



Master's degree thesis

LOG950 Logistics

Title: Omni Channel: New Business Models and New Channels

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Number of pages including this page: 101

Molde, 28 May, 2020



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Preface

This master thesis is the last assignment in my master degree at Molde University College-Specialized University in Logistics and my studies of Logistics will ended with it. This dissertation was conducted between November 2019 and June 2020. It covers some of the topics that we have studied during the past two years. There has been challenges and frustration during the thesis, however, this research has been both knowledgeable and rewarding. This thesis will hopefully contemplate my hard work and will represent me as a student.

The thesis is mostly based on secondary data as collecting the relevant primary data was difficult because of the Covid-19 and the planned interviews has not been conducted. So, a more generalized approach based on secondary data has been implemented while conducting this research. The framework of the thesis has been changed from a narrow down structure to a more generalized approach. The initial plan for the series of interviews was with four different companies but due to the current situation, those interviews couldn't conducted. Finally, after mutual understanding with the supervisor Per Engelseth, the one and only interview with Mr. Steffen Larvoll is conducted who is the Market Development Manager at DRIW and responsible for designing omni-channel implementation plan for those client companies of DRIW with whom the four interviews were planned. Interview conducted with him, used as a primary data source for the empirical findings chapter of this dissertation.

Furthermore, I would like to express my sincere gratitude and appreciation to my Supervisor Per Engelseth who has help me allot during this thesis with his valuable comments and recommendations. He has given me constructive guidance throughout the thesis and be flexible with his time and always promptly answers to my questions, either through mail or face-to-face-communication. I would also like to be thankful to Steffen Larvoll, who give me an insight about this topic and I has been given an opportunity to write on it. His needy help and the interview conducted with him give me a broad view of the different essential logistics elements to be considered for a successful omni-channel implementation.

Lastly, I would also likely to present my utmost gratitude to the Dean of Molde University College "Svein Bråthen" who give me a chance to study at Molde University College. Additionally, I would also thanks and acknowledge my family members, friends and others' whose encouragement and support help me throughout this thesis.

Abstract

The traditional business practices which were based on a clear division between the brick-and-mortar and non-brick-and-mortar stores, are now disrupted by the development of the e-commerce-based retailers as well as by the emerging of additional channels. This as result a new concept has been emerged called omni-channel. This new retailing strategy propose that the retailers should optimize their business practices by integrating different channels as well as to adopt such necessary capabilities which could fulfil the customer orders from any-where and through any channel i.e., physical stores, online channel, distribution centers, click-and-collect points or a drop-shipping from a third part supplier etc., which will bring operational complexities and challenges for the retail supply chain. In the light of the emergence of such fulfilment strategies, it is essential for the retailers to not only consider the financial returns but to focus and strategically design their upstream logistic as it could potentially impact their overall business operations. Furthermore, omni-channel will allow the retailers to offer new fulfillment services i.e., cross-channels returns or in store pick-up which ultimately needed to develop a new supply chain framework in order to fulfill those services conveniently and efficiently. Thus, the purpose of this dissertation is to investigate and find the consequences the supply chain may have in an omni-channel fulfillment. This dissertation will also present a holistic understanding of the importance and impacts of the omni-channel strategy on the retail market. This will be done by ultimately selecting and reviewing the three echelons such as retailer, customer and supplier while investigating omni-channel retailing strategy and its impact on all these three.

Keywords

Omni Channel, Supply chain challenges in omni-channel, Supply chain optimization, Order fulfillment, Channel selection, Lead time, Customer satisfaction, Cost related to logistics, Channels integration in omni-channel

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List of Abbreviations

GDP	Gross Domestic Product
QR	Quick Response Code
IT	Information Technology
ERP	Enterprise Resource Planning
RFID	Radio Frequency Identification
ASBCI	Association of Supplier to British Clothing Industry
MC	Multi-Channel
OC	Omni-Channel
B&M	Brick and Mortar
CEO	Chief Executive Officer
SMS	Short Message Service, mobile based text messages
HBR	Harvard Business Review
AIDA	Awareness, Interest, Desire and Action
COVID-19	A pandemic disease emerges from Wuhan, China
C&C	Click and Collect
DRIW	A company based in Oslo
FBA	Fulfillment by Amazon
KPI	Key Performance Indicators

Chapter 1: Introduction

In this chapter, a brief introduction about the omni-channel has been presented which is followed by the research objective and later-on proposed research questions are introduced. Additionally, a detail structure of the thesis with chapter names are also presented.

1.1 Research Background

From decades, retailers use multiple channels to reach their customers (Cao, 2014). Recently, the expansion of e-commerce brings a new trend of integrating these channels to enable a seamless shopping experience for customers (Piotrowicz & Cuthbertson, 2014). This new trend often referred to as Omni-channel (Brynjolfsson, et al., 2013) which includes a single logistics interface where order, inventory and returns are merged together. Omni channel is defined as, “*synergetic management of the numerous available channels and customer touch points in such a way that the customer experience across channels and the performance over channels is optimized*” (Verhoef, et al., 2015). These so-called touch points and available channels refer to communication points between the organizations (retailers) and the stakeholders (customers) (Jenkinson, 2007). Omni channel retailing evaluates these touch points and available channels in order to enhance the customer sales experience by integrating the advantages of the physical stores with the enhanced level of information provided by the online channels (Rigby, 2011). Omni-channel link and coordinate business practices by the help of technology throughout all the channels (Brynjolfsson, et al., 2013). Omni channel provides seamless and uniform view of a product, irrespective of a channel and enhance the customer experience while maintaining the brand value (Liebmann, 2013).

The Omni-channel landscape include the customer requirements and the value proposition which is continuously changing (Ishfaq, et al., 2016), while the competition demands the companies to focus on cutting logistic costs (Hubner, et al., 2016). At the same time, customers are expecting high product assortment, accessibility and flexible delivery and return options (Mahar, et al., 2014). Meanwhile, the customer also wants a shorter lead time for product delivery which puts pressure on the retailers to reduce the time gap between the receipt of order, picking, packing and finally shipping the product to the end customer

(Hübner, et al., 2015). To reduce the lead time and provide flexible delivery and return options, a new trend is emerging which shifts the physical distribution structure. This new trend with contrast to traditional centralized practices across industries (Abrahamsson, et al., 1998) drives Omni-channel retailer towards an increase degree of decentralized practices which are represented by a number of handling nodes (channels) in a omni-channel strategy. These nodes in a omni-channel particularly represented by physical stores, online shopping websites, mobile based shopping applications etc., which support order fulfillment, click and collect point and handle the return products (Cao, 2014; Ishfaq, et al., 2016; Colla & Lapoule, 2012).

Omni-channel retailing is the interaction with the customers by using variety of channels in order to fulfil customer demands. The interaction between a customer and a retailer in an omni-channel context has primarily been in three ways i.e., information flow, product flow and funds flow. To efficiently optimize these three ways of interaction, omni-channel needs a well-structured supply chain in essence to be more responsive to customer needs by exploiting the complementary strengths that online and offline channels brings together (Chopra, 2018). A decade ago, customers were primarily tended to go to physical stores to fulfil their needs, but today people prefer to buy online while sitting at home. People are likely to segment and select channel based on their specific needs. Customers tend to buy basic needs from brick and mortar stores while they prefer to use the online channels for more niche products. The hybrid characteristics of omni-channel, serve customer in both physical and virtual network, and is more effective than the traditional or multi-channel retail network approach (Chopra, 2018). The difference of omni-channel over multi-channel and traditional business doing is, it expands the retail touch points in order to reach the customers in all ways which also have a significant impact on a supply chain network. As a result, it is necessary for firms to be strategic when designing their supply chain to construct it in such a way which enhances the customer value (Chopra, 2018).

