to the omnichannel business model and haven't been focussed on in earlier research studies. The firm-level factors that have been studied earlier in the context of omnichannel retailing have been technology capabilities which continue to be high on impact and hence the research interest. The consumer-facing strategies like Product Portfolio Strategy and Retail Strategies need further research. The specific ones that we would like to highlight are research regarding physical stores and cross-channel consistency. Some specific research questions are about understanding the redesign of stores and the footprint of stores to serve not just physical channel consumers but omnichannel consumers. Regarding cross-channel inputs, the research can be about the areas of consistency that consumers desire across channels and how firms can serve this important need of information transparency and consistency. Another key factor that needs a specific firm-focussed study is People Capabilities – in this study, two types of people capabilities were researched, viz. People Capabilities – Tech and People Capabilities – Digital Marketing. Both came up as impacting omnichannel retailing success albeit in different ways – technology with a positive coefficient and digital marketing with a

negative one. It would be worthwhile researching the Digital Marketing skills needed by organizations in a world where consumers are not just consuming digital media but are engaging in digital commerce on multiple screens almost 24/7. The lines between media and entertainment and commerce have blurred and digital marketing needs to keep pace with that.

Success Outcomes

A key area of future research could be in the area of performance metrics and success outcomes for firms. While this research had sought to study multiple outcomes like tracing consumer journeys across channels, percentage of consumers shopping on online and offline channels, percentage of transactions leveraging both channels before fulfilment, channel share of the new channel and revenue growth of organizations, we hit a roadblock with most organizations not measuring these outcomes. A study on omnichannel success outcomes both from the customer's point of view (satisfaction, referral, review etc) and from the firm's point of view (revenue, profitability, competitive share etc) would go a long way in ensuring that the linkage of omnichannel business model to long-term business outcomes is established.

Developing markets & Industry Segments including Online-First organizations

Future research should focus on developing markets where the structure of retail is very different from the developed world. The nuances with regard to physical channels are associated with the type of retail outlets and the nature of ownership or control. For example, in developing markets, mom-and-pop stores are cheek-and-jowl with organised retail and the control over the physical channels is usually distributed between brands, distributors and retailers. Differences vis-à-vis the western organised retail are also being seen in digital retail - digital retail entities include single-brand

platforms, horizontal and vertical marketplaces, social commerce, hyperlocal platforms etc. Processes of fulfilment involve multiple stakeholders including the last mile delivery often through local mom-and-pop stores. This complex omnichannel retailing structure is definitely worth understanding in greater detail – understanding the omnichannel drivers in common with the rest of the world, and those that are specific and critical to developing markets.

Future studies could take up online-first organizations as their focus and seek to find answers to some of these pertinent questions. They would start with understanding the reasons for digital organizations to become omni followed by the means by which they become omnichannel retailers. Would organizations define the role of physical channels as brand building, as display and showrooming, or for the full stack of discovery, engagement, and fulfilment? Further research could be about how online-first organizations build sales and channel capabilities which are so different from their core DNA and how would they defray the costs of the physical channel. Even within offline-first organizations, it could be worthwhile studying the services segment or the luxury goods segment wherein omnichannel retailing could take on vastly different hues.

Sustenance post COVID pandemic

Researchers in developing markets have been focussed on studying barriers and triggers to digital adoption with the pandemic occupying larger-than-life mind space. They are driven by what consumer and firm behaviour drives growth of Omnichannel currently. While there have been some efforts to study consumer and firm behaviour in the context of omnichannel retailing, there has been no focus on the medium term, leave alone the long term. It would be an imperative to study profitability and

sustenance of the omnichannel business model considering the sharing of costs between brands, distributors, platforms, and retailers. Specifically for this study, it has been highlighted that one significant limitation of this study is its timing. It was conducted while the COVID-19 pandemic raged all over the world and impacted mindset and behaviour of consumers and organizations alike. The digital adoption journey was accelerated during COVID-19 and some key organizational factors which would have been needed in a steady-state world were bypassed or leapfrogged to ensure omnichannel acceptance by consumers. Organizations in developing markets have ridden the COVID-19 wave to digital adoption and digital omnipresence but this is coming at the cost of medium to long-term profitability. As the pandemic recedes, and business operations go back towards the earlier normal, would organizations continue the digital thrust, or would it be dialled back? A similar firm-level study on the key factors driving omnichannel success conducted in the post-pandemic environment is merited to understand drivers of sustained revenue and profitability growths. What would be interesting and critical as an area of future research is how the omnichannel business model builds itself as the most optimal way of doing business in the post-pandemic world.

Chapter 10 : CLOSING COMMENTS

I have been on the Omnichannel Retailing dissertation journey for a few years and I felt that circling back with a few of my initial interviewees would be beneficial. I was particularly keen to understand their learnings from deploying the omnichannel business model over the last couple of years, heightened by the COVID-19 impact. I also felt that speaking to them now would give a sense of how they foresee the future especially as COVID-19 related restrictions and directives are going away – would some of the progress made on the omnichannel retailing front be forgotten with business as usual coming back or were these changes here to stay. Here are some closing comments of significance from the perspective of learnings as well as the future view.

> *Forrester's Ecommerce Readiness Index 2020 categorises India as a large and developing opportunity for online retail. Only the US and Chinese markets have larger opportunities. Forrester estimates that the number of online buyers in India will go up from 71.5 million in 2016 to 291.5 million in 2025. The online retail market will double from $41 Billion in 2021 to $85 Billion in 2025.*
>
> *https://retail.economictimes.indiatimes.com/news/e-commerce/e-tailing/etails-turning-into-4-way-race-with-reliance-and-tata-forays/90302636*

> *In the fashion industry, ecommerce is here to stay, regardless of covid. This is particularly true for premium fashion, where the unit economics of delivery work out somewhat close compared to the costs of physical retail.*
>
> *To strengthen our e commerce business, we are investing on multiple fronts - app experience, delivery experience, store operations, cataloguing, personalization and more.*
>
> *However, it's our belief that man will continue to be a social animal- and will continue to enjoy the process of shopping from a physical store. A good omni-channel network also enhances rotation of merchandise- leading to a virtuous cycle*
>
> ***CEO, Apparel & Fashion, Offline-First***

The advent of Covid across the world accelerated the adoption of omnichannel. We had made all our brick-and-mortar stores omni ready by August of 2020 and this has proved to be useful even after all the stores have opened up. The brand commerce site generates leads that are passed on to the stores. Equally, store walk-ins are shown the website in case the particular product that they are looking for is not present in the store. Both the teams get incentivised for these sales, so that there is joint accountability. Further refinements on different use cases is amplifying the adoption and value of omnichannel. The consumer has also modified the decision journey substantially. Almost all search starts online and then moves to either online or on-ground for fulfilment.

CEO, Watches & Wearables, Offline-First

Businesses are essentially a bridge between what clients need and how the fulfilment is supplied. The bridge is essentially the channel. The bridge chosen or offered is also a function of pull by the customer and push to the customer. The same has to be balanced by the cost of the channel, persuasion requirement of the product and reaching out to customer.

As digital becomes ubiquitous the balance is tilting towards digital channels. Complex products where persuasion and judgment is required remains more offline, where there is pull and products/ services are less complex it is shifting rapidly online.

In financial services, servicing and simple products have rapidly migrated online but advisory and complex products have remained offline. In advisory and complex products, the sales and sales operations (the process of fulfilment) are getting delinked. The former stays offline but the latter is becoming online, in an almost frictionless manner.

Going forward, we will use offline processes sharpened by data and analytics and use digital as a core medium to serve consumers at the most optimum costs.

CEO, Banking & Financial Services, Offline – First

While we were active on E-Commerce before the pandemic, the onset of pandemic and the related restrictions, caused us to accelerate our transition to a truly omnichannel retailer, with not just our DCs but all our stores acting as fulfilment centres, positively impacting our delivery speed across the cities we operate out of. Our store associates innovated to provide online shopping experiences through video calls & digital catalogues to our frequent customers to enable them to experience the product they are ordering and go online more confidently.

As we are easing out of the pandemic, continuing on the omni channel journey is an important imperative for both customer convenience and business growth. We strongly believe that the future of retail is omnichannel. Customers who shop omni channel give us 3X annual revenues compared to customers who shop from stores only and we will continuously strive to expand this base. On the technology front we are working on making our shopping experience simpler and more intuitive, content more visual and appealing and enable us to offer faster delivery and returns to our customers.

CEO, Fashion Retailer, Offline – First

We had followed three key dimensions of firm-level strategies, consumer-facing strategies and organizational capabilities for the development and validation of the strategic model for omnichannel retailing. In closing, I would like to highlight that the triad of strategy, capability and profitability are what is needed for the omnichannel business model to be sustainable in the medium to long term.

References

Akter, Hossain, T. M. T., & Strong, C. (2021). What omnichannel really means? *Journal of Strategic Marketing*, *29*(7), 567–573.

https://doi.org/10.1080/0965254X.2021.1937284

Ailawadi, & Farris, P. W. (2017). Managing Multi- and Omni-Channel Distribution: Metrics and Research Directions. *Journal of Retailing*, *93*(1), 120–135.

https://doi.org/10.1016/j.jretai.2016.12.003

Alikhani, Torabi, S. A., & Altay, N. (2021). Retail supply chain network design with concurrent resilience capabilities. *International Journal of Production Economics*, *234*, 108042–. *https://doi.org/10.1016/j.ijpe.2021.108042*

Andrews, A (2019). Four tips for mastering omnichannel commerce *https://wwd.com/business-news/business-features/think-tank-four-tips-omnichannel-commerce-1203346427/*

Armstrong, C. (2016). Omnichannel retailing and demand planning. The Journal of Business Forecasting, 35(4), 10-

Asmare, & Zewdie, S. (2022). Omnichannel retailing strategy: a systematic review. *The International Review of Retail, Distribution and Consumer Research*, *32*(1), 59–79. *https://doi.org/10.1080/09593969.2021.2024447*

Bain & Company, (2022). How India shops Online 2021.

https://www.bain.com/insights/how-india-shops-online-2021/

Beck, & Rygl, D. (2015). Categorization of multiple channel retailing in Multi-, Cross-, and Omni-Channel Retailing for retailers and retailing. *Journal of Retailing and Consumer Services*, *27*, 170–178. https://doi.org/10.1016/j.jretconser.2015.08.001

Bell, D. R., Gallino, S., & Moreno, A. (2014). How to win in an omnichannel world. *MIT Sloan Management Review*, *56*(1), 45–53.

Bell, Gallino, S., & Moreno, A. (2018). Offline Showrooms in Omnichannel Retail: Demand and Operational Benefits. *Management Science*, *64*(4), 1629–1651.

https://doi.org/10.1287/mnsc.2016.2684

Bell, Gallino, S., & Moreno, A. (2020). Customer Supercharging in Experience-Centric Channels. *Management Science*, *66*(9), 4096–4107.

https://doi.org/10.1287/mnsc.2019.3453

Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the Age of Omnichannel Retailing. *MIT Sloan Management Review*, *54*(4), 23–29.

Burke. (2002). Technology and the customer interface: What consumers want in the physical and virtual store. *Journal of the Academy of Marketing Science*, *30*(4), 411–432. https://doi.org/10.1177/009207002236914

Wu, Chang, Y. P., Yan, J., & Hou, D.-L. (2019). Online product category and pricing strategies of land-based retailers: Homogenous vs prototypical orientation. *Internet Research*, *29*(1), 245–270. https://doi.org/10.1108/IntR-07-2017-0287

Chatterjee, P., 2006. Cross-channel product ordering and payment policies in multichannel retailing: implications for shopping behavior and retailer profitability. *Journal of Shopping Center Research*, 13(2), pp. 31-56.

Chatterjee. (2010). Causes and consequences of “order online pick up in-store” shopping behavior. *The International Review of Retail, Distribution and Consumer Research*, *20*(4), 431–448. *https://doi.org/10.1080/09593969.2010.504009*

Chatterjee, & Kumar, A. (2017). Consumer willingness to pay across retail channels. *Journal of Retailing and Consumer Services*, *34*, 264–270.

https://doi.org/10.1016/j.jretconser.2016.01.008

Chatterjee, Chaudhuri, R., & Vrontis, D. (2021). Examining the global retail apocalypse during the COVID-19 pandemic using strategic omnichannel management: a consumers’ data privacy and data security perspective. *Journal of Strategic Marketing*, *29*(7), 617–632. *https://doi.org/10.1080/0965254X.2021.1936132*

Chopra. (2015). How omni-channel can be the future of retailing. *DECISION*, *43*(2), 135–144. *https://doi.org/10.1007/s40622-015-0118-9*

Cook. (2014). Customer experience in the omni-channel world and the challenges and opportunities this presents. *Journal of Direct, Data and Digital Marketing Practice*, *15*(4), 262–266. *https://doi.org/10.1057/dddmp.2014.16*

Faisal, Imran, Shahzad, K., Butt, A., & Kantola, J. (2020). Leadership Competencies for Digital Transformation: Evidence from Multiple Cases. In *Advances in Human Factors, Business Management and Leadership* (pp. 81–87). Springer International Publishing.

Fortuna, Risso, M., & Musso, F. (2021). Omnichannelling and the Predominance of Big Retailers in the post-Covid Era. *Symphonya*, *2*, 142–157.

https://doi.org/10.4468/2021.2.11fortuna.risso.musso

Forrester Report 2014, Customer Desires vs Retailer Capabilities: Minding the Omnichannel Commerce Gap.

https://www.supplychain247.com/images/pdfs/Accenture-hybris-Forrester-new_2014.pdf

Fisher, Gallino, S., & Xu, J. J. (2019). The Value of Rapid Delivery in Omnichannel Retailing. *Journal of Marketing Research*, *56*(5), 732–748.

https://doi.org/10.1177/0022243719849940

Gallino, & Moreno, A. (2014). Integration of Online and Offline Channels in Retail: The Impact of Sharing Reliable Inventory Availability Information. *Management Science*, *60*(6), 1434–1451. *https://doi.org/10.1287/mnsc.2014.1951*

Gao, & Su, X. (2017a). Omnichannel Retail Operations with Buy-Online-and-Pick-up-in-Store. *Management Science*, *63*(8), 2478–2492.

https://doi.org/10.1287/mnsc.2016.2473

Gao, & Su, X. (2017b). Online and Offline Information for Omnichannel Retailing. *Manufacturing & Service Operations Management*, *19*(1), 84–98.

https://doi.org/10.1287/msom.2016.0593

Gao, Agrawal, V. V., & Cul, S. (2022). The Effect of Multichannel and Omnichannel Retailing on Physical Stores. *Management Science*, *68*(2), 809–826.

https://doi.org/10.1287/mnsc.2021.3968

Gilli, Nippa, M., & Knappstein, M. (2020). Leadership Competencies for Digital Transformation - Skills and Traits Sought by Practitioners. *Academy of Management Proceedings*, *2020*(1), 16597–. *https://doi.org/10.5465/AMBPP.2020.16597abstract*

Global Omnichannel Commerce Trends 2018 - Digital and Offline Retail Channels Converge - ResearchAndMarkets.com. (2018).

https://www.businesswire.com/news/home/20181212005662/en/Global-Omnichannel-Commerce-Trends-2018---Digital-and-Offline-Retail-Channels-Converge---ResearchAndMarkets.com

Grewal, Gauri, D. K., Roggeveen, A. L., & Sethuraman, R. (2021). Strategizing Retailing in the New Technology Era. *Journal of Retailing*, *97*(1), 6–12.

https://doi.org/10.1016/j.jretai.2021.02.004

Hamel, & Prahalad, C. K. (2010). *Strategic intent*. Harvard Business Press.

Hansen, R., and S. K. Sia. 2015. "Hummel's Digital Transformation toward Omni Channel Retailing: Key Lessons Learned." MIS Quarterly Executive 14 (2): 51–66.