This thesis mostly focuses on the supply chain consequences the retailer faces and present the understanding of omni-channel strategy while focusing on logistics cost and customer value as well as omni-channel as a disruptive innovation. Final mile delivery and reverse logistics will also be evaluated. Furthermore, the technological impact on omni channel and customer buying behavior will also be analyzed. The thesis is mostly based on a general case study, given by the Steffen Larvoll, which likely represent the importance of omni-channel

and the supply chain role in an omni-channel fulfillment. The data which will enable me to disclose the case study, will mostly be the secondary data as the thesis is based on descriptive case study analyses.

1.2 Research Objective

In this thesis, the main focus is on the supply chain consequences that the retailers are facing in an omni-channel strategy. A little previous research also held and investigate those consequences in a minor way. Therefore, my research questions are developed in a way to attempt and investigate the omni-channel impact on retailer's business practices and the supply chain consequences the retailers may face while considering logistic cost and customer value. The omni-channel will also be analyzed as a disruptive innovation. Based on the Omni-channel growth, it is important to gain more insight about the impact of omni-channel on the retail market. This thesis could help and increase the company's' knowledge of the omni-channel and its impact on their business doing while managing their cost related to logistics while fulfilling customer orders. Furthermore, this research will also be beneficial in terms of omni-channel successful implementation while offering convenient shopping experience to the customers.

1.3 Research Questions

There is one main research question with two sub questions which are:

- 1. What consequences the Omni-Channel may have for the supply chain?**
 - 1.1. How the different channels have impact on logistic cost and customer value?**
 - 1.2. To what degree omni-channel is a disruptive innovation?**

1.4 Structure of the Thesis

Chapter 1 Introduction, research background, and the research question

Chapter 2 Present the theoretical framework for the research

Chapter 3 Research Methodology, research design, and data collection

Chapter 4 Omni-channel case description

Chapter 5 Empirical Findings

Chapter 6 Analysis

Chapter 7 Conclusion

Chapter 2: Literature Review

This section of literature review will present the understanding of the Omni-channel, definition of Omni-channel and its implications. Then it will present the literature regarding different retail channels; single channel, multi-channel and omni-channel. Next, it will describe the omni-channel supply chain challenges, motives and its impact on retailers who are going to implement the omni-channel strategy. lastly, it will describe the theoretical framework with-in customer value creation and disruptive innovation which will present the complexity of a change process.

Retailers are dynamic in nature and from the last two decades they are facing disruptive transformation, from the changing scenarios to new technology inventions. Availability of online retail channels i.e., online retailers such as Amazon, Walmart, Alibaba etc., and specifically the state of the mobile channels which transform the retail business strategies (Varhoef, et al., 2015). According to (Galipoğlu, et al., 2018), retailers are rapidly transforming from one channel to multi-channel and at last shift towards Omni-channel. (Saghiri, et al., 2017) argue that in omni-channel, the focal of the retailers is to integrate process and operation across different channels in the way to make sure the customer receives consistent and reliable services. In addition, (Mirsch, et al., 2016) also argue that the companies who are going to adopt the Omni-channel strategy, are considering factors such as contemporary multiple channel approach, infrastructure and technological development as well as the rapid change in the customer needs.

The term Omni-channel first presented by the practitioners to emphase on the new customer perspective that they should reach to the retailer in “all ways and in all locations” (Saghiri, et al., 2018). From the last few years, there has been a biggest disruption in a retail business for a generation. This disruption caused by a large degree of technological development and information system which enables customers to interact with the retailers conveniently as well as the retailers themselves to interact with the customers by the application of technology. This innovation gives an opportunity to retailers to create a supply chain which is highly responsive by enhancing the warehouse facilities as well as to optimizing the final mile delivery (Murfield, et al., 2017). This Omni-channel perspective resulted in a new customer’s perception which no longer view the e-commerce channels of a business as

separate channel which brings significant challenges for the traditional logistics and supply chain models. These challenges are caused by customers who are now start asking “why I cannot buy online and collect the product in physical store or delivered directly to home, or buy online and return goods to physical stores” (Saghiri, et al., 2018). This brings considerable challenges for logistics and supply chain managers as the customers now see the business as a single entity and wants to interact with the business across all the channels seamlessly and as we know, customers are always right! (Saghiri, et al., 2018).

These significant challenges resulted in a rapidly developing logistics model to accommodate this new paradigm. The traditional metrics of the supply chain model which are utilized within the traditional retail supply chain, proved insufficient which driven an increased focus on cost driver and an increased understanding of the “cost to serve” customers. The new supply chain approach with new processes and networks infrastructure, information system and organization structure had to be developed to enable the Omni-channel approach.

With invention of the new technological ways, the business practices are rapidly changing (Iyadurai, 2016). The traditional brick and mortar stores who are not adopt to the new business patterns of the current generation are facing threats of losing competitive advantage to the other retailers who are innovative and adopting current trends. There are number of ways which are introduced by the retailers to engage these technology savvy customers. The technological disruption also brings a shift in the customer buying behavior (Iyadurai, 2016). In addition, the retail industry is also going under a massive transformation and technology has a dominance which these traditional brick and mortar stores has already experienced. The agent of disruption is none other than the technology in our hands in the form of smartphones, tablets, and computers etc., which are changing the future of retailing (Iyadurai, 2016).

2.1 Different Touch Points and Retail channels

The rapid expansion with the additional retail channels bring an opportunity for the customers to engage with the retailer in a way they prefer to choose (Rangswamy & Bruggen, 2005). Channels are the touch points through which retailers reach their current and prospective customers. Today customer engage with a retailer in many ways. According to (Levy, et al., 2013), till recent, physical channels were the most stable and significant

sales channel for the retailers. Although physical channel still is an important channel but now, with the innovations in the technology, the marginal growth of the online channel is higher in comparison to physical channel (E-barometer, 2017). A retailer can setup and choose in a variety of channel to interact and engage with its customers:

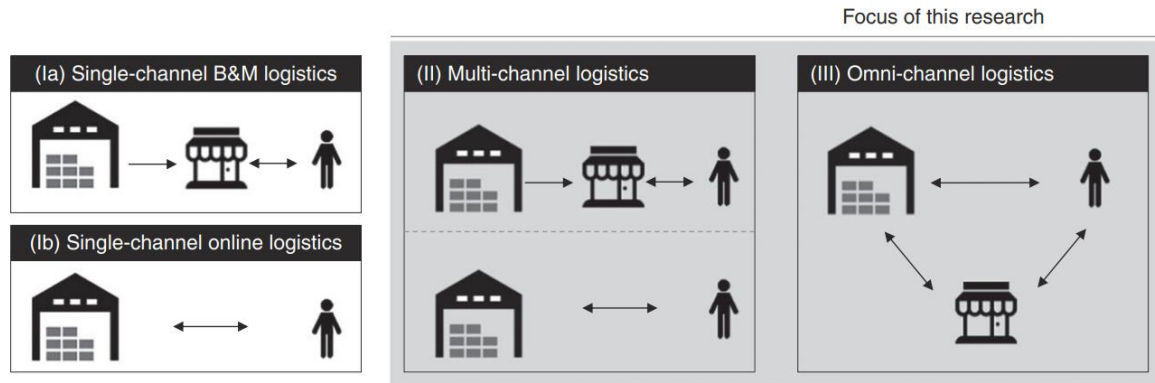


Figure 1 - Different Channels in Retail Setting, Source: (Hübner, et al., 2016)

A retailer with multiple channels under-goes through different levels of interconnection and integration processes in order to merge and consolidate them (Hübner, et al., 2016). In omni-channel, retailers expand their business from one primary single channel to a configuration of multiple channels (Brynjolfsson, et al., 2013). Many different expressions have been developed for retailing on multiple channels. Terms encountered in practice include “multi-channel,” “Omni-channel,” “everywhere commerce” or “no-line commerce,” which are often used interchangeably without a clear differentiation (Beck & Rygl, 2015). Here in this research, the main focus is on omni-channel while comparing and differentiating it from the multi-channel approach.