Harsha, Subramanian, S., & Uichanco, J. (2019). Dynamic pricing of omnichannel inventories. *Manufacturing & Service Operations Management*, *21*(1), 47–65.

https://doi.org/10.1287/msom.2018.0737

Hickman, Kharouf, H., & Sekhon, H. (2020). An omnichannel approach to retailing: demystifying and identifying the factors influencing an omnichannel experience. *The International Review of Retail, Distribution and Consumer Research*, *30*(3), 266–288. *https://doi.org/10.1080/09593969.2019.1694562*

Hossain, Akter, S., Kattiyapornpong, U., & Dwivedi, Y. (2020). Reconceptualizing Integration Quality Dynamics for Omnichannel Marketing. *Industrial Marketing Management*, *87*, 225–241. *https://doi.org/10.1016/j.indmarman.2019.12.006*

Hübner, Wollenburg, J., & Holzapfel, A. (2016). Retail logistics in the transition from multi-channel to omni-channel. *International Journal of Physical Distribution & Logistics Management*, *46*(6/7), 562–583. *https://doi.org/10.1108/IJPDLM-08-2015-0179*

HUANG, Wei-Jen. (2021). Literature Review on Omnichannel Retailing. *Expert Journal of Marketing*, *9*(1), 1–7.

Juaneda-Ayensa, Mosquera, A., & Murillo, Y. S. (2016). Omnichannel customer behavior: Key drivers of technology acceptance and use and their effects on purchase intention. *Frontiers in Psychology*, *7*, 1117–1117.

https://doi.org/10.3389/fpsyg.2016.01117

Kang. (2018). Showrooming, Webrooming, and User-Generated Content Creation in the Omnichannel Era. *Journal of Internet Commerce*, *17*(2), 145–169.

https://doi.org/10.1080/15332861.2018.1433907

Kang. (2019). What drives omnichannel shopping behaviors?: Fashion lifestyle of social-local-mobile consumers. *Journal of Fashion Marketing and Management*, *23*(2), 224–238. *https://doi.org/10.1108/JFMM-07-2018-0088*

Kazancoglu, & Aydin, H. (2018). An investigation of consumers' purchase intentions towards omni-channel shopping: A qualitative exploratory study. *International Journal of Retail & Distribution Management*, *46*(10), 959–976.

https://doi.org/10.1108/IJRDM-04-2018-0074

Kramer, A. (2014). Webrooming, the next big thing in all-channel retailing. Capgemini Group, January 9.

Larke, Kilgour, M., & O'Connor, H. (2018). Build touchpoints and they will come: transitioning to omnichannel retailing. *International Journal of Physical Distribution & Logistics Management*, *48*(4), 465–483. *https://doi.org/10.1108/IJPDLM-09-2016-0276*

Lee, Chan, T. K. ., Chong, A. Y.-L., & Thadani, D. R. (2019). Customer engagement through omnichannel retailing: The effects of channel integration quality. *Industrial Marketing Management*, *77*, 90–101.

https://doi.org/10.1016/j.indmarman.2018.12.004

Levy, M., Weitz, B. and Grewal, D., 2013. *Retailing management-9th edition*, McGraw-Hill Education, New York, USA.

Li, Yang, S., Kang, H., & Shi, V. (2020). "Buy Online, Pick Up in Store" under Fit Uncertainty: To Offer or Not to Offer. *Complexity (New York, N.Y.)*, *2020*, 1–12. *https://doi.org/10.1155/2020/3095672*

Lynch, & Barnes, L. (2020). Omnichannel fashion retailing: examining the customer decision-making journey. *Journal of Fashion Marketing and Management*, *24*(3), 471–493. *https://doi.org/10.1108/JFMM-09-2019-0192*

Mishra. (2021). An analysis of factors influencing omnichannel retailing adoption using ISM-DEMATEL approach: an Indian perspective. *International Journal of Retail & Distribution Management*, *49*(4), 550–576. *https://doi.org/10.1108/IJRDM-03-2020-0108*

Mishra, Singh, R. K., & Koles, B. (2021). Consumer decision-making in omnichannel retailing: Literature review and future research agenda. *International Journal of Consumer Studies*, *45*(2), 147–174. *https://doi.org/10.1111/ijcs.12617*

Mosquera, Olarte Pascual, C., & Juaneda Ayensa, E. (2017). Understanding the customer experience in the age of omni-channel shopping. *La Revista Icono 14*, *15*(2), 92–114. *https://doi.org/10.7195/ri14.v15i2.1070*

Nachtsheim, C. J., Neter, J., Li, W., & Kutner, M. H. (2004). Applied linear statistical models. Journal Of the Royal Statistical Society Series A General, Fifth, 1396.

Neslin, Jerath, K., Bodapati, A., Bradlow, E. T., Deighton, J., Gensler, S., Lee, L., Montaguti, E., Telang, R., Venkatesan, R., Verhoef, P., & Zhang, Z. J. (2014). The interrelationships between brand and channel choice. *Marketing Letters*, *25*(3), 319–330. *https://doi.org/10.1007/s11002-014-9305-2*

Norman. (2010). Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education : Theory and Practice*, *15*(5), 625–632. *https://doi.org/10.1007/s10459-010-9222-y*

Omar, Nazri, M. A., Ali, M. H., & Alam, S. S. (2021). The panic buying behavior of consumers during the COVID-19 pandemic: Examining the influences of uncertainty, perceptions of severity, perceptions of scarcity, and anxiety. *Journal of Retailing and Consumer Services*, *62*, 102600–. *https://doi.org/10.1016/j.jretconser.2021.102600*

O'Shannassy. (2016). Strategic intent: The literature, the construct and its role in predicting organization performance. *Journal of Management & Organization*, *22*(5), 583–598. *https://doi.org/10.1017/jmo.2015.46*

Otto, J. R. and Chung, Q. B., 2000. A framework for cyber-enhanced retailing: integrating e-commerce retailing with brick-and-mortar retailing. *Electronic Markets*, 10(3), pp. 185-191.

Park, Dayarian, I., & Montreuil, B. (2021). Showcasing optimization in omnichannel retailing. *European Journal of Operational Research*, *294*(3), 895–905.

https://doi.org/10.1016/j.ejor.2020.03.081

Piotrowicz, & Cuthbertson, R. (2014). Introduction to the Special Issue Information Technology in Retail: Toward Omnichannel Retailing. *International Journal of Electronic Commerce*, *18*(4), 5–16. *https://doi.org/10.2753/JEC1086-4415180400*

Rigby, D. (2011). The future of shopping. *Harvard Business Review*, *89*(12).

Saghiri, Wilding, R., Mena, C., & Bourlakis, M. (2017). Toward a three-dimensional framework for omni-channel. *Journal of Business Research*, *77*, 53–67.

https://doi.org/10.1016/j.jbusres.2017.03.025

Shankar, Inman, J. J., Mantrala, M., Kelley, E., & Rizley, R. (2011). Innovations in Shopper Marketing: Current Insights and Future Research Issues. *Journal of Retailing*, *87*(1), S29–S42. *https://doi.org/10.1016/j.jretai.2011.04.007*

Shankar, Kleijnen, M., Ramanathan, S., Rizley, R., Holland, S., & Morrissey, S. (2016). Mobile Shopper Marketing: Key Issues, Current Insights, and Future Research Avenues. *Journal of Interactive Marketing*, *34*(May), 37–48.

https://doi.org/10.1016/j.intmar.2016.03.002

Shankar, Kalyanam, K., Setia, P., Golmohammadi, A., Tirunillai, S., Douglass, T., Hennessey, J., Bull, J. ., & Waddoups, R. (2021). How Technology is Changing Retail. *Journal of Retailing*, *97*(1), 13–27. *https://doi.org/10.1016/j.jretai.2020.10.006*

Sharma, Luthra, S., Joshi, S., & Kumar, A. (2021). Accelerating retail supply chain performance against pandemic disruption: adopting resilient strategies to mitigate the

long-term effects. *Journal of Enterprise Information Management*, *34*(6), 1844–1873. *https://doi.org/10.1108/JEIM-07-2020-0286*

Sheth. (2021). Future of brick-and-mortar retailing: how will it survive and thrive? *Journal of Strategic Marketing*, *29*(7), 598–607.

https://doi.org/10.1080/0965254X.2021.1891128

Shontell A (2013) Retail stores will completely die, says tech investor Marc Andreessen. Business Insider (January 31),

https://www.businessinsider.in/tech/retail-stores-will-completely-die-says-tech-investor-marc-andreessen/articleshow/21401654.cms

Silva, Martins, C. C., & Sousa, J. M. de. (2018). Omnichannel approach: Factors affecting consumer acceptance. *Journal of Marketing Channels*, *25*(1-2), 73–84. *https://doi.org/10.1080/1046669X.2019.1647910*

van Baal, & Dach, C. (2005). Free riding and customer retention across retailers' channels. *Journal of Interactive Marketing*, *19*(2), 75–85.

https://doi.org/10.1002/dir.20036

Verhoef, Kannan, P., & Inman, J. (2015). From Multi-Channel Retailing to Omni-Channel Retailing: Introduction to the Special Issue on Multi-Channel Retailing. *Journal of Retailing*, *91*(2), 174–181.

https://doi.org/10.1016/j.jretai.2015.02.005

Verhoef, Neslin, S. A., & Vroomen, B. (2007). Multichannel customer management: Understanding the research-shopper phenomenon. *International Journal of Research in Marketing*, *24*(2), 129–148. *https://doi.org/10.1016/j.ijresmar.2006.11.002*

von Briel. (2018). The future of omnichannel retail: A four-stage Delphi study. *Technological Forecasting & Social Change*, *132*, 217–229.

https://doi.org/10.1016/j.techfore.2018.02.004

Weber. (2021). Responding to supply chain disruptions caused by the covid-19 pandemic: A black swan event for omnichannel retailers. *Journal of Transport and Supply Chain Management*, *15*, e1–e16. *https://doi.org/10.4102/jtscm.v15i0.628*

Wollenburg, J, Holzapfel, Andreas, & Hübner, A. (2019). Omni-channel customer management processes in retail: An exploratory study on fulfillment-related options. Logistics Research, 12(1). https://doi.org/10.23773/2019_7

Ye, Lau, K. H., & Teo, L. K. Y. (2018). Drivers and barriers of omni-channel retailing in China: A case study of the fashion and apparel industry. *International Journal of Retail & Distribution Management*, *46*(7), 657–689. https://doi.org/10.1108/IJRDM-04-2017-0062

Yrjölä, Saarijärvi, H., & Nummela, H. (2018). The value propositions of multi-, cross-, and omni-channel retailing. *International Journal of Retail & Distribution Management*, *46*(11/12), 1133–1152. https://doi.org/10.1108/IJRDM-08-2017-0167

Zhang, Xu, Q., & He, Y. (2018). Omnichannel retail operations with consumer returns and order cancellation. *Transportation Research. Part E, Logistics and Transportation Review*, *118*, 308–324. https://doi.org/10.1016/j.tre.2018.08.006

Appendices

Appendix I: Discussion Guide Omnichannel Retailing: Corporate Executives

Introduction: Hi. I am conducting qualitative interviews as part of my dissertation project, and I sincerely appreciate your time for the same. All the information provided will be kept confidential and analysed only in a masked manner.

Disclaimer: I would like to start with a COVID-19 disclaimer – the pandemic is the largest thing looming over us in every aspect of our lives, and specifically to businesses. In some parts of the discussion, I will request you to think of times before COVID-19 and we will certainly discuss COVID-19 and its impact in some detail.

1. What are the biggest changes in your business that you have seen in the last few years? What do you think have been the reasons for these?

2. What are the biggest changes in your business model / servicing consumers that you have seen over the last few years? Again, if you could talk about what have been the triggers for these? Are you seeing these changes across your industry? Who / what have been the influencers for the business model shifts?

3. Let us talk about the external influencers (again, lets first speak about the last 2-3 years please)
    a. Can you describe how consumers are evolving which is making your organization relook at how to target / reach them? Would you walk me through a typical consumer journey please?
    b. What environment shifts are affecting your business model?
    c. Have there been any large regulatory changes impacting your industry in the last few years
    d. How would you rate competition intensity in your industry? What is the impact that has had in your business model framework?

4. What would you say are the top three priorities for the senior management as far as your business model is concerned?

5. What are the changes that your organization has been making to facilitate the changes in business model? Can you please bucket these under say 3-4 key pillars and we could talk about each of the pillars? (Discuss the pillars that the interviewee has detailed, and if not covered already discuss top management priorities, consumer facing strategies, back-end strategies as listed below)

6. Strategic Mindset

a. Has your organization made changes in the Org Structure (resourcing / reporting) and KRA's / compensation in the last few years towards the business model shift?
b. What are the big skill gaps that you have identified towards the shift in business model and are you hiring / building for the same?
c. What are the challenges and conflicts that you have faced in the business model shift? How are you addressing them?

7. Consumer-Facing Strategies – what are the changes happening to consumer facing strategies as consumers evolve, become more demanding and your organization sets itself on a course of business model change. (Get the listing for discussion from the response to this question but ensure that the following are also discussed).

   The common question that can be asked is: What are the big opportunities and challenges about each of the following? How are you addressing them?

   a. Assortment & Merchandising
   b. Pricing & Promotion
   c. Communication Reach / Channels /
   d. Customer Experience

8. Back-end Resources and Capabilities – What are the capabilities that your organization needs to build/ are building towards your business model change. If you could bucket them into 3-4 heads for me, please, in the order of importance? (Get the listing for discussion from the response to this question but ensure that the following are also discussed).

   The common question that can be asked is: Without any specific numbers, can you help me understand the investment that you are putting into the following, to get a sense of the importance of the same. If you could indicate the specific activities in these areas, it would be of immense help.

   a. Technology Stack
   b. Inventory System
   c. People Capabilities

9. COVID-19 impact: Let us talk about the last 6 months too and the impact of the COVID-19 pandemic on your business. What are the implications COVID-19 has had on your business model?

10. Omnichannel Strategies
    a. What omnichannel models has your organization piloted / is piloting?
    b. Can you talk about the partnerships your organization has built / is building towards omnichannel retailing?

c. Currently, how do you measure effectiveness / success of your omnichannel retailing. Do you think there are metrics you will add or modify going forward?
d. According to you, what are the big drivers for omnichannel success
e. Can you name a benchmark for omnichannel business model?

Thank you for your time. If you think I will benefit from speaking to someone you know, I would appreciate an introduction. I also hope I can stay in touch as I develop my thesis further. Thank you

Appendix II a: Data Collection Questionnaire (Offline-first, Product Organization)

Q. No	Question / Statement	Scale						
Section 1: Organization Profile								
1.1	What is the core industry that your organization operates in?	Fashion & Accessories	Electronics & Home Appliances	Personal care, Wellness, Beauty	FMCG & Pharma	Services (Financial, Telecom, Education, Others)	Others	
1.2	How long has the organization been in existence	0-5	06-Oct	Nov-25	>25			
1.3	What is the product pricing approach of the core of your organization	Prestige	Premium	Mass	Discount	Any other		
1.4	What was the revenue of your organization in 2019-20 (Rs crore)	0-199	200-499	500-1999	2000-6999	>7000		
1.5	How much does online sales contribute to the overall market for your product category (in %)							
1.6	What is your organization's retail business model?	Offline first	Online first					
Section 2: Respondent Profile								
2.1	What is your role / title							
2.2	Can you tell us where this role fits in the organizational hierarchy	Top Mgt	Senior Mgt	Middle Mgt	Junior Mgt	Frontline/Others		
2.3	Can you tell us which function your role is closest aligned to	Sales, Mktg, Retail	Supply Chain	Finance	Information Systems	Strategy, Planning, CEO office	Others	
2.4	How many years have you been in the organization	0-3	04-Oct	>10				

Q. No	Question / Statement	Scale						
2.5	How many years of total work experience do you have	0-5	06-Oct	Nov-20	>20			
Section 3: Top Management Profile / Priorities								
3.1	With regard to understanding of technological advancements, the top management of your organization is:	Tech detractors	Not Tech Savvy	Somewhat Tech Non-Savvy	Neither tech savvy nor tech detractors	Somewhat tech savvy	Tech savvy	Extremely Tech Savvy
3.2	With regard to change orientation, the top management of your organization is:	Detractors to change	Closed to change	Somewhat closed to change	Neither open nor closed to change	Somewhat open to change	Open to change	Extremely open to change
3.3	The top management of your organization has digital specialists	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.4	The top management of your organization has defined the role of the digital channel clearly in the company strategy and business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.5	The top management of your organization believes that rapid adoption of the online business model will significantly improve business results in the next 2 years	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.6	Digital channel strategy and its results is a key priority for the top management of your organization	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 4: Strategic Intent								
4.1	The digital channel of your organization is structured like a Strategic Business Unit with its own P&L and marketing budgets	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
4.2	The digital channel of your organization has dedicated functional resources (eg, Marketing, Merchandising Supply chain etc)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.3	How senior in the organization is the Head of the digital channel?	Top Management	Senior Management	Middle Management	Junior Management			
4.4	How experienced in Digital is the Head of the digital channel?	0-2 years	3-5 years	6- 10 years	> 10 years			
4.5	Is the Head of the digital channel	A Lateral Hire	Homegrown Talent					
4.6	Your organization's investments in technology are in line with the need of the online business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.7	Your organization's investments in online customer acquisition for the new retail channel are in line with need	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.8	Your organization's investments in supply chain and inventory systems are in line with the need of the online business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 5: Product Portfolio Strategy								
5.1	Your organization creates channel-specific merchandise basis needs / behaviour of online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.2	The product assortment strategy of your organization ensures that products are carefully curated for online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
5.3	Your organization ensures product pricing parity across its channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.4	Your organization showcases its online inventory to its offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.5	Your organization showcases its offline inventory to its online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 6: Retail Strategy & Channel Integration								
6.1	Your organization is redesigning its physical stores and reviewing its retail footprint to better serve online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.2	Your organization has enabled an adequate number of social and digital channels for discovery, engagement, and fulfilment to supplement its physical channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.3	Your organization has been piloting and using omnichannel models in a systematic manner	< 2 years	2 - 4 years	> 4years				
6.4	Your organization has an omnichannel evangelist in the senior leadership team	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.5	Your organization engages in Joint Business Plans and Reviews with e-commerce players	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.6	The Customer Relationship Management (CRM) Program of your organization is integrated across channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
6.7	Your organization actively promotes the new channel / omnichannel to its existing consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.8	Your organization has a system for product returns both at online and at stores irrespective of channel of purchase by consumer	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 7: Technology Capabilities								
7.1	The tech stack of your organization is integrated and enables a unified view (consumers, orders, inventory)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.2	Your organization has combined its legacy IT systems across offline and online into a data warehouse to facilitate data mining	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.3	Both online and offline teams (sales, marketing, customer acquisition) of your organization are able to use inferences from data mining for improved performance	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.4	Your organization's inventory system has been redesigned to optimize maximum assortment and speedy delivery	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 8: People Capabilities								
8.1	Your organization's investment in people resourcing addresses the needs of the online business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
8.2	The marketing team in your organization is well attuned to digital marketing and online consumer behaviour	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.3	The data science team in your organization is well resourced	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.4	Your organization has inhouse digital tech teams	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 9: The COVID-19 Impact								
9.1	Compared to pre-COVID times, the share of the digital channel increased during COVID-19 time	Significantly declined	Moderately declined	Neither increased nor decreased	Moderately increased	Significantly increased		
9.2	Your organization was well prepared for the digital channel when COVID-19 19 happened	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
9.3	Going ahead, your organization will invest significantly in both physical and digital channels to ensure overall business growth	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
Section 10: Some Organizational Data								
		Can you please share the trendline data of your organization on the following parameters? The closest approximation is welcome. If some metric is not tracked, pls mark as not tracked						
		2018-19	2019-20	2020-21	Plan 2021-22	Metric not tracked		
10.1	Annual Revenue Growth (%)							
10.2	Channel Share of new channel (%)							
10.3	Omnichannel Share (%)							
10.4	%Consumers shopping on both offline and online channels							
10.5	% Marketing spend on digital channels							

Appendix II b: Data Collection Questionnaire (Online-first, Product Organization)

Q No.	Question / Statement	Scale						
Section 1: Organization Profile								
1.1	What is the core industry that your organization operates in?	Fashion & Accessories	Electronics & Home Appliances	Personal care, Wellness, Beauty	Services (Financial, Telecom, Education, Others)	FMCG & Pharma	Others	
1.2	How long has the organization been in existence	0-5	06-Oct	Nov-25	>25			
1.3	What is the product pricing approach of the core of your organization	Prestige	Premium	Mass	Discount	Any other		
1.4	What was the GMV of your organization in 2019-20 (in Rs crore)	0-199	200-999	1000-4999	>5000			
1.5	How much does online sales contribute to the overall market for your product category (in %)							
1.6	What is your organization's retail business model?	Offline first	Online first					
Section 2: Respondent Profile								
2.1	What is your role / title							
2.2	Can you tell us where this role fits in the organizational hierarchy	Top Mgt	Senior Mgt	Middle Mgt	Junior Mgt	Frontline	Others	
2.3	Can you tell us which function your role is closest aligned to	Sales, Mktg, Retail	Supply Chain	Finance	Information Systems	Strategy, Planning, CEO office	Others	
2.4	How many years have you been in the organization							

Q No.	Question / Statement	Scale						
2.5	How many years of total work experience do you have							
Section 3: Top Management Profile / Priorities								
3.1	With regard to understanding of technological advancements, the top management of your organization is:	Tech detractors	Not Tech Savvy	Somewhat Tech Non- Savvy	Neither tech savvy nor tech detractors	Somewhat tech savvy	Tech savvy	Extremely Tech Savvy
3.2	With regard to change orientation, the top management of your organization is:	Detractors to change	Closed to change	Somewhat closed to change	Neither open nor closed to change	Somewhat open to change	Open to change	Extremely open to change
3.3	The top management of your organization has physical channel specialists	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.4	The top management of your organization has defined the role of the physical channel clearly in the company strategy and business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.5	The top management of your organization believes that rapid adoption of the offline business model will significantly improve business results in the next 2 years	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.6	Physical channel strategy and its results is a key priority for the top management of your organization	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 4: Strategic Intent								
4.1	The physical channel of your organization is structured like a Strategic Business Unit with its own P&L and marketing budgets	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q No.	Question / Statement	Scale						
4.2	The physical channel of your organization has dedicated functional resources (eg, Sales, Channel Development, Merchandising, Supply chain etc)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.3	How senior in the organization is the Head of the physical channel	Top Management	Senior Management	Middle Management	Junior Management			
4.4	How experienced in traditional retail is the Head of the physical channel	0-2 years	3-5 years	6- 10 years	> 10 years			
4.5	Is the Head of the new retail channel	A Lateral Hire	Homegrown Talent					
4.6	Your organization's investments in technology are in line with the need of the offline business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.7	Your organization's investments in creating footprint of physical stores are in line with need	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.8	Your organization's investments in supply chain and inventory systems are in line with the need of the offline business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 5: Product Portfolio Strategy								
5.1	Your organization creates channel-specific merchandise basis requirements / dynamics of offline retail	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.2	The product assortment strategy of your organization ensures that products are carefully selected for offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q No.	Question / Statement	Scale						
5.3	Your organization ensures product pricing parity across its channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.4	Your organization showcases its online inventory to its offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.5	Your organization showcases its offline inventory to its online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 6: Retail Strategy & Operations								
6.1	Your organization is executing towards a physical footprint plan to better serve offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.2	Your organization is enabling an adequate number of physical channels for experience, fulfilment, and service to supplement online channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.3	Your organization has been piloting and using omnichannel models in a systematic manner	< 1 year	1 - 3 years	> 3 years				
6.4	Your organization has an omnichannel evangelist in the senior leadership team	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.5	Your organization is creating a distribution network for offline presence through large-format retailers, multi-brand outlets, distributors	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.6	The Customer Relationship Management (CRM) Program of your organization is integrated across channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q No.	Question / Statement	Scale						
6.7	Your organization actively promotes the new channel / omnichannel to its existing consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.8	Your organization has a system for product returns both at online and at stores irrespective of channel of purchase by consumer	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 7: Tech Capabilities								
7.1	The tech stack of your organization is integrated and enables a unified view (consumers, orders, inventory)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.2	Your organization has integrated data across online and offline channels into a data warehouse to facilitate data mining	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.3	Both online and offline teams (sales, marketing, customer acquisition) of your organization are able to use inferences from data mining for improved performance	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.4	Your organization's inventory system has been redesigned to optimize maximum assortment and speedy delivery	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 8: People Capabilities								
8.1	Your organization's investments in people resourcing address the needs of the offline business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q No.	Question / Statement	Scale						
8.2	The marketing team in your organization is trained / capable to drive traffic to stores	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.3	The sales / channel development team in your organization is well resourced to build the offline retail channel	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.4	Your organization has inhouse retail design and visual merchandising teams to enhance the consumer experience at offline retail	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 9: The COVID-19 Impact								
9.1	Compared to pre-COVID times, has the share of physical channel changed during COVID-19 time	Significantly declined	Moderately declined	Neither increased nor decreased	Moderately increased	Significantly increased		
9.2	Your organization was well prepared for the physical channel when COVID-19 19 happened	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
9.3	Going ahead, your organization will invest significantly in both offline and online channels to ensure overall business growth	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q No.	Question / Statement	Scale						
Section 10: Some Organizational Data								
		Can you please share the trendline data of your organization on the following parameters? The closest approximation is welcome. If some metric is not tracked, pls mark as not tracked						
		2018-19	2019-20	2020-21	Plan 2021-22	Metric not tracked		
10.1	Annual Revenue Growth (%)							
10.2	Channel Share of new channel (%)							
10.3	Omnichannel Share (%)							
10.4	% Consumers shopping on both offline and online channels							
10.5	% Marketing spend on digital channels							

Appendix II c: Data collection Questionnaire (Offline-first, Service Organization)

Q. No	Question / Statement	Scale						
Section 1: Organization Profile								
1.1	What is the core industry that your organization operates in?	Fashion & Accessories	Electronics & Home Appliances	Personal care, Wellness, Beauty	Services (Financial, Telecom, Education, Others)	FMCG & Pharma	Others	
1.2	How long has the organization been in existence?	0-5	06-Oct	Nov-25	>25			
1.3	What is the product pricing approach of the core of your organization	Prestige	Premium	Mass	Discount	Any other		
1.4	What was the revenue of your organization in 2019-20 (Rs crore)	0-199	200-999	1000-4999	>5000			
1.5	How much does online sales contribute to the overall market for your product category (in %)							
1.6	What is your organization's retail business model?	Offline first	Online first					
Section 2: Respondent Profile								
2.1	What is your role / title							
2.2	Can you tell us where this role fits in the organizational hierarchy	Top Mgt	Senior Mgt	Middle Mgt	Junior Mgt	Frontline	Others	
2.3	Can you tell us which function your role is closest aligned to	Sales, Mktg, Retail	Supply Chain	Finance	Information Systems	Strategy, Planning, CEO office	Others	
2.4	How many years have you been in the organization							

Q. No	Question / Statement	Scale						
2.5	How many years of total work experience do you have							
Section 3: Top Management Profile / Priorities								
3.1	With regard to understanding of technological advancements, the top management of your organization is:	Tech detractors	Not Tech Savvy	Somewhat Tech Non-Savvy	Neither tech savvy nor tech detractors	Somewhat tech savvy	Tech savvy	Extremely Tech Savvy
3.2	With regard to change orientation, the top management of your organization is:	Detractors to change	Closed to change	Somewhat closed to change	Neither open nor closed to change	Somewhat open to change	Open to change	Extremely open to change
3.3	The top management of your organization has digital specialists	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.4	The top management of your organization has defined the role of the digital channel clearly in the company strategy and business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.5	The top management of your organization believes that rapid adoption of the online business model will significantly improve business results in the next 2 years	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.6	Digital channel strategy and its results is a key priority for the top management of your organization	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 4: Strategic Intent								
4.1	The digital channel of your organization is structured like a	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
	Strategic Business Unit with its own P&L and marketing budgets							
4.2	The digital channel of your organization has dedicated functional resources (eg, Marketing, Channel Development, Domain specialists etc)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.3	How senior in the organization is the Head of the digital channel?	Top Management	Senior Management	Middle Management	Junior Management			
4.4	How experienced in Digital is the Head of the digital channel?	0-2 years	3-5 years	6- 10 years	> 10 years			
4.5	Is the Head of the digital channel	A Lateral Hire	Homegrown Talent					
4.6	Your organization's investments in technology are in line with the need of the digital business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.7	Your organization's investments in customer acquisition through the digital channel are in line with need	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 5: Product Portfolio Strategy								
5.1	Your organization creates channel-specific product solutions basis needs / behaviour of online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.2	The range of product solutions of your organization is carefully curated for online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
5.3	Your organization ensures product pricing parity across its channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 6: Retail Strategy & Operations								
6.1	Your organization has Redesigned its physical footprint (eg, branches, stores, service points, ATMs) to serve online consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.2	Your organization has enabled an adequate number of social and digital channels for discovery, engagement, and fulfilment to supplement physical channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.3	Your organization has been piloting and using omnichannel models in a systematic manner	< 1 year	1 - 3 years	> 3 years				
6.4	Your organization has an omnichannel evangelist in the senior leadership team	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.5	Your organization sells its product solutions through third party e-commerce players.	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.6	The Customer Relationship Management (CRM) Program of your organization is integrated across channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.7	Your organization actively promotes the new channel / omnichannel to its existing consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 7: Tech Capabilities								

Q. No	Question / Statement	Scale						
7.1	The tech stack of your organization is integrated and enables a unified view (consumers, transactions)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.2	Your organization has combined its legacy IT systems across offline and online into a data warehouse to facilitate data mining	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.3	Both online and offline teams (sales, marketing, customer acquisition) of your organization are able to use inferences from data mining for improved performance	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 8: People Capabilities								
8.1	Your organization's investments in people resourcing address the needs of the online business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.2	The marketing team in your organization is well attuned to digital marketing and online consumer behaviour	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.3	The data science team in your organization is well resourced	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.4	Your organization has inhouse digital tech teams	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 9: The COVID-19 Impact								

Q. No	Question / Statement	Scale						
9.1	Compared to pre-COVID times, the share of the digital channel increased during COVID-19 time	Significantly declined	Moderately declined	Neither increased nor decreased	Moderately increased	Significantly increased		
9.2	Your organization was well prepared for the digital channel when COVID-19 19 happened	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
9.3	Going ahead, your organization will invest significantly in both physical and digital channels to ensure overall business growth	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 10: Some Organizational Data								
		Can you please share the trendline data of your organization on the following parameters? The closest approximation is welcome. If some metric is not tracked, pls mark as not tracked						
		2018-19	2019-20	2020-21	Plan 2021-22	Metric not tracked		
10.1	Annual Revenue Growth (%)							
10.2	Channel Share of digital channel (%)							
10.3	Omnichannel Share (%)							
10.4	% Consumers transactions on both offline and online channels							
10.5	% Marketing spend on digital channels							

Appendix II d: Data collection Questionnaire (Online-first, Service Organization)