2.1.1 Single Channel

According to (Enes Emre, et al., 2018), single channel retailing is a retail setup where retailers interact with customers through only one channel. The logistics system of such retailing is also based on a single entity which includes exclusively physical store or a pure online retail. Before 1995, the internet was not available for commercial activities and people who want to buy something, they visit brick and mortar stores or placed an order through catalogue as those were the only means of shopping at that time. In the same year, US lifted the strict prohibition and make available the internet platform for the retail. As a result, big giant e-retailers such as Amazon, e-Bay and later-on Alibaba were launched and now lead the retail market around the globe. Before and during the 1995, retailers were

mostly based on Mono channel¹ strategy in which retailers only sell goods via one channel either through physical stores or digital platform (Sauter, 2015).

2.1.2 Physical Channel

In a Mono channel strategy, physical stores are the most traditional sales channel. Despite growing technology and innovation in sales channels, physical channel is still the first choice of the customers for buying new things as the customer get the instant gratification of the buying product. It also plays a central role in developing successful customer relationship (Blazquez, 2014). However, as technology is redefining the store experience, the physical store need to implement the new layouts through i.e., “click and collect”, “ordering in store”, “ordering online, return to store”, and other initiatives which transcend the online and physical retail channels to make the shopping experience more convenient and easier (Bell, et al., 2014).

Walmart chief executive quoted:

“There was a time when the online and offline businesses were viewed as being different. Now we are realizing that we actually have a physical advantage, thanks to our thousands of physical stores that we can use it to become Number 1.”

Raul Vasquez, Walmart.com Chief Executive (Bustillo & Fowler, 2009) p. 1; italics added).

2.1.3 Online Channel

Online retailers are today at the highest level of evolution then in comparison to its initial years. The success of online retailing is lie in the benefits it brings to both retailers and customers (Sauter, 2015). Online retailers provide customers a much wider range of products, cheaper prices and the ease and convenience of shopping from anywhere, any time with just an internet connection which increases the potential of the market enormously. Customers prefer to use the online channel rather than to go to physical store especially in terms of time saving, having cheaper products as well as to have access to more detail information about a product (Sauter, 2015).

2.1.4 Multi-Channel

Multi-channel is a retailing strategy in which a set of channels are involved while selling products or services to customers (Levy & Weitz, 2009). At its core, customers interact with

¹ Mono Channel: where a company sells its product through only one channel i.e., brick & mortar or online.

a business in more than one way and receive broader convenience and service from a retail they already trust (Robinson, 2006). By the use of different channels, customers have an opportunity to deal with a single organization while in search for information, engage in communication, and initialize purchase of product or service and return purchases. Additionally, it also gives an opportunity to retailers to serve customers in a more convenient way across different channels (Sands, et al., 2010). In multi-channel, the different leveraging channels operate as a separate entity and relatively independently while in Omni-channel, the channel integrates functions which allow customers to engage in communication, search for product and consume the brand across all the channels seamlessly (Palmatier, et al., 2019).

2.1.5 Omni-Channel Retail Development

According to (Rigby, 2011), omni-channel is to integrate the advantages of the physical channel with the rich experience of an online channel. The true Omni-channel experience means that a transaction span over more than one channel. For example, a customer order a product from an online channel and collects it at the physical retail store or buy a product online and return it to a physical store in case of dissatisfaction (Rigby, 2011). Omni is derived from a Latin word “Omnis” which mean “for all” or “universal”, meaning “all channels together” (Ayensa, et al., 2016). Omni-channel follows a customer-centered focus which featuring a holistic shopping experience, where customer experience smooth and seamless shopping irrespective of the channel they use (Gupta, et al., 2004; Shah, et al., 2006). According to (Payne, et al., 2017), in Omni-channel environment, customer interaction is not with the channel but with a brand. According to (Verhoef, et al., 2015) in view of customer relationship maximization, Omni channel is the *“synergetic management of the numerous available channels and customer touch points in such a way that the customer experience across channels and the performance over channels is optimized”*.

Omni channel is all because of the internet which transform our lives. Samuel, (an imaginary name), a resident of California, go to a physical store and search for shoes but he couldn't find one interesting. As he was leaving the store, the store manager came to show him some additional collection on iPad. After browsing for some time, scanning through online offers and reading reviews, checking prices, Samuel decided to preorder a new upcoming stylish shoe which were arriving at the store in the following week. Example like these illustrate how internet transform the boundaries of the traditional retailing into a new retail business

which enables the retailers to interact with the consumers through numerous channels or touch points and expose them to sensory offline information with the online content (Brynjolfsson, et al., 2013). The use of numerous channels represents the concept of Omni-channel in which customer are free to move across the channels i.e., online channel, mobile application and offline channel all within a one and unified transaction process (Kilcourse & Rosenblum, 2013).

In past, the traditional brick and mortar retail stores were unique by providing services such as allowing consumers to touch and experience the product physically while providing instant gratification, meanwhile the new e-retailers; the internet based retailers, trying to provide a wide range of products to the shoppers with low prices and providing content such as reviews, rating and customers feedbacks. With the introduction of internet, the retail industry evolve towards a seamless omni-channel retailing which will vanish the distinction between the physical and online retail channels and this will turn the whole world into a showroom without walls (Brynjolfsson, et al., 2013). As the retail industry is shifting towards a concierge model of omni-channel, this will not only focus on transactions and deliveries but will also geared to help customers. For example, the physical retail stores will be augmented by virtual reality which will be accessible by smartphones and other devices i.e., Google Glass, Google wearable which will transform the shape of future retail industry. As the Omni-channel retail will breaks down the geographical boundaries and customer ignorance, it will become obligatory for the retailers as well as their supply chain partners to redesign their competitive strategies and come up with unique and innovative ideas which could help them in achieving higher customer value (Brynjolfsson, et al., 2013).

2.2 From Multi-Channel to Omni-channel

Tradition Business Concept Vs Innovative Business Model

The traditional retailing has been changed from the last decades because of the advent of online channel and ongoing digitalization. This digitalization and online channels become very dominant in some particular retail markets and has been considered as disruptive development (Christensen & Raynor, 2013). According to (Sorescu, et al., 2011), most of the retail business models has been affected because of the alteration in their retail mix due to which their customers starts behaving adversely. The retailer has initiated the new strategies to encounter such development and at start they implement the multi-channel strategies in which they mainly focus on whether new channels should be added to existing

channel mix or not (Geyskens & Dekimpe, 2002). Multi-channel is defined as (Neslin, et al., 2006)p. 96; italics added), *multi-channel is the design, deployment, coordination and evaluation of channels to enhance customer value through effective customer acquisition, retention and development*. In this definition (Neslin, et al., 2006) consider channels as touch points or the contact points where a business interact with the customers.

The retail industry is an important element of the global economy, accounted US\$ 22.6trillion revenue in 2015 which is 32 percent of the total global GDP (gross domestics product) (Research and Market, 2016). The retail industry with constant flux, undergoes with significant transformation which require the retailers to adapt the change processes for their survival. From the last two decades, internet transform the retail industry and this transformation is largely driven by the advent of the new channels with becomes possible because of the internet and advance technology (Varhoef, et al., 2015). The advent of online retailers like Amazon, eBay, Alibaba etc., are led by the internet to come into existence which transformed the traditional store-front based retailers (i.e., brick and mortar stores). The retailers start to diversify their channel mix by adding online channels and transform their existing model to multi-channel strategy (Pentina, et al., 2009). In multi-channel strategy, most of the retailers operate their different channel separately and governed their silos organization structure traditionally (Gallino & Moreno, 2014) (Rigby, 2011). Retailers in multi-channel, typically compare their individual channels (Min & Wolfinbarger, 2005; Polo & Sese, 2016) and on bases of those, analyze how adding or removing channel from their channel mix (Avery, et al., 2012) will influence the various aspects of their business from a customer perspective (Melisa, et al., 2015) while elevating their own performance. With multiple channels in hand, customers now tend to search for product in store and buy online or vice versa which intensify an increase competition in the industry (Balakrishnan, et al., 2013). This increase competition forces retailers to add additional channels to their retail mix in order to sustain in the market (Bernstein, et al., 2008). With the addition of the extra channels, an ongoing necessity is also emerged to integrate these channels into a single and seamless channel to enhance customer buying experience. To integrate channels, omni-channel concept has been emerged. Omni-channel integrates all these channels into a single and seamless channel (Briel, 2018). The Omni-channel transforms the buying behavior of the consumer and their loyalty towards a retailer (Zhang, et al., 2010) which gives a freedom to customers while shopping. Customers already interact with retailer in a multi channels strategy (Sorescu, et al., 2011) and now increasingly