Q. No	Question / Statement	Scale						
Section 1: Organization Profile								
1.1	What is the core industry that your organization operates in?	Fashion & Accessories	Electronics & Home Appliances	Personal care, Wellness, Beauty	Services (Financial, Telecom, Education, Others)	FMCG & Pharma	Others	
1.2	How long has the organization been in existence?	0-5	06-Oct	Nov-25	>25			
1.3	What is the product pricing approach of the core of your organization	Prestige	Premium	Mass	Discount	Any other		
1.4	What was the revenue of your organization in 2019-20 (Rs crore)	0-199	200-999	1000-4999	>5000			
1.5	How much does online sales contribute to the overall market for your product category (in %)							
1.6	What is your organization's retail business model?	Offline first	Online first					
Section 2: Respondent Profile								
2.1	What is your role / title							
2.2	Can you tell us where this role fits in the organizational hierarchy	Top Mgt	Senior Mgt	Middle Mgt	Junior Mgt	Frontline	Others	
2.3	Can you tell us which function your role is closest aligned to	Sales, Mktg, Retail	Supply Chain	Finance	Information Systems	Strategy, Planning, CEO office	Others	
2.4	How many years have you been in the organization							

Q. No	Question / Statement	Scale						
2.5	How many years of total work experience do you have							
Section 3: Top Management Profile / Priorities								
3.1	With regard to understanding of technological advancements, the top management of your organization is:	Tech detractors	Not Tech Savvy	Somewhat Tech Non-Savvy	Neither tech savvy nor tech detractors	Somewhat tech savvy	Tech savvy	Extremely Tech Savvy
3.2	With regard to change orientation, the top management of your organization is:	Detractors to change	Closed to change	Somewhat closed to change	Neither open nor closed to change	Somewhat open to change	Open to change	Extremely open to change
3.3	The top management of your organization has physical channel specialists	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.4	The top management of your organization has defined the role of the physical channel clearly in the company strategy and business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.5	The top management of your organization believes that rapid adoption of the offline business model will significantly improve business results in the next 2 years	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
3.6	Physical channel strategy and its results is a key priority for the top management of your organization	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 4: Strategic Intent								

Q. No	Question / Statement	Scale						
4.1	The physical channel of your organization is structured like a Strategic Business Unit with its own P&L and marketing budgets	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.2	The physical channel of your organization has dedicated functional resources (eg, Marketing, Channel Development, Domain specialists etc)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.3	How senior in the organization is the Head of the physical channel?	Top Management	Senior Management	Middle Management	Junior Management			
4.4	How experienced in Traditional Retail is the Head of the physical channel?	0-2 years	3-5 years	6- 10 years	> 10 years			
4.5	Is the Head of the physical channel	A Lateral Hire	Homegrown Talent					
4.6	Your organization's investments in technology are in line with the need of the offline business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
4.7	Your organization's investments in customer acquisition through the physical channel are in line with need	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 5: Product Portfolio Strategy								
5.1	Your organization creates channel-specific product solutions basis needs / behaviour of offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

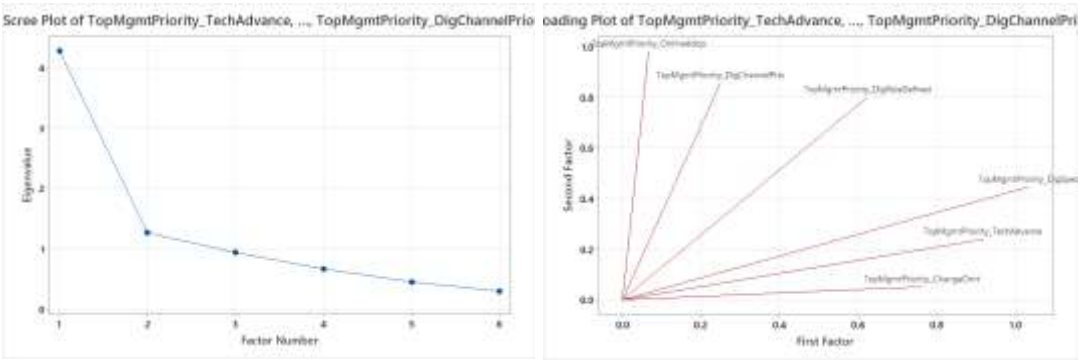
Q. No	Question / Statement	Scale						
5.2	The range of product solutions of your organization is carefully curated for offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
5.3	Your organization ensures product pricing parity across its channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 6: Retail Strategy & Operations								
6.1	Your organization is executing towards a physical footprint plan to better serve offline consumers	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.2	Your organization is enabling an adequate number of physical channels for experience, fulfilment, and service to supplement digital channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.3	Your organization has been piloting and using omnichannel models in a systematic manner	< 1 year	1 - 3 years	> 3 years				
6.4	Your organization has an omnichannel evangelist in the senior leadership team	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.5	Your organization is creating a physical network through agents, distributors, salesforce	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.6	The Customer Relationship Management (CRM) Program of your organization is integrated across channels	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
6.7	Your organization actively promotes the new channel /	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
	omnichannel to its existing consumers							
Section 7: Tech Capabilities								
7.1	The tech stack of your organization is integrated and enables a unified view (consumers, transactions)	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.2	Your organization has integrated data across online and offline channels into a data warehouse to facilitate data mining	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
7.3	Both online and offline teams (sales, marketing, customer acquisition) of your organization are able to use inferences from data mining for improved performance	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 8: People Capabilities								
8.1	Your organization's investments in people resourcing address the needs of the offline business model	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.2	The marketing team in your organization is well attuned to support offline sales	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.3	The sales and channel development team in your organization is well resourced	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
8.4	Your organization has inhouse teams for building sales capability to enhance consumer relationship building.	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree

Q. No	Question / Statement	Scale						
Section 9: The COVID-19 Impact								
9.1	Compared to pre-COVID times, the share of the physical channel changed during COVID-19 time	Significantly declined	Moderately declined	Neither increased nor decreased	Moderately increased	Significantly increased		
9.2	Your organization was well prepared for the physical channel when COVID-19 19 happened	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
9.3	Going ahead, your organization will invest significantly in both physical and digital channels to ensure overall business growth	Strongly Disagree	Disagree	Slightly disagree	Don't agree or disagree	Slightly agree	Agree	Strongly Agree
Section 10: Some Organizational Data								
		Can you please share the trendline data of your organization on the following parameters? The closest approximation is welcome. If some metric is not tracked, pls mark as not tracked						
		2018-19	2019-20	2020-21	Plan 2021-22	Metric not tracked		
10.1	Annual Revenue Growth (%)							
10.2	Channel Share of digital channel (%)							
10.3	Omnichannel Share (%)							
10.4	% Consumers transactions on both offline and online channels							
10.5	% Marketing spend on digital channels							

Appendix III a: Factor Analysis (Top Management)

Scree Plot and Factor Loading Plot for factors of Top Management



Rotated Factor Loadings and Communalities, Varimax Rotation

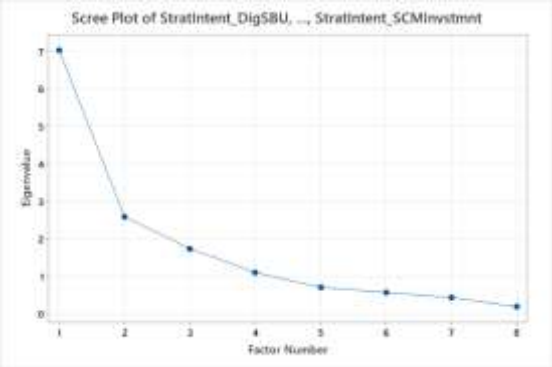
Variable	Factor1	Factor2	Communality
TopMgmt_TechAdvance	**0.916**	0.239	0.897
TopMgmt_ChangeOrnt	**0.762**	0.052	0.583
TopMgmt_DigSpec	**1.034**	0.446	1.267
TopMgmt_DigRoleDefined	0.623	**0.800**	1.028
TopMgmt_OnlineAdop	0.066	**0.980**	0.965
TopMgmt_DigChannelPrio	0.249	**0.856**	0.795
Variance	2.9431	2.5910	5.5341
% Var	0.374	0.329	
Cumulative		**70.3%**	

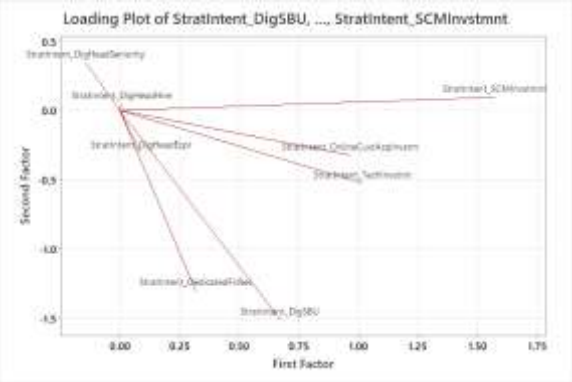
Factor Coefficients (Top Management)

EigenVectors		TopMgt_Rotation_Matrix		Coefficients	
Factor1	Factor2			***TopMgt_Profile***	***TopMgt_DigFocus***
0.408	-0.384	0.747305	0.664482	0.560	-0.016
0.292	-0.417	-0.66448	0.747305	0.495	-0.117
0.517	-0.315			0.596	0.108
0.482	0.164			0.252	0.443
0.339	0.613			-0.154	0.683
0.365	0.422			-0.007	0.558

Appendix III b: Factor Analysis (Strategic Intent)

Scree Plot and Factor Loading Plot for factors of Strategic Intent





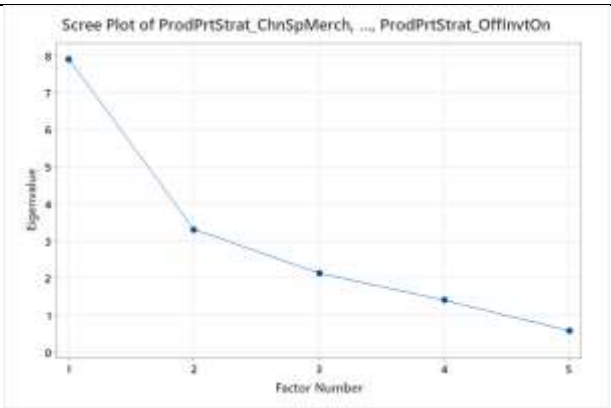
Factor Coefficients (Strategic Intent)

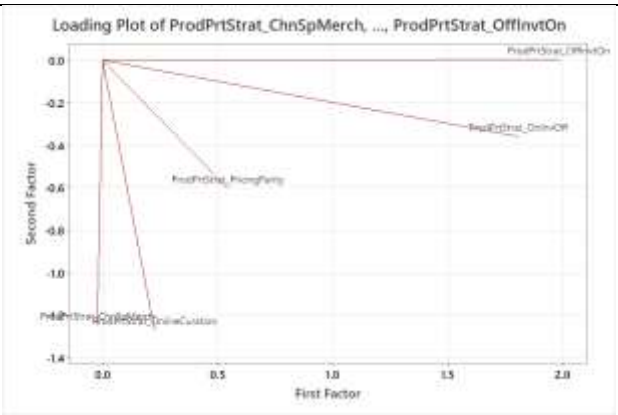
			EigenVectors				Coefficients	
Variable	**Factor1**	**Factor2**	**Factor1**	**Factor2**	**Strategic Intent Rotation Matrix**		**StratIntent _DigInvst mnts**	**StratIntent_ DigitalSBU[5]**
StratIntent_DigSBU	1.516	-0.666	0.572	-0.414	0.739	-0.673	0.144	**0.691**
StratIntent_DedicatedFnRes	1.114	-0.75	0.420	-0.466	0.673	0.739	-0.003	**0.628**
StratIntent_DigHeadSeniority	-0.336	0.159	-0.127	0.099			-0.027	**-0.158**
StratIntent_DigHeadExpr	0.275	-0.17	0.104	-0.106			0.006	**0.148**
StratIntent_DigHeadHire	-0.027	0.041	-0.010	0.025			0.010	**-0.026**
StratIntent_TechInvstmt	1.106	0.296	0.417	0.184			0.432	**0.145**
StratIntent_OnlineCustAcqInvstm	0.932	0.41	0.352	0.255			0.431	**0.048**
StratIntent_SCMInvstmnt	1.097	1.128	0.4138	0.701			0.778	**-0.239**
Variance	7.027	2.589						
% Var	0.49	0.18						
Cumulative		**68%**						

[5] Unit vector reversed for ease in interpretation of the regression results

Appendix III c: Factor Analysis (Product Portfolio Strategy)

Scree Plot and Factor Loading Plot for factors of Product Portfolio Strategy



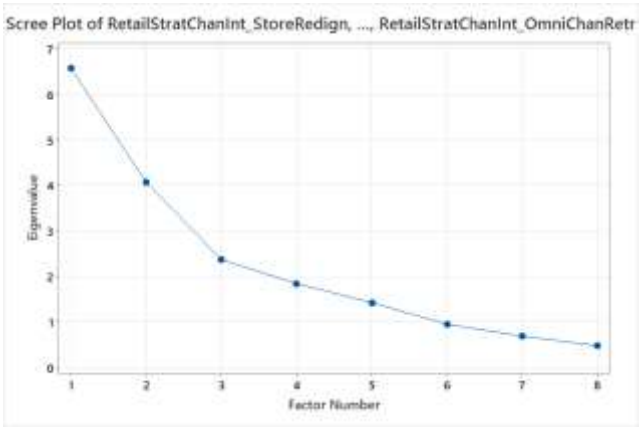


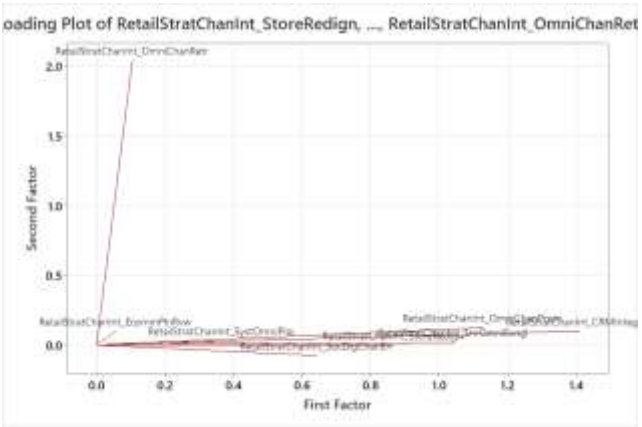
Factor Coefficients for Product Portfolio Strategy

Unrotated Factor Loadings			Coefficients	
Variable	Factor1	Factor2	***ProdPrtStrat_CrossChnl***	***ProdPrtStrat_OnlineChnl***
ProdPrtStrat_ChnSpMerch	0.327	-1.205	-0.073	**0.668**
ProdPrtStrat_OnlineCuration	0.572	-1.157	0.018	**0.667**
ProdPrtStrat_PricingParity	0.692	-0.429	0.171	**0.295**
ProdPrtStrat_OnInvOff	1.833	0.159	**0.651**	**0.098**
Variance	7.897	3.310		
% Var	0.515	0.216		
Cumulative		**73.1%**		

Appendix III d: Factor Analysis (Retail Strategy)

Scree Plot and Factor Loading Plot for factors of Retail Strategy



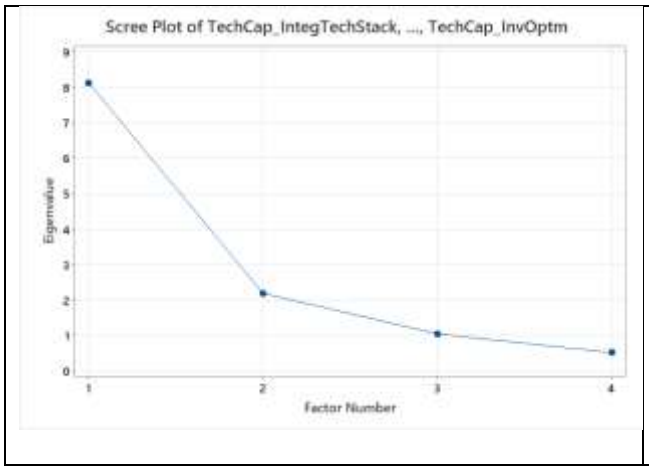


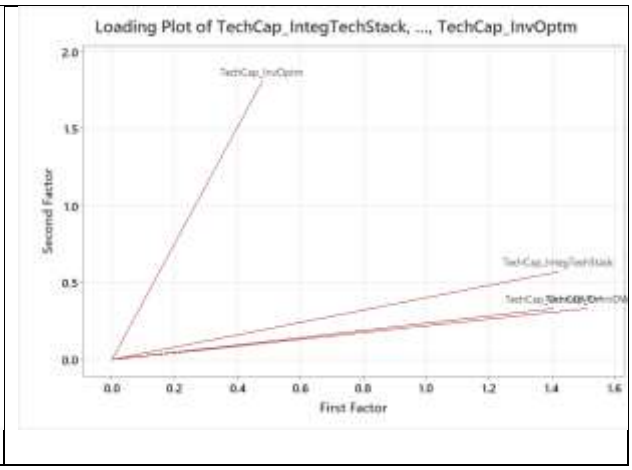
Factor Coefficients for Retail Strategy

Unrotated Factor Loadings				Coefficients		
Variable	**Factor1**	**Factor2**	**Factor3**	**RetailStrat_ OmniPrep**	**RetailStrat_ Returns**	**RetailStrat_ JtBizPlng**
RetailStratChanInt_StoreRedign	1.151	-0.256	0.467	0.293	-0.034	0.473
RetailStratChanInt_SocDigChanEn	0.664	-0.242	-0.013	0.258	-0.054	0.109
RetailStratChanInt_SystOmniPilo	0.349	-0.064	-0.105	0.156	0.006	-0.002
RetailStratChanInt_SnrOmniEvngl	1.194	-0.268	0.150	0.397	-0.024	0.294
RetailStratChanInt_EcommPlnRvw	0.589	0.020	1.062	-0.097	0.023	**0.721**
RetailStratChanInt_CRMIntegrati	1.078	-0.222	-0.974	0.664	0.031	-0.386
RetailStratChanInt_OmniChanProm	1.159	-0.168	-0.181	0.465	0.034	0.092
RetailStratChanInt_OmniChanRetr	0.627	1.945	-0.060	-0.002	**0.996**	0.022
Variance	6.560	4.062	2.365			
% Var	0.357	0.221	0.129			
Cumulative			**70.7%**			

Appendix III e: Factor Analysis (Technology Capabilities)

Scree Plot and Factor Loading Plot for factors of Technology Capabilities



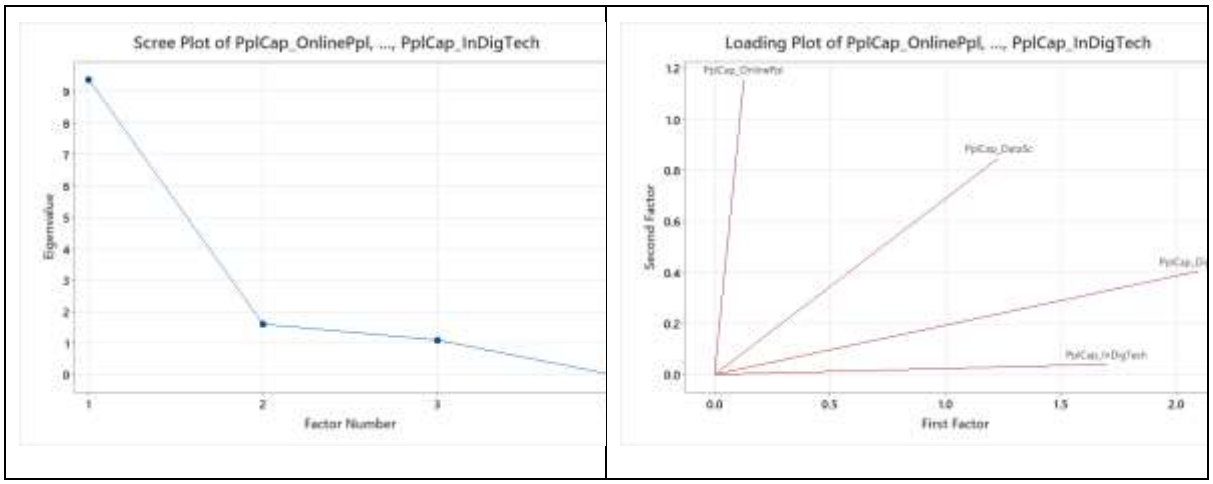


Factor Coefficients for Technology Capabilities

Unrotated Factor Loadings			Coefficients	
Variable	**Factor1**	**Factor2**	**TechCap_Omni**	**TechCap_SCRedesign**
TechCap_IntegTechStack	1.512	-0.253	**0.542**	0.130
TechCap_OmniDW	1.465	-0.505	**0.617**	-0.024
TechCap_OmniDMInf	1.371	-0.448	**0.569**	-0.008
TechCap_InvOptm	1.346	1.291	-0.052	**0.991**
Variance	8.122	2.186		
% Var	0.684	0.184		
Cumulative		**86.8%**		

Appendix III f: Factor Analysis (People Capabilities)

Scree Plot and Factor Loading Plot for factors of People Capabilities



Factor Coefficients for People Capabilities

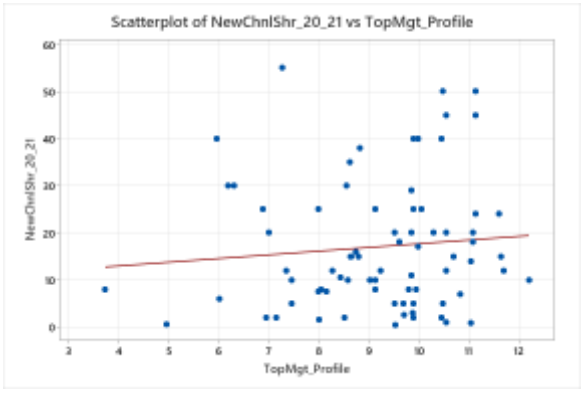
Unrotated Factor Loadings			Coefficients	
Variable	**Factor1**	**Factor2**	**PplCap_DigiMktg**	**PplCap_Tech**
PplCap_OnlinePpl	0.446	1.073	-0.098	**0.855**
PplCap_DigMktg	2.117	-0.199	**0.707**	0.043
PplCap_DataSc	1.417	0.468	0.340	**0.485**
PplCap_InDigTech	1.641	-0.439	**0.612**	-0.182
Variance	9.383	1.602		
% Var	0.777	0.133		
Cumulative		**91%**		

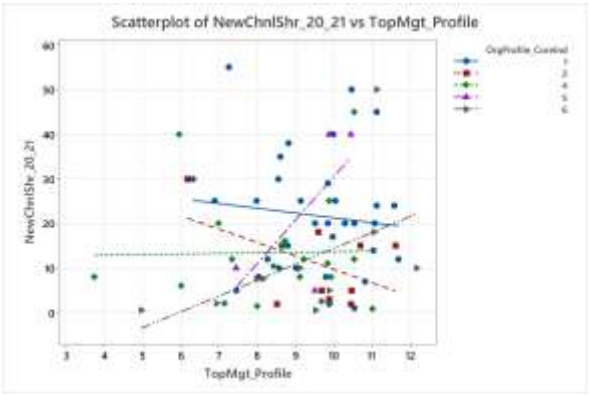
Appendix III g: Factor Analysis (COVID Impact)

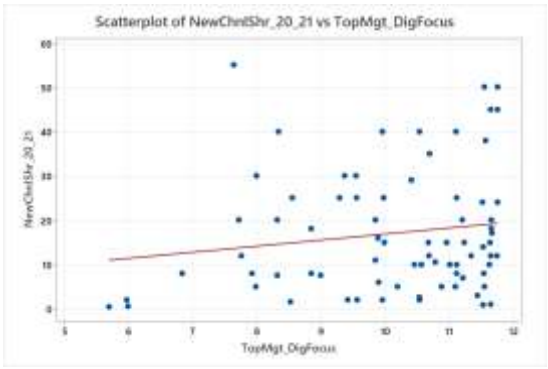
Factor Coefficients for COVID Impact

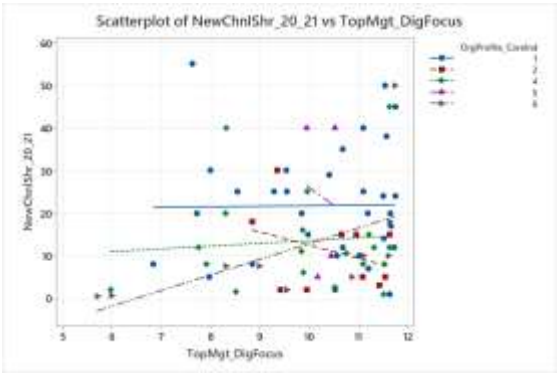
		Eigen Vector	Coefficients
Variable	**Factor1**	**Factor1**	**CovidImpct**
CovidImpct_DigChnPrep	1.666	0.987	0.987
CovidImpct_DigFutInvst	0.276	0.163	0.163
Variance	2.850		
% Var	85.4%		

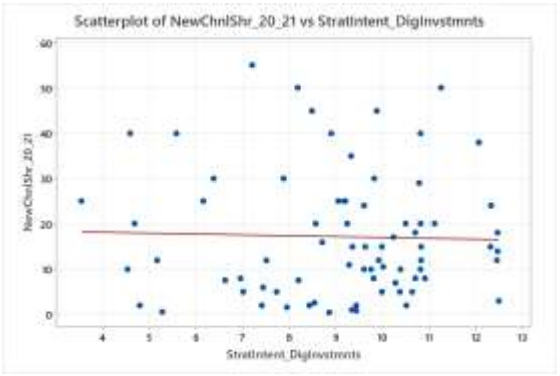
Appendix IV: Scatter Plots of Pairwise Correlations

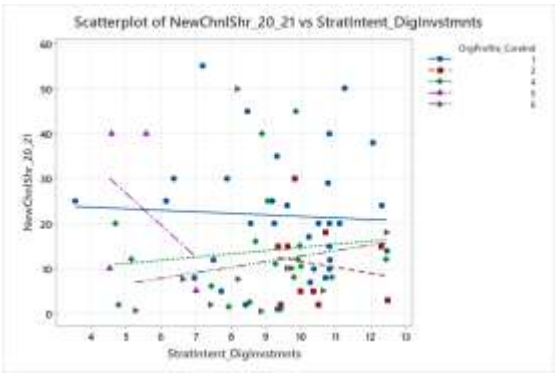


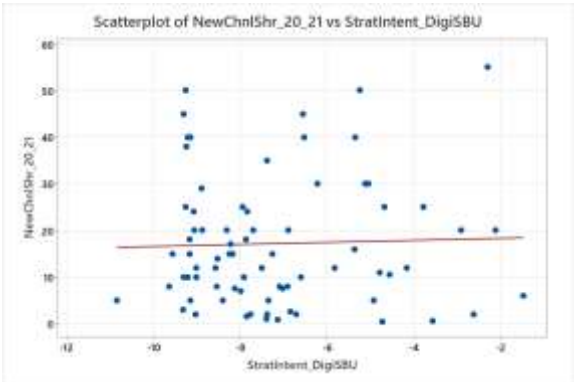


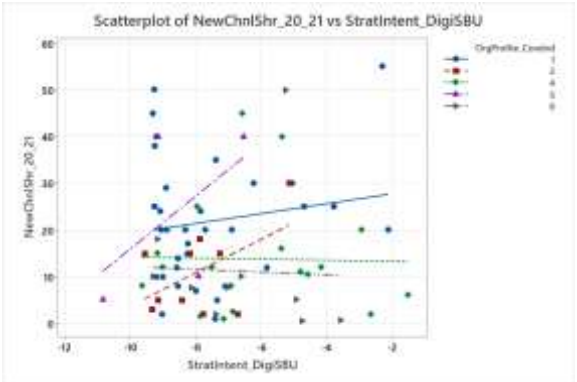


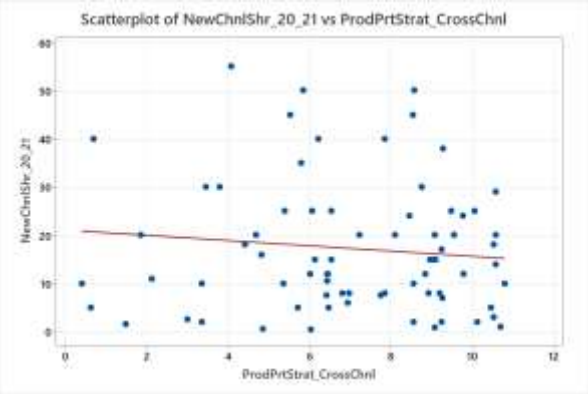


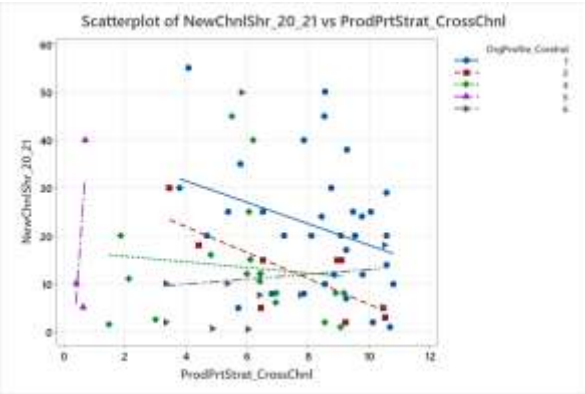


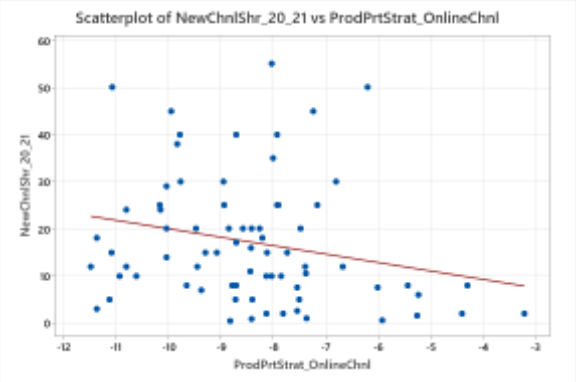


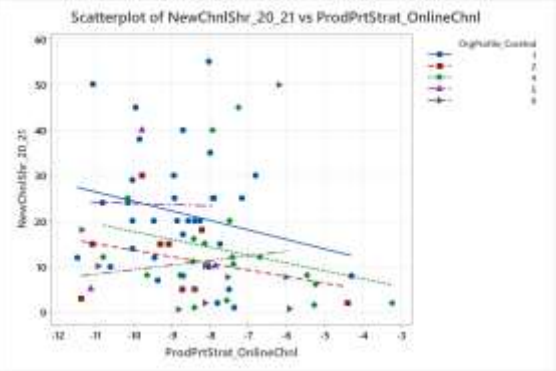


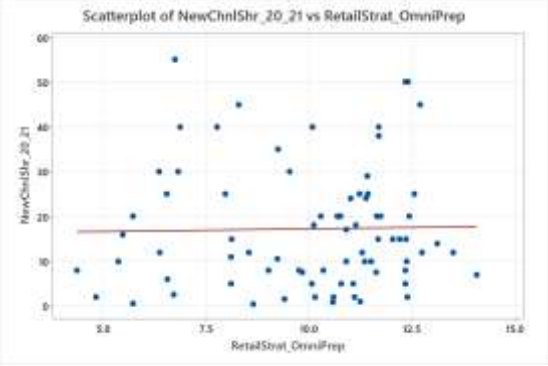


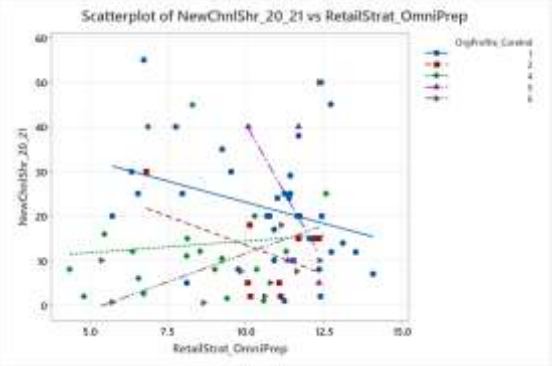

Scatterplot of NewChnlShr_20_21 vs ProdPrtStrat_CrossChnl
NewChnlShr_20_21
ProdPrtStrat_CrossChnl