expect that these channels should ‘talk to’ one another and be integrated into a seamless shopping experience (Hansen & Sia, 2015). In omni-channel strategy, all the channels are integrated and operated collectively while endorsing each other sales. Omni-channel give a seamless and unified shopping experience to customers as compare to multi-channel in which each channel operates individually and does not endorse each other sales. In omni-channel, customers can easily switch between channels as compare to multi or a single channel strategy. The shoppers in omni-channel are more satisfied then the traditional retail because of the less effort of switching channels and become more loyal to the brand or retailer. The omni-channel transform the way of shopping of customers in such a way that the customers can now fill a shopping list serval days before and share the list with friends or family to get comments on items, sort items, may receive personal coupons as well as comments on special nutrition information or special diets, number of items to be ordered for an offered recipe and thus use the list as basis of new order (Scott & Scott, 2008). This collaboration between family and friend can increase the convenience factor tremendously no matter which channel they prefer to use.

2.2.1 Customer Centric

The change in consumer buying behavior drives the retailers to rethink about their offered services and the channels they operate with. Today, many organizations operate with multiple channels i.e., online and offline to offer a seamless and integrated shopping experience to the customer. The aim of the omni-channel is to bring ease and make the shopping experience as seamless as possible (Griffiths & Howard, 2008). The customer journey is dynamic which means that the customer uses non-linear path to their purchases. The non-linear path begins with search, information, awareness, evaluation and finally ends with the purchase decision. Technology enables customers to interact with retailers from online to physical store, call center to mobile applications, depending on their needs. Customer relationship pathway with the retailers can be direct but more often are non-linear as customers can enter and exits from a relationship with a retailer at a less predictable point or channel. The customer shopping journey is more accessible as well as continues as the channels or touch point to which the customers are exposed are always on. As the journey is more non-linear, dynamic, continuous and accessible, the customer demands for increasingly integrated, consistent, seamless as well as personalized experience which is indeed impossible in multi-channel models but instead fully integrated and customer driven journey can be accessible in omni-channel nature (Carroll & Guzman, 2013). In omni-

channel, retailers channels are aligned and represent the single and consistent way of doing business which replace the different views of the customer and transform it to a single and unified view which enable the retailers to respond consistently to the evolving customer's needs. Customers are now increasingly demanding for the integrated and seamless experience i.e., if a customer buy a product online and wants to return at a physical store and the physical store did not except it, it could be frustrated for the customer as the customer think that all channels belong to one retailer and expects that the retailer will accept the customer request at either channel (Carroll & Guzman, 2013).

2.2.2 IT Development and its Impact on Omni-Channel

In omni channel, technology have a key role while creating an integrated experience between various channels as well as creating a seamless shopping experience which the customer demands (Piotrowicz & Cuthbertson, 2014). E-commerce is growing continuously as major e-store giants are developed i.e., Amazon, Alibaba, eBay, and many other which transform the traditional retailing and make the shopping more convenience and easier for customers. With the advent of the e-stores, physical stores are also greatly influenced by the technology as the store experience and layout are changing day by day. The new services offered by the physical stores such as ordering in-store, click-and-collect, return to store and other service which are highly supported by technology, are now offered by physical stores (Bell, et al., 2014). Physical stores are now more equipped with the advance interactive technologies with the aim to increase the customer satisfaction as well as to improve their shopping journey. Such technologies are augmented reality, virtual fitting rooms, magic mirrors, interactive screens, informative tablets and digital devices, mobile apps, automatic checkouts etc., which help the customer in getting product specification, virtual appearance, its price and information, convenience in buying or returning product, getting insight etc. These new interactive technologies demonstrate the new aspect of physical stores. The role of physical store is also greatly influenced by the technology and yet the future role is not clear but the current shop atmosphere where customer interact with product to touch, feel and try the product, may end up being determined by the product segmentation and its categories as well as just being used as a physical showrooms (Piotrowicz & Cuthbertson, 2014).

Technology integrate the channels by presenting the uniform view and seamless experience to the customers regardless of the channel they use. The technology gives customers an

opportunity to check for the desired product, its price, availability of the product well before they visit a store to buy it. In omni channel, the retailers aim is to provide better services irrespective of channel and such efficient services are fulfilled by the use of different technological devices which helps the customers in shopping. The customers have been given the ability to look for the cheaper, better quality alternatives which are fulfilled by IT in the form of QR code and barcode readers along with the mobile device which makes possible for the customers to look for alternatives. The revolution in the technology also brings the growth in the social media through which a customer can check the rating of the product, contact with someone to ask for recommendations, and also share their feeling, opinion and thoughts as well their shopping experience in the store in a real time. The customer motivation to use the physical store could also be influenced by the type of shopping i.e., hedonic and utilitarian² which are highly considered by the customer while shopping at a store.

The omni-channel supply chain is also supported by the technology and is redesigned by the retailer to facilitate the key challenges i.e., product availability, returns, delivery options, reverse flow of products and the inventory management. The end-to-end distribution system and the integration of the channel which ensure the product availability are now fulfilled by the use of softwares such as ERP, Oracle, Lingo and many other. The technology also makes possible for the retailers to offer such personalized offerings and discounts to the customers on the basis of the data they gather from the different options such as loyalty cards, customer search history and then target them with unique offerings and discounts. Thus, customer shopping journey and omni-channel are dependent on the technology which makes possible the channels integration, convenience in shopping and availability of multiple interactive options for the customers to communicate with the retailers and vice versa (Piotrowicz & Cuthbertson, 2014).

2.2.3 Omni Channel Current Practices

In omni-channel, what consumer wants, is the seamless experience, the ability to control their purchase process according to their needs and preferences. Companies using multiple channels are pulling these channels to bring the holistic purchase experience. The companies

² Hedonic is the shopping environment/experience in a store while utilitarian is, conveniently finding a product the customer is looking for.

who apply omni-channel strategy, gain 89 percent more customers than those with a weak omni-channel presence (Braaten, 2018). The leading and the revolutionized brand who apply the omni-channel strategy are being examine with omni-channel practices down below.

2.2.3.1 Amazon

Amazon is quickly developing the customer centric approach. Amazon focuses on the customer preferences and developed personalized and responsive interaction across all channels. With expending their channels, they make all channels integrated and connect customer data to the central fulfilment warehouse. Those data include customer behavior, their purchase history as well as demographic data of a customer. Amazon launches the Amazon Prime through which they promise to deliver the product within the next day. With the Amazon Prime, Amazon Alexa is another customer convenient approach by Amazon through which they enable and make easier for the customer to speak for an order and have that product on their doorstep in the next two days. This faster delivery of amazon enables their supply chain to be more agile and responsive. Yet, Amazon being the biggest retailer, is uniquely embedded in customers lives and doing something which every customer is looking for (Braaten, 2018).

Amazon also applied data unification strategy in order to collect and connect the data across all channels. Amazon unified data through amazon prime membership. With amazon prime, the amazon not only promises the fastest delivery but also offers additional services i.e., prime video subscription, various discounts, free music subscription and prime wardrobe. Through prime wardrobe, amazon offers its customers to try the product before committing to buy it. Amazon gather all the services under the one unified service “amazon prime” which gives an advantage to amazon in unification of the data which is a fundamental part of the omni-channel strategy. With such unified service, amazon underpins the ability to know and understand the customer preferences, their shopping intentions and certainly offer them the vaunted recommendations which they are looking for (Serrano, 2019).

2.2.3.2 Macy

Macy is 161 years old America departmental store as it was launched in 1858. As the technology growing up and changing the traditional retail business, Macy’s was the first to develop an ecommerce sales platform and launch a website Macys.com in 1998. Before that, Macy was based on a traditional brick and mortar store. Prior to the launch of an e-commerce

platform, Macy's realize that the only online presence will not be not enough to counteract competitors. Macy's redesign its basic business model from brick and mortar store to a truly hybrid digital retail strategy. Macy's announced its holistic omni-channel strategy in 2010 when they create an integrated online and physical channel to enhance the customer shopping experience (ARS, 2016).

Macy's was the first who launch the "Ship from Store" initiative in 2016 through which they utilize their 868-physical store as the fulfillment distribution centers for the online orders. Through this initiative, Macy's simultaneously maximizes their inventory management and customer experience. Macy's start fulfilling the online orders from the physical store inventory rather than storing additional inventory for the online orders, anticipated to have efficient inventory available in the physical stores and thus minimizes the inventory holding cost. Additionally, they serve the customers with a quicker delivery from the local physical store rather than delivering from the central distribution center. Macy's also bridge the gap between the online and physical store by serving the online customers through "buy online and pick up in-store". With this, customers get the ease and convenience in fulfilling their order while Macy's also get benefits from the incremental sales at the physical store driven by those customers. Macy's also adopt radio frequency identification (RFID) technology through which the locate the precise location of the product within their store or their supply chain which is important for the fulfillment of "Ship from Store" and "buy online and pick up in-store" initiative. Macy uses the RFID to keep and maintain the accurate inventory while taking care of the customers so that their orders are fulfilled in the meantime (ARS, 2016).

Macy also launch localization initiative program based on Omni channel in which they offer customers the ability to predetermine what is available in shop. Macy's use the mobile application as well as online website to leverage their commitment of enhance customer shopping experience. Macys' uses Google Map 6.0 to display the detailed floor plans of a store which are embedded in Macy's smartphone app. With the help of app, customers then have the ability to get around stores, find products and sign up for the offers. This initiative of the Macys is to integrate the online and offline channels together in a single approach. It gives a customer value by enabling the visibility of a product before they reach to the store. In- addition, it also facilitate the stores associate to check rapidly system-wide availability of product, locate an item and ensure the on time delivery or the next day pick-up by the customer (DHL, 2015).

2.3 Theoretical Framework

2.3.1 Omni-Channel Agility

The innovation in technology pushes customer demand for availability of multiple channels. Organizations faces challenges while offering a seamless experience. To increase the customer experience, agility is identified as a key factor for continues performance in omni-channels (Hoogveld & Koster, 2016). In omni channel strategy, it is essential for the retailers to maintain the balance the current business practices while looking for further opportunities to expand the business. Omni-channel is more agile as it evolves around the change in the market, customer preferences and choices as well as the evolution in the technology and increased demand for integrated channels. Rightly, the countless digital retailers as well as the traditional brick & mortar retailers realize the impact of the technology on the customer shopping journey and begin to adopt omni-channel strategies in order to remain competitive. The retailers realize that they have to align their business according to the customer needs by leveraging technology while changing their business operation and adopting an agile way of business practices (Madan, 2016).

According to (Denning, 2016), agile is a mechanism which enables the organization to master the continues change. It flourishes firms to be capable in a more volatile, uncertain, complex and ambiguous world. Agile highlighted as agile for everybody while based on a concept of creating fast, flexible and customer centric organization. According to (Denning, 2016), agile manifesto is based on “to satisfy the customers” while (Rigby, et al., 2016) describe agile as “agile is all about innovation”. The companies who create an environment to flourish the agile concept, are more innovative and productive in comparison to others who did not (Rigby, et al., 2016). The customers are the focal point and are now embraced by every organization. In response to customer flexible demands, agile is what as consider as the key in omni-channel.

2.3.1.1 Agility is Key in Omni-Channel

According to (Russell, 2018), omni-channel is like a soft supply chain which were based on lean principles 15 years ago. Lean process is based on efficiency in process, reduction in waste as well as to standardize the system (Dewell, 2007). The Omni-channel focuses on, to provide the best quality with lowest possible price as well as the shortest lead time which are based on lean principles. Lean embraces the efficiency and effectiveness in terms of cost

reduction, quality, lower lead time where omni-channel is much more based on factors which revolve around the customer centricity. Agility in omni-channel is considered as the key factor for a successful omni-channel implementation because agility is based on responsiveness which is the main focal point for an omni-channel as it gives the freedom to the customers while fulfilling their demands. The markets are now changing dramatically and the customer centric and flexibility becomes the key to a business success. The customers now seek the seamless experience across all channels and the retailers who adopt the new approaches to fulfil the flexible customer demands are the winners except those who fail to do so (Jackson, 2017). In lean methodology where cost efficiency and lowest lead time are considered as the focal point of omni-channel, are now transforming towards the omni-channel agility where customers and markets are more important for the retailers than the cost efficiency.

The customers are now embraced by the industry and agility become the key to omni-channel success. The business concepts are changing with dramatic changing occurring in marketplaces. E-commerce based retailers like Amazon, eBay and Alibaba are covering the market and expected to own at-least 40 percent of the market share by end of 2020. Harvard business Review found that 73 percent of shoppers are now shopping on more than one channel (Sopadjieva, et al., 2017). Kevin Townend, director of a UK based supply chain and logistics company, mention in Association of Supplier to British Clothing Industry (ASBCI), that omni-channel success is now lie in the agility and it is unfortunately doesn't fit into the lean model (Russell, 2018). According to him, the sustainability practices alongside production activities under the standard rules of lean approach, doesn't work well for omni-channel because in omni-channel you have to be agile and responsive. Customers and market are the most important in omni-channel and you have to be fluid to build partnership and measure capabilities. The customer approach is changed and are now based on see-now-buy-now mentality which is instantaneous and totally opposite to the traditional brick and mortar retail strategy. Thus, to fulfil customers order, you have to be flexible and agile in order to respond in an efficient way. (Russell, 2018).

Agility in omni-channel is also essential for bot pre-purchase and post purchase customer shopping experience. The biggest challenge for the retailers is, how to fulfil the customers desires seamlessly regardless of how and where the purchase is made. The questions arise that did you make the same experience for the purchase made via online or mobile device

as compare to the physical store? How to ensure the customer expectation for the after sales services and easy returns? These are the main challenges for an omni-channel strategy. Retailer who apply the omni-channel strategy should no longer have a question of if but they need to come up with a solution that how to get this done. The retailers need to create a seamless pre-purchase and post purchase experience and for this they need to rippled a flexible and agile supply chain. Retailers need to adopt new strategy based on flexibility, velocity and cost optimization. For an agile omni-channel, the operating silos between the channels need to be removed. To increase omni-channel efficiency, the operation across sales channels need to be integrated and combine so that customers expectations meet at both physical store and e-commerce platforms. Additionally, the inventory management is also important in agile omni-channel as the inventory available at physical store need to be visible at the e-commerce channel too. The customer should get the same insight about the inventory at both physical and virtual channels so that the customer expectations gets fulfilled and the sale of a retailer doesn't get hurt (Agility, 2016).

2.3.2 Variety-Seeking Behavior Theory

The variety seeking behavior is the act of choosing an alternative in order to experience the brand or a product diversity (Kwon & Jain, 2009). In previous literature, variety-seeking-behavior theory is conceptualized as a multi-channel shopping behavior where consumer are engaged in satisfying their desired stimulation and especially in the case where the consumer psychological arousal level is lower than their desired arousal level (Mowen & Minor, 2001). Therefore, switching-brand behavior is identified as a way to increases arousal level. Consequently, it can also be argued that changing store or switching to another store either physical or virtual, is for instance identified as a type of variety seeking behavior (Kwon & Jain, 2009).