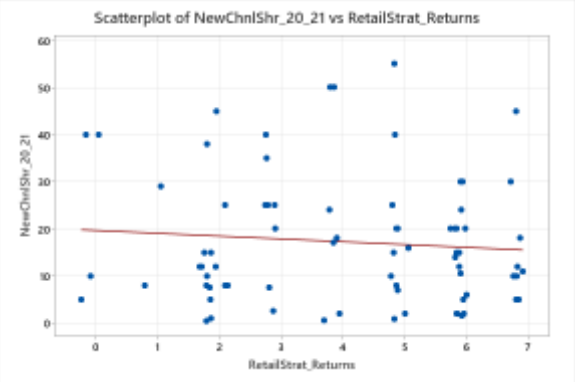

Scatterplot of NewChnlShr_20_21 vs ProdPrtStrat_CrossChnl
NewChnlShr_20_21
ProdPrtStrat_CrossChnl

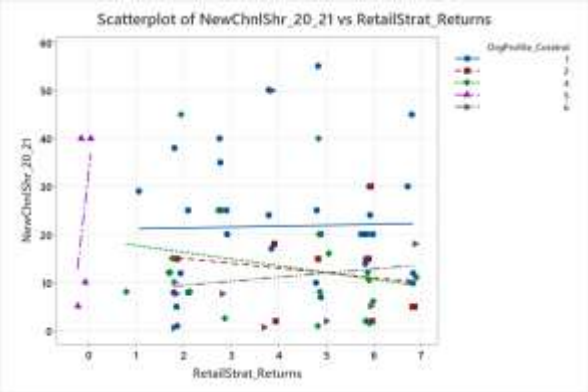

Scatterplot of NewChnlShr_20_21 vs ProdPrtStrat_OnlineChnl
NewChnlShr_20_21
ProdPrtStrat_OnlineChnl

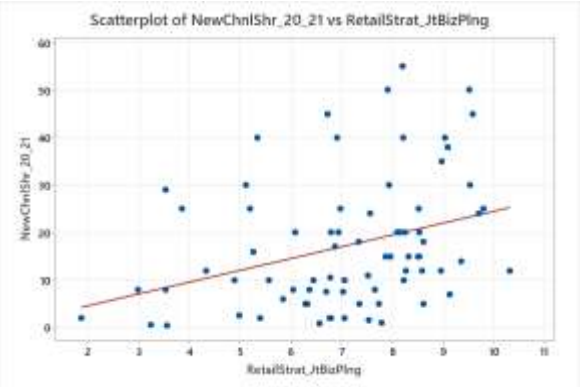

Scatterplot of NewChnlShr_20_21 vs ProdPrtStrat_OnlineChnl
NewChnlShr_20_21
ProdPrtStrat_OnlineChnl

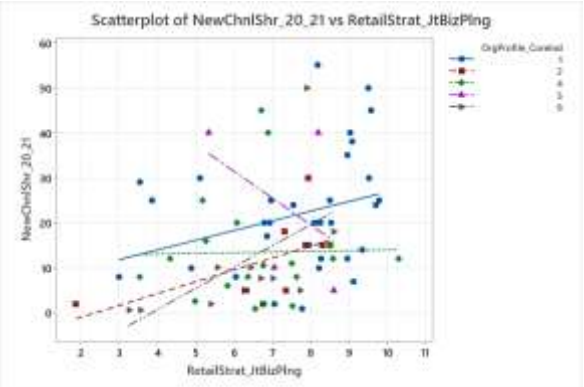

Scatterplot of NewChnlShr_20_21 vs RetailStrat_OmniPrep
NewChnlShr_20_21
RetailStrat_OmniPrep

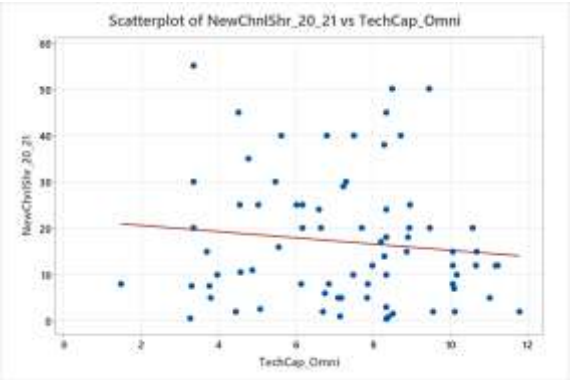

Scatterplot of NewChnlShr_20_21 vs RetailStrat_OmniPrep
NewChnlShr_20_21
RetailStrat_OmniPrep

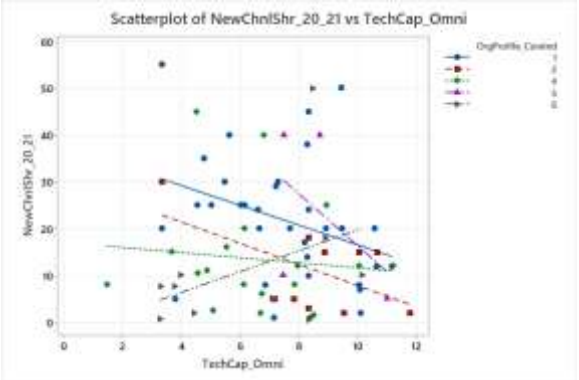

Scatterplot of NewChnlShr_20_21 vs RetailStrat_Returns
NewChnlShr_20_21
RetailStrat_Returns

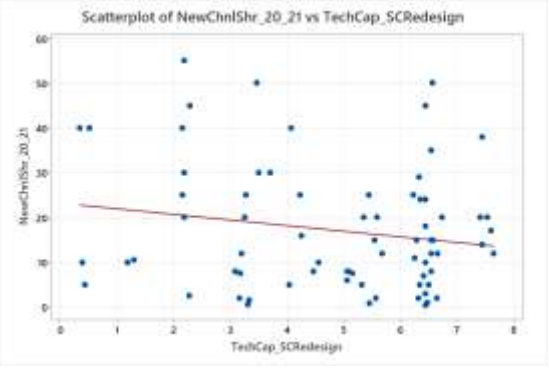

Scatterplot of NewChnlShr_20_21 vs RetailStrat_Returns
NewChnlShr_20_21
RetailStrat_Returns

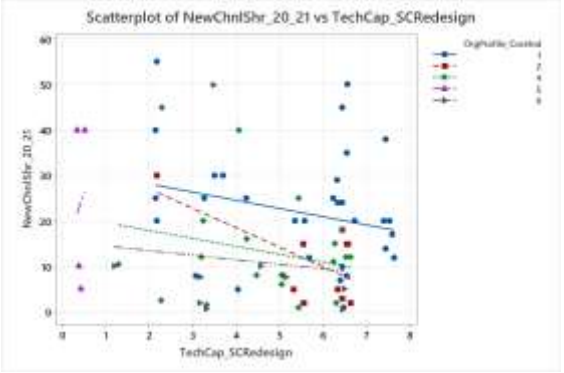

Scatterplot of NewChnlShr_20_21 vs RetailStrat_JtBizPlng
NewChnlShr_20_21
RetailStrat_JtBizPlng

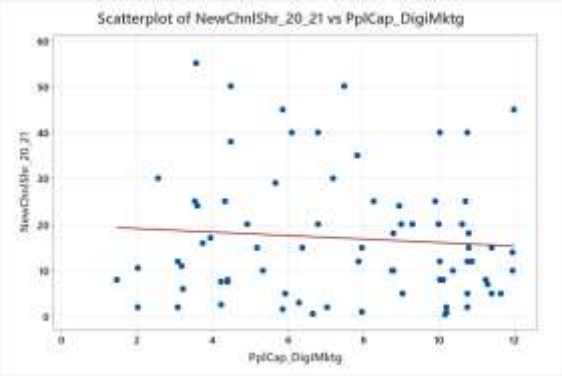

Scatterplot of NewChnlShr_20_21 vs RetailStrat_JtBizPlng
NewChnlShr_20_21
RetailStrat_JtBizPlng

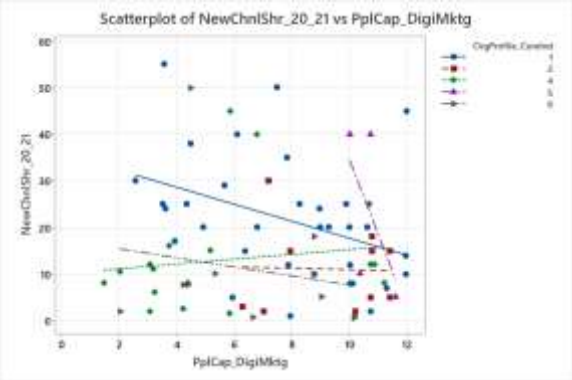

Scatterplot of NewChnlShr_20_21 vs TechCap_Omni
NewChnlShr_20_21
TechCap_Omni

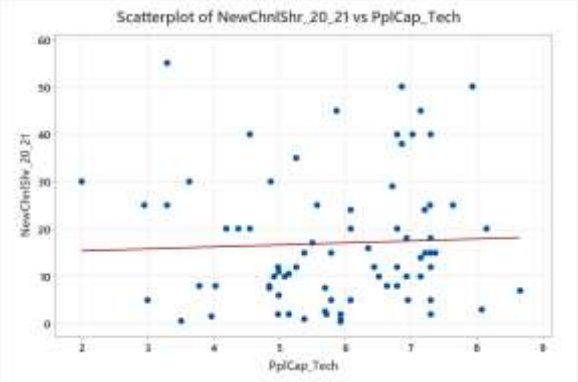

Scatterplot of NewChnlShr_20_21 vs TechCap_Omni
NewChnlShr_20_21
TechCap_Omni

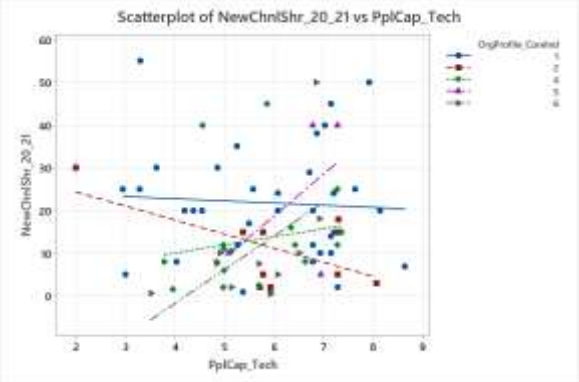

Scatterplot of NewChnlShr_20_21 vs TechCap_SCRedesign
NewChnlShr_20_21
TechCap_SCRedesign

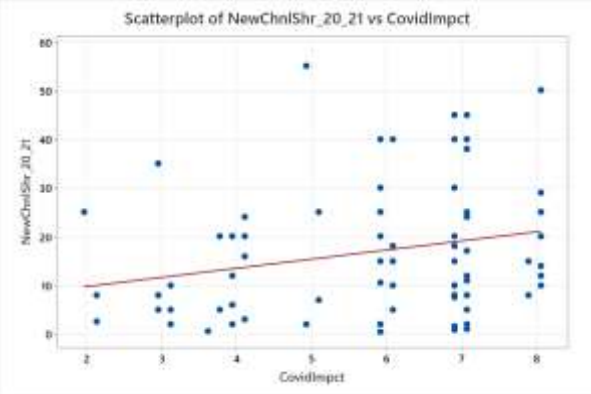

Scatterplot of NewChnlShr_20_21 vs TechCap_SCRedesign
NewChnlShr_20_21
TechCap_SCRedesign

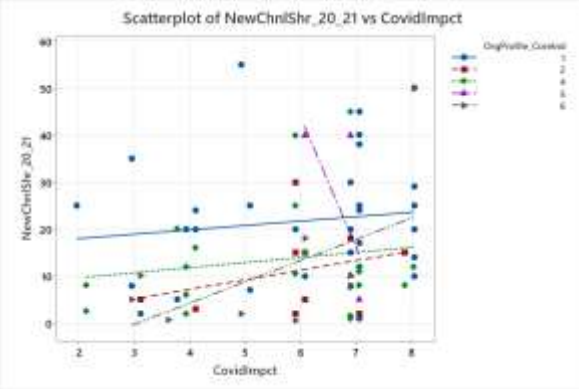

Scatterplot of NewChnlShr_20_21 vs PplCap_DigiMktg
NewChnlShr_20_21
PplCap_DigiMktg


Scatterplot of NewChnlShr_20_21 vs PplCap_DigiMktg
NewChnlShr_20_21
PplCap_DigiMktg


Scatterplot of NewChnlShr_20_21 vs PplCap_Tech
NewChnlShr_20_21
PplCap_Tech


Scatterplot of NewChnlShr_20_21 vs PplCap_Tech
NewChnlShr_20_21
PplCap_Tech


Scatterplot of NewChnlShr_20_21 vs CovidImpct
NewChnlShr_20_21
CovidImpct


Scatterplot of NewChnlShr_20_21 vs CovidImpct
NewChnlShr_20_21
CovidImpct

Appendix V: Factor Correlations

	TopMgt_Profile	TopMgt_DigFocus	DigInvstmnts	DigiSBU	CrossChnl	OnlineChnl	OmniPrep	Returns	JtBizPlng	TechCap_Omni	SCRedesign	DigiMktg	PplCap_Tech
TopMgt_DigFocus	0.541												
StratIntent_DigInvstmnts	0.518	0.546											
StratIntent_DigiSBU	-0.378	-0.535	-0.46										
ProdPrtStrat_CrossChnl	0.171	0.181	0.498	-0.119									
ProdPrtStrat_OnlineChnl	-0.378	-0.516	-0.591	0.394	-0.234								
RetailStrat_OmniPrep	0.508	0.426	0.487	-0.453	0.308	-0.415							
RetailStrat_Returns	-0.086	0.052	0.228	0.111	0.294	-0.166	0.097						
RetailStrat_JtBizPlng	0.386	0.542	0.347	-0.366	0.207	-0.38	0.377	0.096					
TechCap_Omni	0.451	0.319	0.482	-0.372	0.202	-0.367	0.657	0.191	0.241				
TechCap_SCRedesign	0.257	0.159	0.607	-0.162	0.622	-0.266	0.366	0.375	0.16	0.531			
PplCap_DigiMktg	0.417	0.235	0.323	-0.343	0.119	-0.316	0.551	0.033	0.134	0.533	0.255		
PplCap_Tech	0.527	0.557	0.592	-0.492	0.237	-0.491	0.536	0.056	0.368	0.589	0.392	0.476	
CovidImpct	0.342	0.357	0.354	-0.246	0.162	-0.454	0.407	0.057	0.316	0.332	0.163	0.251	0.368

Appendix VI a: Regression Model 1 (Linear, Overall Industry)

FINALDATAOFFLINEFIRST

DV NewChnlShr_20_21 versus TopMgt_Profile, ProdPrtStrat_OnlineChnl, RetailStrat_JtBizPlng, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, TopMgmtPriority_DigSpec, OrgProfile_CoreInd

Method

Categorical coding	predictor	(1, 0)
Rows unused		49

Regression Equation

OrgProfile_CoreInd

1 NewChnlShr_20_21 = 16.42 - 4.68 TopMgt_Profile - 1.926 ProdPrtStrat_OnlineChnl + 1.673 RetailStrat_JtBizPlng - 3.17 TechCap_SCRedesign - 1.666 PplCap_DigiMktg + 2.98 PplCap_Tech + 5.96 TopMgmtPriority_DigSpec