The new technology revolutionized the business practices. The advent of mobile technologies e.g., scan and go technology, self-check-out, location and artificial based technologies which are offered across all channels i.e., brick and mortar stores, online retail channels, mobile application platforms and social media etc., transform the retail business doing while making the shopping experience easier for the customers which bring change in their shopping behavior (Beck & Rygl, 2015). Now the multi-channel retail model is moving towards omni-channel model (Rigby, 2011). In multifactual and omni-channel environment, the channel used by the retailers are fully integrated and customers are

switching across the channels and devices used by them for shopping i.e., mobile, laptop etc., represents the variety and the shopping seamless experience (Beck & Rygl, 2015). Thus, to increase the arousal level, the customers in omni-channel can simultaneously and interchangeably use the dissimilar channels at the same time (Varhoef, et al., 2015).

The digitalization turn the customers behavior and transform them into omni-channel customers through which they often use virtual and physical channel together for both pre-purchase and post purchase phase (Brynjolfsson, et al., 2013). The customer shopping behavior is based on two congruent i.e., utilitarian and hedonic value where utilitarian likely effects the customer shopping experience and performance e.g., a customer expresses his rejoicing experience when he got a deal on an item for which he was looking for, while the hedonic effects primarily the brand experience e.g., a customer found an ease in shopping and express his pleasant experience while shopping in a particular store (Chandon, et al., 2000). These two utilitarian and hedonic are further briefly explain in the section below.

2.3.2.1 Utilitarian and Hedonic

Customers are shifted from traditional retail markets towards omni-channel retail due to the internet and the advance technology. Due to the increase access to information and data, customers now tend to browse, search and buy according to their needs more easily and efficiently. During shopping, customers seek not only for utilitarian value (functionality) but also hedonic value (enjoyment). It is essential for the retailers to constantly provide high level of customer services in order to maintain the superior shopping experience for the customers. The retailers should motivate customers to purchase while achieving the utilitarian and hedonic value through their various shopping channels. The utilitarian and hedonic are the tools used by retailers, to build or gain the competitive advantage in an omni-channel strategy (Nopnukulvised, et al., 2017).

Customers now are comparatively more connected to the digital media as before and therefor their shopping journey is more sophisticated and complex (Intel, 2011). In omni- channel, each channel has its own ability and strength (Chatterjee, 2010). Customers tend to use alternative channels based on their strengths and convenience (Swaid & Wigand, 2012). Hence, customers may receive undoubtedly different level of utilitarian and hedonic value across different channels. To increase the customers loyalty, the omni-channel retailers need to understand the customer preferences and also how they use a channel for their shopping

in response to rapidly adopt changes align to the customers behavior. On the other hand, those who fail to do so, are more likely to lose their market share (Nopnukulvised, et al., 2017). The hedonic and utilitarian are the two fundamentals of the shopping experience. (Babin, et al., 1994) proposed these two fundamentals as shopping value. The hedonic and utilitarian are associated with the shopping experience since they were used to explain the customer behavior such as customer loyalty, impulse buying behavior, customer satisfaction, purchase intention as well as word of mouth (Overby & Lee, 2006). (Babin, et al., 1994) defines the hedonic value as more subjective and personal while the utilitarian is a task specific, rational and goal oriented (Batra & Ahtola, 1992). The hedonic value based on exploration and entertainment (Davis, 2013). Hence, the increase arousal, fun, fantasy, entrainment, and easy fulfillment of orders are all indicates the hedonic value of shopping experience. In contrast, the utilitarian value is task specific as it reflects the shopping trips to be more objective and work accomplishment (Holbrook & Hirschman, 1982). In comparison to hedonic, utilitarian is more based on cost effectiveness and convivence (Davis, 2013). Moreover, the customer perceives both the utilitarian and hedonic value at the same time while shopping. This means that the customers expect the utilitarian value as to find and buy the product they needed while the hedonic value as the customer get the best shopping experience which they expect in the form of convenience and enjoyment during shopping at a store (Chung, 2015).

2.4 Omni-Channel Distribution

The supply chain network encompasses of three functions; distribution, procurement and production function. Excluding the procurement and production functions, the supply chain resulted to a distribution channel. According to (Arya & Mittendorf, 2013), the distribution channel is the way of delivering products to the customers. In early 1980s, the supplier only delivers the products to the retailers but in mid of 1980s, another trend emerged in which in addition to delivering product to retailers, suppliers start delivering products to retail distribution centers as well. This new concept divides the distribution channels into centralized and decentralized distribution channels (Blanc, et al., 2006).

The (Rosenblum & Kilcourse, 2013) in their report mention that blending the digital and physical selling world into one seamless and compelling customer experience, will remain challenge for the retailers. This challenge can be resolved by the Omni-channel distribution (Tetteh, 2014). Omni-channel distribution is defined as, *everything that retailers utilizes to*

gain the seamless, integrated and unified customer experience in order to retain the customers (Tetteh, 2014). Retailers faces the challenges of fulfilling both the store shopping deliveries and customer direct shipments which needs the retailers to redesign their processes in order to build a seamless customer experience. To ensure a seamless experience, a boundless and integrated distribution system is required across all channels (Hübner, et al., 2016). Therefore, the retailers merge the operations from the isolated multi-channel (MC) to unified omni-channel (OC) logistics system. The merging of these operations, will deplete the independency of the channels in MC where the distribution to store and direct-to-customers are operated independently, to a parallel OC distribution system with a unified frontend and backend system (Bell, et al., 2014).

The logistics strategies related to single, multi and omni channel is based on distinction of these basic strategies:

Single Channel	Based on only one sales channel i.e., either B&M or Online retail.	It operates with only one and dedicated logistics system.
Multi-Channel	Retailers operate with multiple channels but those are all segregated unite which based on individual and stand-alone system. Customers can buy product from either online channel or in-store purchase. There is no unified delivering process as there is no integration and coordination between the channels.	Retailers operate with individual and stand-alone system of logistics and operations. All logistics operations are independent and no mutual corporation between the channels and distribution interfaces.
Omni-Channel	There is no difference between the channels. All channels are integrated. Coordination and exchange of information, joint operations and logistics as well as inventories across channels enable the fulfillment process.	Logistics system is integrated and based on a common logistics interface. Distance orders placed in physical stores for pick-up or home delivery which are processed through the same logistics system.

Table 1 - Logistics Approaches of Different Strategies; Source: (Hübner, et al., 2016)

The retailers are now offering multiple options in order to increase their service offerings (Varhoef, et al., 2015). The growing number of retail channels also increases the complexity for logistic (Handfield, et al., 2013). The delivering system does not remain linear any longer because the B&M and online retailing is gradually overlapping (Beck & Rygl, 2015). Before, supply chain was only responsible for delivering goods to the retail stores as the retail stores were the end points of transactions (Baird & Kilcourse, 2011). But now, online

retailers place the distribution system on the front line since retailers starts offering number of options to customers to search, find, buy and return goods across the offline (B&M) and online retail channels (Mercier, et al., 2014). B&M stores are today limited to just one of a set of channels. With the new set of channels, retailers need to accommodate and anticipate the demand and to ensure the availability of products while meeting the varying lead-times as well as to keep the cost down for each channel (Handfield, et al., 2013).

(Saghiri, et al., 2017) designed one of the first framework for omni-channel logistics to analyze the customer journey, omni channel environment and the location of touch point of a retailer. The framework is presented below with the various integrations in the form of product information, integrated promotion, transaction, integrated pricing, order fulfillment and reverse logistics to fulfil the omni-channel experience. The various integration functions are defined as:

- **Integrated Product Information:** it implies to the information providers, organizers and distributor to make sure that the information distributed across channels should be same and unique and the customers should receive the same information across the different channels.
- **Integrated promotion:** It refers to uniquely promoting a brand name across all channels. The promotions, product or brand name and logo and motto should be consistent and unique across all channels (Avery, et al., 2012).
- **Integrated Transaction:** Integrated transaction consists of cash, card, gift coupons, electronic transfers which should be secured by pin number, verification code and signature (Carton, et al., 2012). These should be retrieved securely across all channels in an omni-channel setting regardless of where and to whom the transaction is made.
- **Integrated Pricing:** It is the key factor of the competition among retailers in the omni-channel. It integrates the product price and the changes in the prices in the form of discounts which should be visible across all channels to the customers and other members in an omni-channel framework (Chen, et al., 2015).
- **Integrated Order Fulfillment:** According to (Phan, et al., 2006), integrated order fulfillment consists of order placement, order preparation and order delivery stages while (Zhang, et al., 2010) also includes components like product design, requirement analysis and coding system in the integrated order fulfillment. The high level of order fulfillment leads to a higher level of customer service (Ma, et al., 2014).

- Integrated Reverse Logistics:** In integrated reverse logistics, the information regarding return points, stock keeping units and product reverse information should be traceable and retrievable at all channels in omni-channel strategy. It links and integrate the different stages and channels involved in it (Lauren R. Skinner, 2008).

The framework presented by the (Saghiri, et al., 2017) combining it with the (Hubner, et al., 2016), the enablers of the omni channel supply chain which will illustrate the theoretical framework of the omni-channel distribution.

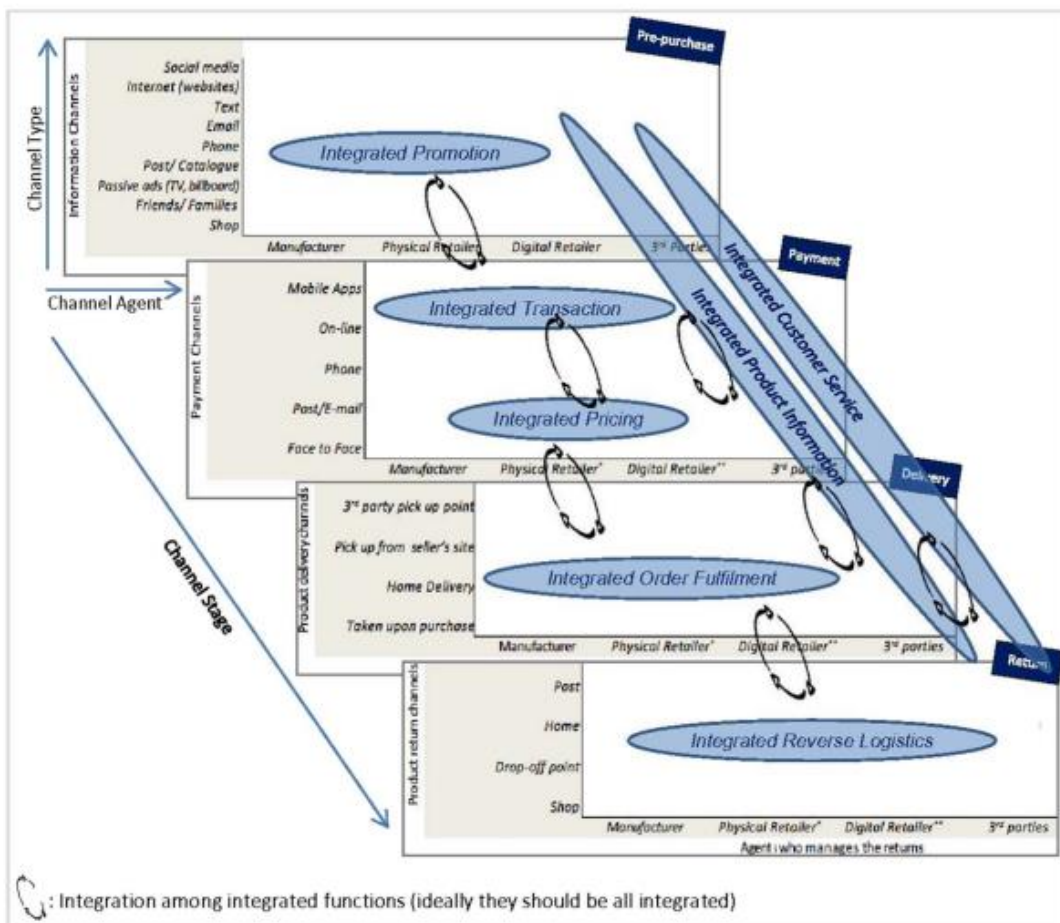
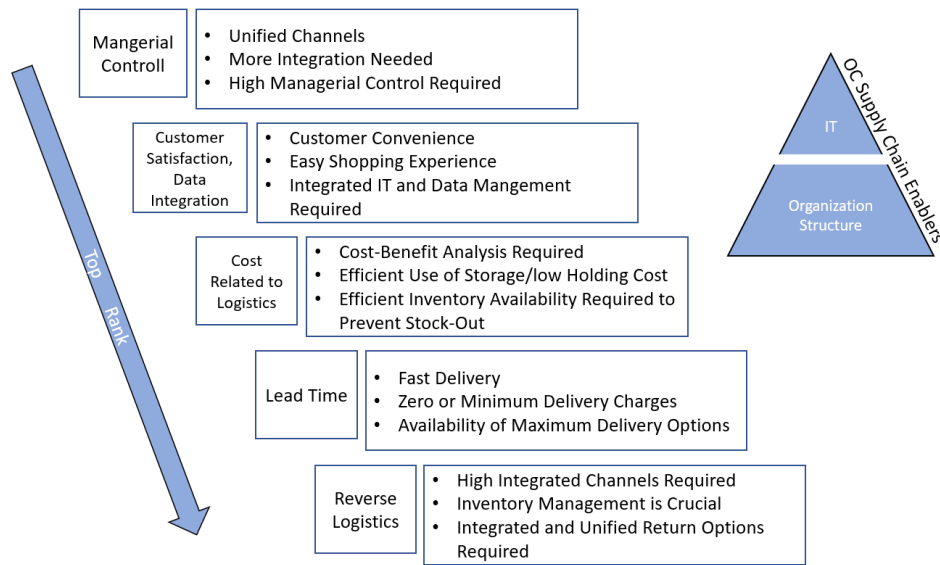


Figure 2 - Omni-Channel Integrated Distribution Implications, Source: (Saghiri, et al., 2017)

2.5 Supply Chain Consequences in an Omni-Channel



*Figure 3 - Omni Channel Supply Chain Consequences, (Author Own Illustration);
Information Source: (Saghiri, et al., 2017)*

Omni channel gives an opportunity to retailers to build relationship with customers (Tetteh, 2014). The Omni-channel connect the online and offline (bricks & Mortar) channels to comprehend the sales and increase the customer value. Due to the connectivity and changes in retail landscape, a major transformation in retail supply chain has been emerged (Hübner, et al., 2016). To manage such changes, a significant investment in infrastructure, processes and capabilities of warehousing and distribution is needed. According to (Luiz, et al., 2014), supply chain comprises of several logistics aspects including providing the raw material for the production, drawing itself in the production process and to the final delivery of the finished products. Today, reverse logistics is also a part of the supply chain. According to (Bertaglia, 2003), without supply chain it is very hard to accomplish any production activity. Supply chain is paramount which makes possible the production of a product and the availability of the product to the end customer at the place and at the time the customer wants. This brings considerable challenges for the supply chain. In omni-channel, the supply chain activates must be integrated and interconnected so that it could serve the customers efficiently and, in any situation, consider an optimal cost of operations while delivering the physical goods to the customers (Bowersox & Closs, 2001). This nature of the omni-channel brings significant challenges for the supply chain. Those supply chain challenges are in omni-channel are define broadly down below:

2.5.1 Managerial Control

The challenges to retailer in the Omni-channel are immerse where the retail current structure, customer demands and fierce competition are the main challenges to the coordination among different channels of the retailer. Channels in Omni-channel are interchangeably and seamlessly used by the customers during shopping which foster a higher managerial control in omni-channel and thus it plays a significant role while offering seamless services. Omni-channel demands the higher managerial control because of the interconnected and integrated channels which are used to make sure the flawless shopping experience for the customers (Hubner, et al., 2016). In comparison to Omni-channel, in multi-channel retailing, the channels are separated from each other and are operated individually which as a result the managerial control in multi-channel is scattered as the managing team of different channels is separated from each other. According to (Kotler & Keller, 2012), in multi-channel, each channel has a different target market and aims to serve the different needs of the same client, while in Omni-channel, the aim and focal point of each channel is to enhance the customer shopping experience while creating value for the customers. This indeed needed a higher managerial control because it does not matter which channel is used by the customer but what really matters is the experience that the customer has with the product or the brand itself (Luiz, et al., 2014). According to the (Luiz, et al., 2014), in Omni-channel, the customer should have a flawless attendance and realized the positive offerings, offered by the retailer. The high degree of integration demands the more managerial control in omni-channel than the multi-channel strategy (Hubner, et al., 2016).