2 NewChnlShr_20_21 = 12.6 - 4.68 TopMgt_Profile - 1.926 ProdPrtStrat_OnlineChnl + 1.673 RetailStrat_JtBizPlng - 3.17 TechCap_SCRedesign - 1.666 PplCap_DigiMktg + 2.98 PplCap_Tech + 5.96 TopMgmtPriority_DigSpec

4 NewChnlShr_20_21 = 8.63 - 4.68 TopMgt_Profile - 1.926 ProdPrtStrat_OnlineChnl + 1.673 RetailStrat_JtBizPlng - 3.17 TechCap_SCRedesign - 1.666 PplCap_DigiMktg + 2.98 PplCap_Tech + 5.96 TopMgmtPriority_DigSpec

5 NewChnlShr_20_21 = 7.9 - 4.68 TopMgt_Profile - 1.926 ProdPrtStrat_OnlineChnl + 1.673 RetailStrat_JtBizPlng - 3.17 TechCap_SCRedesign - 1.666 PplCap_DigiMktg + 2.98 PplCap_Tech + 5.96 TopMgmtPriority_DigSpec

6 NewChnlShr_20_21 = 5.34 - 4.68 TopMgt_Profile - 1.926 ProdPrtStrat_OnlineChnl + 1.673 RetailStrat_JtBizPlng - 3.17 TechCap_SCRedesign - 1.666 PplCap_DigiMktg + 2.98 PplCap_Tech + 5.96 TopMgmtPriority_DigSpec

Coefficients

Term	Coef	SE Coef	95% CI	T-Value	P-Value	VIF
Constant	16.42	9.83	(-3.24, 36.08)	1.67	0.100	
OrgProfile_CoreInd						
2	-3.85	4.68	(-13.20, 5.50)	-0.82	0.413	1.22
4	-7.79	3.72	(-15.22, -0.36)	-2.10	0.040	1.47
5	-8.50	8.89	(-26.28, 9.28)	-0.96	0.343	2.34
6	-11.08	4.39	(-19.85, -2.31)	-2.53	0.014	1.30
TopMgt_Profile	-4.68	1.75	(-8.18, -1.17)	-2.67	0.010	4.88
ProdPrtStrat_OnlineChnl	-1.926	0.990	(-3.905, 0.053)	-1.95	0.056	1.65
RetailStrat_JtBizPlng	1.673	0.906	(-0.139, 3.484)	1.85	0.070	1.39
TechCap_SCRedesign	-3.17	1.04	(-5.25, -1.09)	-3.05	0.003	2.48
PplCap_DigiMktg	-1.666	0.615	(-2.895, -0.436)	-2.71	0.009	2.03
PplCap_Tech	2.98	1.47	(0.04, 5.93)	2.03	0.047	2.42
TopMgmtPriority_DigSpec	5.96	2.21	(1.54, 10.37)	2.70	0.009	4.95

Model Summary

S	R-sq	R-sq(adj)	PRESS	R-sq(pred)	AICc	BIC
11.3179	41.57%	31.20%	11538.1	15.11%	588.08	611.97

Analysis of Variance

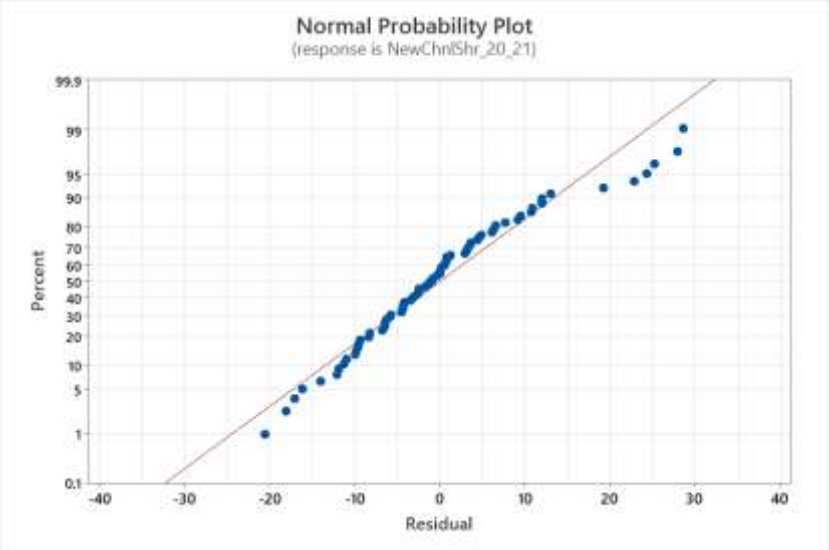
Source	DF	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Regression	11	5650.1	41.57%	5650.1	513.6	4.01	0.000
OrgProfile_CoreInd	4	1693.4	12.46%	1031.5	257.9	2.01	0.104
TopMgt_Profile	1	33.7	0.25%	912.7	912.7	7.13	0.010
ProdPrtStrat_OnlineChnl	1	433.5	3.19%	484.7	484.7	3.78	0.056
RetailStrat_JtBizPlng	1	631.0	4.64%	436.4	436.4	3.41	0.070
TechCap_SCRedesign	1	1060.5	7.80%	1190.3	1190.3	9.29	0.003
PplCap_DigiMktg	1	350.9	2.58%	938.9	938.9	7.33	0.009
PplCap_Tech	1	514.7	3.79%	527.0	527.0	4.11	0.047
TopMgmtPriority_DigSpec	1	932.5	6.86%	932.5	932.5	7.28	0.009
Error	62	7941.8	58.43%	7941.8	128.1		
Total	73	13592.0	100.00%				

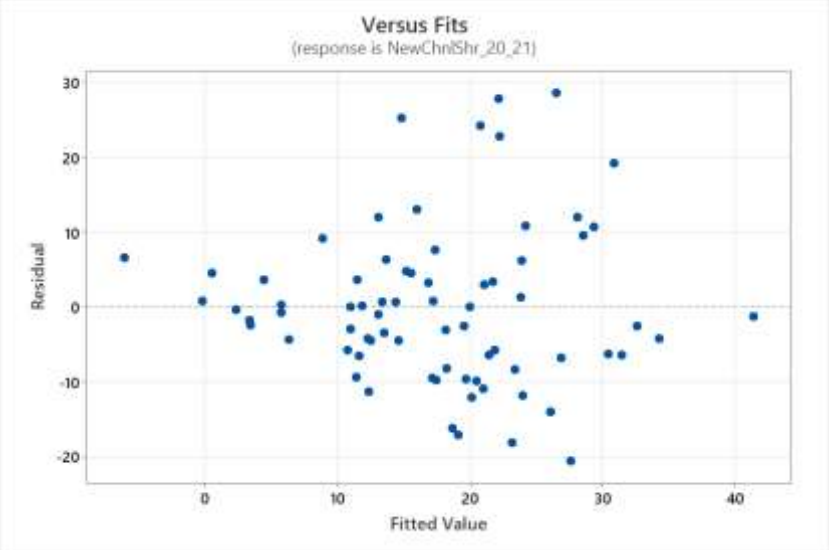
Fits and Diagnostics for Unusual Observations

Obs	NewChnlShr_20_21	Fit	SE Fit	95% CI	Resid	Std Resid	Del Resid	HI
12	50.00	22.14	5.90	(10.36, 33.92)	27.86	2.88	3.07	0.271307
21	45.00	22.16	3.16	(15.83, 28.49)	22.84	2.10	2.16	0.078172
45	45.00	20.76	4.27	(12.22, 29.29)	24.24	2.31	2.40	0.142395
48	40.00	14.77	4.29	(6.19, 23.35)	25.23	2.41	2.51	0.143883
100	55.00	26.47	4.49	(17.50, 35.44)	28.53	2.75	2.91	0.157103

Obs	Cook's D	DFITS	
12	0.26	1.87561	R
21	0.03	0.62998	R
45	0.07	0.97805	R
48	0.08	1.02892	R
100	0.12	1.25445	R

R Large residual


Normal Probability Plot
(response is NewChnlShr_20_21)
Percent
99.9
99
95
90
80
70
60
50
40
30
20
10
5
1
0.1
-40
-30
-20
-10
0
10
20
30
40
Residual


Versus Fits
(response is NewChnlShr_20_21)
Residual
30
20
10
0
-10
-20
0
10
20
30
40
Fitted Value

Appendix VI b: Regression Model 2 (Linear, Overall Industry)

FINALDATAOFFLINEFIRST

Alternate DV CovidImpct_DigShrInc versus TopMgt_Profile, TopMgt_DigFocus, StratIntent_DigInvstmnts, StratIntent_DigiSBU, ProdPrtStrat_CrossChnl, ProdPrtStrat_OnlineChnl, RetailStrat_OmniPrep, RetailStrat_Returns, RetailStrat_JtBizPlng, TechCap_Omni, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, CovidImpct, TopMgmtPriority_DigSpec, OrgProfile_CoreInd

Method

Categorical coding	predictor	(1, 0)
Rows unused	7	

Stepwise Selection of Terms

Candidate terms: TopMgt_Profile, TopMgt_DigFocus, StratIntent_DigInvstmnts, StratIntent_DigiSBU, ProdPrtStrat_CrossChnl, ProdPrtStrat_OnlineChnl, RetailStrat_OmniPrep, RetailStrat_Returns, RetailStrat_JtBizPlng, TechCap_Omni, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, CovidImpct, TopMgmtPriority_DigSpec, OrgProfile_CoreInd

	-----Step 1-----		-----Step 2-----		------Step 3-----	
	Coef	**P**	**Coef**	**P**	**Coef**	**P**
Constant	4.8605		3.828		3.944	
OrgProfile_CoreInd	-0.798	0.000	-0.694	0.000	-0.733	0.000
TopMgt_DigFocus			0.0998	0.001	0.1440	0.000
StratIntent_DigInvstmnts					-0.0603	0.027
RetailStrat_Returns						
S	0.501898		0.479905		0.471354	
R-sq	27.92%		34.69%		37.57%	
R-sq(adj)	25.33%		31.73%		34.14%	
Mallows' Cp	18.10		8.44		5.48	
AICc	176.92		167.74		164.82	
BIC	192.67		185.98		185.50	

	------Step 4-----	
	Coef	**P**
Constant	3.780	
OrgProfile_CoreInd	-0.684	0.000
TopMgt_DigFocus	0.1417	0.000
StratIntent_DigInvstmnts	-0.0609	0.024
RetailStrat_Returns	0.0451	0.067
S	0.466218	
R-sq	39.49%	
R-sq(adj)	35.56%	
Mallows' Cp	4.19	
AICc	163.56	
BIC	186.65	

α to enter = 0.15, α to remove = 0.15
If a term has more than one coefficient, the largest in magnitude is shown.

Regression Equation

CovidImpct_DigShrInc = 3.780 + 0.1417 TopMgt_DigFocus
- 0.0609 StratIntent_DigInvstmnts
+ 0.0451 RetailStrat_Returns + 0.0 OrgProfile_CoreInd_1
- 0.684 OrgProfile_CoreInd_2 - 0.101 OrgProfile_CoreInd_4
- 0.536 OrgProfile_CoreInd_5 - 0.644 OrgProfile_CoreInd_6

Coefficients

Term	Coef	SE Coef	95% CI	T-Value	P-Value	VIF
Constant	3.780	0.322	(3.142, 4.419)	11.74	0.000	
TopMgt_DigFocus	0.1417	0.0347	(0.0729, 0.2106)	4.08	0.000	1.67
StratIntent_DigInvstmnts	-0.0609	0.0266	(-0.1136, -0.0082)	-2.29	0.024	1.77
RetailStrat_Returns	0.0451	0.0244	(-0.0033, 0.0935)	1.85	0.067	1.27
OrgProfile_CoreInd						
1	0.000000	0.000000	(0.000000, 0.000000)	*	*	*
2	-0.684	0.158	(-0.997, -0.372)	-4.34	0.000	1.14
4	-0.101	0.103	(-0.304, 0.103)	-0.98	0.328	1.29
5	-0.536	0.269	(-1.069, -0.004)	-2.00	0.048	1.59
6	-0.644	0.145	(-0.930, -0.357)	-4.45	0.000	1.33

Model Summary

S	R-sq	R-sq(adj)	PRESS	R-sq(pred)	AICc	BIC
0.466218	39.49%	35.56%	28.3749	26.86%	163.56	186.65

Analysis of Variance

Source	DF	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Regression	7	15.3183	39.49%	15.3183	2.1883	10.07	0.000
TopMgt_DigFocus	1	5.2007	13.41%	3.6195	3.6195	16.65	0.000
StratIntent_DigInvstmnts	1	0.5368	1.38%	1.1398	1.1398	5.24	0.024
RetailStrat_Returns	1	1.6732	4.31%	0.7422	0.7422	3.41	0.067
OrgProfile_CoreInd	4	7.9076	20.38%	7.9076	1.9769	9.10	0.000
Error	108	23.4748	60.51%	23.4748	0.2174		
Total	115	38.7931	100.00%				

Fits and Diagnostics for Unusual Observations

Obs	CovidImpct_DigShrInc	Fit	SE Fit	95% CI	Resid	Std Resid	Del Resid
19	3.000	4.068	0.158	(3.754, 4.382)	-1.068	-2.44	-2.49
27	4.000	4.249	0.214	(3.825, 4.674)	-0.249	-0.60	-0.60
32	2.000	3.882	0.170	(3.546, 4.218)	-1.882	-4.33	-4.75
43	3.000	3.934	0.126	(3.684, 4.183)	-0.934	-2.08	-2.11
51	4.000	4.956	0.084	(4.790, 5.121)	-0.956	-2.08	-2.12
55	4.000	4.978	0.112	(4.755, 5.200)	-0.978	-2.16	-2.20
59	5.000	4.601	0.234	(4.138, 5.064)	0.399	0.99	0.99
85	5.000	4.045	0.144	(3.759, 4.331)	0.955	2.15	2.19

Obs	HI	Cook's D	DFITS	
19	0.115290	0.10	-0.90038	R
27	0.211006	0.01	-0.31063	X
32	0.132343	0.36	-1.85376	R
43	0.073044	0.04	-0.59309	R
51	0.032201	0.02	-0.38611	R
55	0.058109	0.04	-0.54613	R
59	0.251036	0.04	0.57210	X
85	0.096032	0.06	0.71445	R

R *Large* *residual*
X Unusual X

Appendix VI c: Regression Model 3 (Logistic, Overall Industry)

FINALDATAOFFLINEFIRST

Logistic Regression of Derived DV Competitive Success versus TopMgt_Profile, TopMgt_DigFocus, StratIntent_DigInvstmnts, StratIntent_DigiSBU, ProdPrtStrat_CrossChnl, ProdPrtStrat_OnlineChnl, RetailStrat_OmniPrep, RetailStrat_Returns, RetailStrat_JtBizPlng, TechCap_Omni, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, CovidImpct, TopMgmtPriority_DigSpec, OrgProfile_CoreInd

Method

Link function	Logit
Categorical predictor coding	(1, 0)
Rows used	73
Rows unused	50

Stepwise Selection of Terms

Candidate terms: TopMgt_Profile, TopMgt_DigFocus, StratIntent_DigInvstmnts, StratIntent_DigiSBU, ProdPrtStrat_CrossChnl, ProdPrtStrat_OnlineChnl, RetailStrat_OmniPrep, RetailStrat_Returns, RetailStrat_JtBizPlng, TechCap_Omni, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, CovidImpct, TopMgmtPriority_DigSpec, OrgProfile_CoreInd

	----Step 1----		----Step 2----		----Step 3----	
	Coef	**P**	**Coef**	**P**	**Coef**	**P**
Constant	1.540		-0.002		-1.75	
OrgProfile_CoreInd	-2.927	0.016	-3.187	0.011	-3.100	0.014
RetailStrat_Returns			0.403	0.020	0.427	0.017
CovidImpct					0.291	0.108
TopMgmtPriority_DigSpec						
StratIntent_DigInvstmnts						
PplCap_Tech						
TopMgt_Profile						
Deviance R-Sq	16.12%		22.48%		25.34%	
Deviance R-Sq(adj)	11.86%		17.15%		18.95%	
AIC	88.70		84.74		84.05	
AICc	89.60		86.01		85.77	
BIC	100.15		98.48		100.08	
Area Under ROC Curve	0.7412		0.7867		0.7975	

	----Step 4----		----Step 5----		----Step 6----	
	Coef	**P**	**Coef**	**P**	**Coef**	**P**
Constant	-0.03		-1.65		-1.28	
OrgProfile_CoreInd	-3.36	0.008	-3.39	0.008	3.55	0.007
RetailStrat_Returns	0.432	0.019	0.420	0.025	0.470	0.019
CovidImpct	0.433	0.035	0.357	0.088	0.392	0.071
TopMgmtPriority_DigSpec	-0.457	0.081	-0.631	0.031	-0.458	0.151
StratIntent_DigInvstmnts			0.330	0.094	0.563	0.024
PplCap_Tech					-0.656	0.069
TopMgt_Profile						
Deviance R-Sq	28.76%		31.71%		35.63%	
Deviance R-Sq(adj)	21.30%		23.18%		26.04%	
AIC	82.84		82.08		80.40	

AICc	85.09	84.93	83.94
BIC	101.16	102.69	103.30
Area Under ROC Curve	0.8350	0.8650	0.8858

	----Step 7----		----Step 8----	
	Coef	**P**	**Coef**	**P**
Constant	-2.16		0.28	
OrgProfile_CoreInd	3.70	0.007	4.32	0.006
RetailStrat_Returns	0.486	0.014	0.499	0.016
CovidImpct	0.338	0.110	0.452	0.052
TopMgmtPriority_DigSpec				
StratIntent_DigInvstmnts	0.504	0.039	0.688	0.011
PplCap_Tech	-0.808	0.018	-0.696	0.054
TopMgt_Profile			-0.571	0.066

Deviance R-Sq	33.38%	37.32%
Deviance R-Sq(adj)	24.85%	27.73%
AIC	80.51	78.81
AICc	83.36	82.36
BIC	101.12	101.71
Area Under ROC Curve	0.8725	0.8933

α to enter = 0.15, α to remove = 0.15
If a term has more than one coefficient, the largest in magnitude is shown.

Response Information

Variable	Value	Count
NewChanSuccess	1	48 (Event)
	0	25
	Total	73

Regression Equation

P(1) = exp(Y')/(1 + exp(Y'))

OrgProfile_CoreInd

1 Y' = 0.2841 - 0.5714 TopMgt_Profile + 0.6879 StratIntent_DigInvstmnts + 0.4992 RetailStrat_Returns - 0.6956 PplCap_Tech + 0.4516 CovidImpct

2 Y' = -0.9857 - 0.5714 TopMgt_Profile + 0.6879 StratIntent_DigInvstmnts + 0.4992 RetailStrat_Returns - 0.6956 PplCap_Tech + 0.4516 CovidImpct

4 Y' = -1.653 - 0.5714 TopMgt_Profile + 0.6879 StratIntent_DigInvstmnts + 0.4992 RetailStrat_Returns - 0.6956 PplCap_Tech + 0.4516 CovidImpct

5 Y' = 4.603 - 0.5714 TopMgt_Profile + 0.6879 StratIntent_DigInvstmnts + 0.4992 RetailStrat_Returns - 0.6956 PplCap_Tech + 0.4516 CovidImpct

6 Y' = -3.056 - 0.5714 TopMgt_Profile + 0.6879 StratIntent_DigInvstmnts + 0.4992 RetailStrat_Returns - 0.6956 PplCap_Tech + 0.4516 CovidImpct

Coefficients

Term	Coef	SE Coef	Z-Value	P-Value	VIF
Constant	0.28	2.50	0.11	0.909	

TopMgt_Profile	-0.571	0.311	-1.84	0.066	1.98
StratIntent_DigInvstmnts	0.688	0.269	2.55	0.011	2.99
RetailStrat_Returns	0.499	0.207	2.41	0.016	1.62
PplCap_Tech	-0.696	0.361	-1.93	0.054	2.04
CovidImpct	0.452	0.232	1.95	0.052	1.39
OrgProfile_CoreInd					
1	0.000000	0.000000	*	*	*
2	-1.27	1.10	-1.15	0.248	1.27
4	-1.937	0.882	-2.20	0.028	1.35
5	4.32	2.08	2.08	0.038	2.40
6	-3.34	1.09	-3.08	0.002	1.34

Odds Ratios for Continuous Predictors

	Odds Ratio	95% CI
TopMgt_Profile	0.5647	(0.3070, 1.0388)
StratIntent_DigInvstmnts	1.9895	(1.1733, 3.3735)
RetailStrat_Returns	1.6475	(1.0983, 2.4712)
PplCap_Tech	0.4988	(0.2460, 1.0113)
CovidImpct	1.5708	(0.9968, 2.4752)

Odds Ratios for Categorical Predictors

Level A	Level B	Odds Ratio	95% CI
OrgProfile_CoreInd			
2	1	0.2809	(0.0325, 2.4258)
4	1	0.1441	(0.0256, 0.8109)
5	1	75.0771	(1.2828, 4393.8267)
6	1	0.0354	(0.0042, 0.2977)
4	2	0.5129	(0.0510, 5.1600)
5	2	267.2794	(2.2323, 32001.7956)
6	2	0.1261	(0.0096, 1.6600)
5	4	521.1325	(6.5378, 41540.1271)
6	4	0.2459	(0.0273, 2.2129)
6	5	0.0005	(0.0000, 0.0544)

Odds ratio for level A relative to level B

Model Summary

Deviance R-Sq	Deviance R-Sq(adj)	AIC	AICc	BIC	Area Under ROC Curve
37.32%	27.73%	78.81	82.36	101.71	0.8933

Goodness-of-Fit Tests

Test	DF	Chi-Square	P-Value
Deviance	63	58.81	0.626
Pearson	63	78.47	0.090
Hosmer-Lemeshow	8	13.15	0.107

Analysis of Variance

Wald Test

Source	DF	Chi-Square	P-Value
Regression	9	18.26	0.032
TopMgt_Profile	1	3.38	0.066
StratIntent_DigInvstmnts	1	6.52	0.011
RetailStrat_Returns	1	5.82	0.016
PplCap_Tech	1	3.72	0.054
CovidImpct	1	3.79	0.052
OrgProfile_CoreInd	4	14.43	0.006

Fits and Diagnostics for Unusual Observations

Obs	Observed Probability	Fit	Resid	Std Resid		
10	0.000	0.630	-1.410	-2.03	R	X
12	1.000	0.048	2.467	2.58	R	
26	0.000	0.948	-2.434	-2.47	R	
42	1.000	0.111	2.096	2.19	R	
44	0.000	0.454	-1.101	-1.48		X

R *Large* *residual*
X Unusual X

Appendix VI d: Regression Model 4 (Linear, Fashion Industry Segment)

FASHIONONLY

Regression Analysis for Fashion Industry Subset data: NewChnlShr_20_21 versus TopMgt_Profile, TopMgt_DigFocus, StratIntent_DigInvstmnts, StratIntent_DigiSBU, ProdPrtStrat_CrossChnl, ProdPrtStrat_OnlineChnl, RetailStrat_OmniPrep, RetailStrat_Returns, RetailStrat_JtBizPlng, TechCap_Omni, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, CovidImpct

Method

Rows unused 11

Stepwise Selection of Terms

Candidate terms: TopMgt_Profile, TopMgt_DigFocus, StratIntent_DigInvstmnts, StratIntent_DigiSBU, ProdPrtStrat_CrossChnl, ProdPrtStrat_OnlineChnl, RetailStrat_OmniPrep, RetailStrat_Returns, RetailStrat_JtBizPlng, TechCap_Omni, TechCap_SCRedesign, PplCap_DigiMktg, PplCap_Tech, CovidImpct

	-----Step 1----		-----Step 2----		-----Step 3----	
	Coef	**P**	**Coef**	**P**	**Coef**	**P**
Constant	35.91		19.4		29.8	
PplCap_DigiMktg	-1.824	0.026	-1.836	0.020	-1.323	0.091
RetailStrat_JtBizPlng			2.17	0.066	2.76	0.020
ProdPrtStrat_CrossChnl					-2.25	0.052
PplCap_Tech						
TechCap_Omni						
CovidImpct						
S	12.4067		11.9261		11.3706	
R-sq	14.60%		23.55%		32.75%	
R-sq(adj)	11.93%		18.62%		26.02%	
Mallows' Cp	11.10		8.79		6.37	
AICc	272.47		271.28		269.69	
BIC	276.25		276.01		275.17	

	-----Step 4----		-----Step 5----		-----Step 6----	
	Coef	**P**	**Coef**	**P**	**Coef**	**P**
Constant	29.52		35.6		31.7	
PplCap_DigiMktg	-2.272	0.010	-1.996	0.018	-1.579	0.060
RetailStrat_JtBizPlng	2.35	0.036	1.92	0.076	1.78	0.089
ProdPrtStrat_CrossChnl	-3.76	0.005	-3.60	0.005	-4.17	0.002
PplCap_Tech	3.95	0.030	5.82	0.005	5.40	0.007
TechCap_Omni			-2.33	0.060	-2.78	0.025
CovidImpct					2.05	0.089
S	10.6449		10.1573		9.79462	
R-sq	43.02%		49.91%		55.09%	
R-sq(adj)	35.17%		40.97%		45.11%	
Mallows' Cp	3.42		2.11		1.61	
AICc	267.02		265.83		265.57	
BIC	273.06		272.21		272.03	

α to enter = 0.15, α to remove = 0.15

Regression Equation

NewChnlShr_20_21 = 31.7 - 4.17 ProdPrtStrat_CrossChnl + 1.78 RetailStrat_JtBizPlng
- 2.78 TechCap_Omni - 1.579 PplCap_DigiMktg + 5.40 PplCap_Tech
+ 2.05 CovidImpct

Coefficients

Term	Coef	SE Coef	95% CI	T-Value	P-Value	VIF
Constant	31.7	10.5	(10.3, 53.2)	3.03	0.005	
ProdPrtStrat_CrossChnl	-4.17	1.18	(-6.60, -1.74)	-3.52	0.002	1.83
RetailStrat_JtBizPlng	1.78	1.01	(-0.29, 3.85)	1.76	0.089	1.16
TechCap_Omni	-2.78	1.17	(-5.18, -0.37)	-2.37	0.025	2.19
PplCap_DigiMktg	-1.579	0.804	(-3.229, 0.071)	-1.96	0.060	1.71
PplCap_Tech	5.40	1.85	(1.60, 9.20)	2.91	0.007	3.04
CovidImpct	2.05	1.16	(-0.33, 4.43)	1.76	0.089	1.47

Model Summary

S	R-sq	R-sq(adj)	PRESS	R-sq(pred)	AICc	BIC
9.79462	55.09%	45.11%	4222.62	26.79%	265.57	272.03

Analysis of Variance

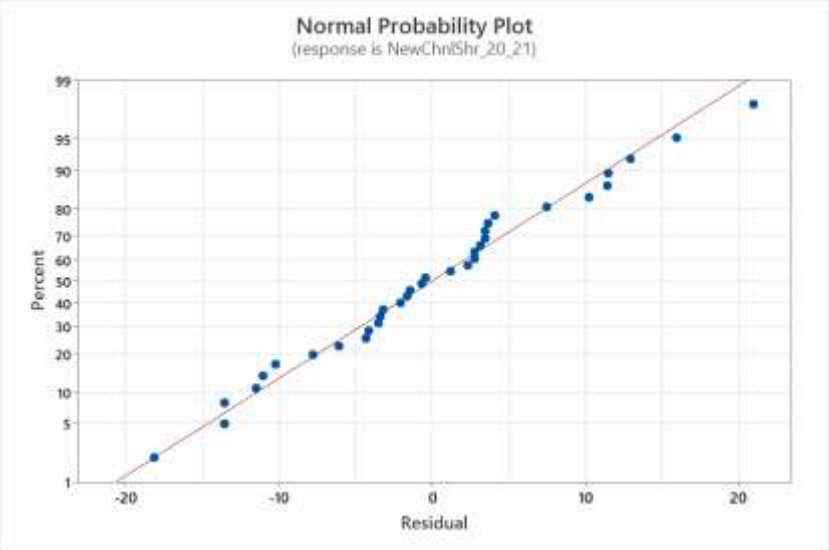
Source	DF	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Regression	6	3177.3	55.09%	3177.3	529.55	5.52	0.001
ProdPrtStrat_CrossChnl	1	623.2	10.80%	1191.3	1191.35	12.42	0.002
RetailStrat_JtBizPlng	1	872.0	15.12%	297.8	297.84	3.10	0.089
TechCap_Omni	1	170.2	2.95%	539.5	539.53	5.62	0.025
PplCap_DigiMktg	1	249.1	4.32%	369.9	369.92	3.86	0.060
PplCap_Tech	1	964.3	16.72%	814.8	814.85	8.49	0.007
CovidImpct	1	298.6	5.18%	298.6	298.56	3.11	0.089
Error	27	2590.2	44.91%	2590.2	95.93		
Total	33	5767.6	100.00%				

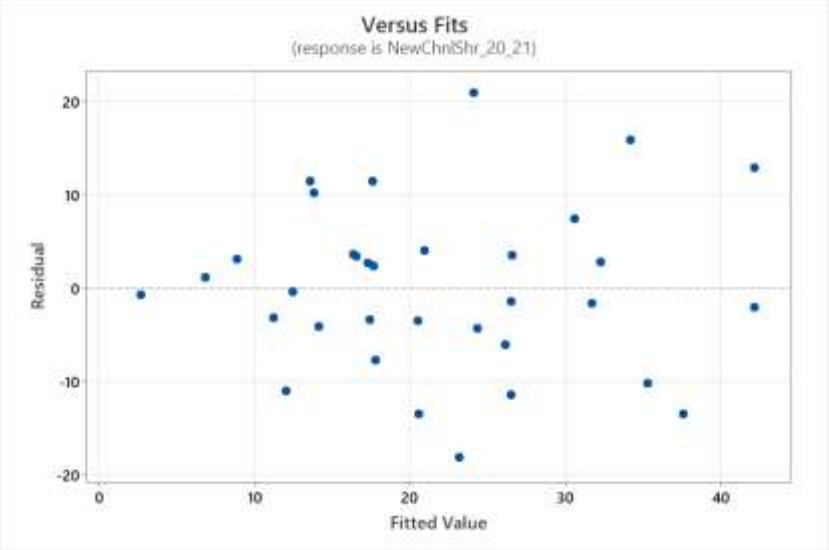
Fits and Diagnostics for Unusual Observations

Obs	NewChnlShr_20_21	Fit	SE Fit	95% CI	Resid	Std Resid	Del Resid	HI
9	45.00	24.10	4.06	(15.77, 32.43)	20.90	2.34	2.58	0.171738
45	5.00	23.12	3.92	(15.07, 31.17)	-18.12	-2.02	-2.15	0.160375

Obs	Cook's D	DFITS	
9	0.16	1.17414	R
45	0.11	-0.93959	R

R Large residual


Normal Probability Plot
(response is NewChnlShr_20_21)
Percent
99
95
90
80
70
60
50
40
30
20
10
5
1
-20
-10
0
10
20
Residual


Versus Fits
(response is NewChnlShr_20_21)
Residual
20
10
0
-10
-20
0
10
20
30
40
Fitted Value