2.5.2 Customer Satisfaction and Data Integration

According to (Zhang, et al., 2010), customer satisfaction can be achieved by the combination of channels used by a retailer which exploit the benefit for the customers and decrease the deficiencies of each channel. Although, to realize these benefits, the customers need to spend more time and energy while visiting store(s). The store may not be opened at customer convenience time and customer may have difficulty in locating information about products in store(s). To overcome this challenge and offer convivence to the customer, retailers need to offer a broader merchandise or channel selection options which comprehend the safe and easy shopping experience from their home, or locations of their choice (Zhang, et al., 2010). Additionally, the increase customer satisfaction will lead towards customer loyalty (Neslin & Shankar, 2009). Meanwhile, (Ansari, et al., 2008) evaluate that the increase usage of

internet channel can also lead towards decrease in customer loyalty. They (Baal & Dach, 2005) also argue that the low cost of searching products online increases the opportunity of free riding.

According (Zhang, et al., 2010), the integration of data across the channels is another difficulty in overcoming such challenges related to customer loyalty. It is difficult for the retailers to develop a history data base which could handle all the customer transaction records and the inability of the retailer to link the customer(s) to the purchase history in order to see when the customer pay in cash, or through a third-party credit card, through bank transfer or through other means. Moreover, the data integration is the extraction of the relevant information from the data source and transferring that data to the decision makers in each channel. Thus, the retailers miss the true value of the omni-channel while linking the customer centric approach to data integration. For example, when a customer places an order to a direct or digital channel, it recognizes very well the customer and trace his behavior over a longer period of time but when a customer visits a traditional brick and mortar store, the retailer faces challenges in linking the customer behavior to his purchase history created in the direct channels. A large number of retailers faces such challenge and are unable to link these two separate databases (Verhoef, et al., 2010). This mostly rely on the usage of big data which is still quite unexplored. There is a gap between the data generated and ability of the retailers to use that data. The usage of big data in near future is increasing and the retailer need to install such tools which make the data more accessible and usable by them. According to (Neslin & Shankar, 2009), the customer integrity and the retailers who overstep the privacy boundary of a customer when collecting and analyzing the data could also be problematize.

2.5.3 Logistics Cost

According to (Scottsdale, 2017), retailers are struggling with the implementation of omni channel strategy. In a survey where retail CEOs were asked about the profitability, only few of them says that they are making profit while fulfilling omni-channel demands (Scottsdale, 2017). Despite having important benefits of omni channel such as higher sales, customer satisfaction, etc., retailers are still facing problems while implementing omni-channel strategy because of the higher cost related to logistics and returns. Omni-channel brings the online and offline channels closer to each other and makes them interconnected in order to increase sales comprehend by each channel as well as to keep the offline (brick and mortar)

stores locations relevant as well. However, the main challenge for the omni-channel retailers is the higher logistics and inventory cost. According to survey, 75 percent respondent shows concerns about their online operating cost which are increased because of the cost related to omni-channel returns (Scottsdale, 2017). On the hand, some of the CEOs also mention that returns are not eroding their profit. Returns are considered as the thorny problems in logistics because the customer expects that the retailer should provide a free return option which could eventually cut the profit by 10-20 percent annually. Additionally, retailer also struggling to match the inventory at each channel which is an important aspect of an omni-channel strategy. According to the survey, 25 percent of the respondents pointed out that the rising out-of-stock problem is a growing supply chain concern while 15 percent reported about the order fulfillment mistakes. Thirteen percent in them cited about the inefficient availability of inventory (Scottsdale, 2017). These issues can be provoked while managing inventory and delivery across all sales channels (BI Intelligence, 2017). To solve these issues and make the omni-channels strategy profitable, retailers need to refine their logistics operations. Retailers need to aggregate the customer orders data and logistics tracking system which could help retailer in managing inventory across all channels as well as leverage and cut the cost related to returns and final mile delivery (BI Intelligence, 2017).

2.5.4 Lead Time

According to (UPS, 2017), customer have higher expectations from the retailer when it comes to delivering a product in the form of speed, efficiency, cost and choices of delivery. Amazon was the first who launches Amazon prime delivery to meet the customer expectations of delivering a product for free within two days on ordering a large number of items (Stone, 2013). Recently many of the retailers also raised their standards of delivery by promising to deliver the products within 1-2 hours with a minimum delivery fee (Chen, 2018). The brick and mortar stores play an important role in the omni-channel supply chain as these stores are easily accessible by the customers for in-store pick-up and order fulfillment. The customers attitude is also evolving and expecting the uniform pricing, product availability and return options in all channels which forces the retailers to adapt such strategies to fulfil these expectations (Gallino & Moreno, 2019).

In omni channel supply chain, the biggest challenge is to satisfy the customer demands of various choices with lower prices than compare to the traditional retail. In omni-channel, the customers expect to get their order in time and place which is convenient to them. The

retailers face difficulties while dealing with a single product order and often to keep the high inventory which bring challenges for the retailer to use the storage and transportation efficiently (Jasin, et al., 2019).

2.5.5 Reverse Logistics

With the foreword logistics, a backward logistics capability in Omni-channel also needed to manage the relevant volume of returns (Handfield, et al., 2013). The integration across channels is yet challenging but requires an efficient and effective implementation to serve the customer in both ways. In Omni-channel, both physical and online store pushes each other sales opportunities due to which an increase interaction capabilities and capacity between the channels are required. A higher integration and interaction between the channels are increasingly important, since they serve each other customers. To better serve the customers, physical stores need to be relocated as it can serve the customers in the form of physical showroom, click-and-collect as well as being utilized for return logistics which boots the brand value (Deloitte, 2017).

The seamless approach of omni-channel presents a new challenge for reverse logistics and product returns. As the omni-channel move towards the integrated channels, integrated processes, unified information system, integrated inventories as well as the return management which becomes important as well as challenging too. The increase in the online sales over the last decade, highlight and make the return management crucial for customer satisfaction within an omni-channel supply chain. In omni-channel, an increase integration is required to manage the omni-channel returns. An increase integration of fulfillment of orders, return and balanced inventory is required for a successful omni-channel strategy. In instance, an unintegrated delivery and returns could lead to customer dissatisfaction. The balance inventory refers to inventory management which retailers needs to re-balance their inventory so that the returns placed in appropriate location and could be handled in an efficient way (Bernon, et al., 2015).

2.6 Motives of Omni-channel

The omni-channel tendency is increasing with the increase integration of channels. The deployment of new technologies enables the channels integration which create new opportunities for retailers to increase the customer satisfaction and profitability. According to (Cook, 2014) today customers have access to more advance technology as compare to

previous generations. Current generation is heavily influenced by the technology which changing their life style. This changing lifestyle means that customers now undertake the buying process at a time and place which suits them best. Omni-channel gives a freedom of choice in channel selection to the customer while pushes retailers to develop such a smooth experience which increases the customer satisfaction and profitability (106). The two such motivators are discussed in detail in this section.

2.6.1 Customer Satisfaction

The customers are now so mobile and highly connected, so that they embrace the technology in their daily life. The retailers who embrace the digital channels to reduce the overheads are more successful as compare to the traditional retailers. The research suggests that there are three types of omni-channel customers:

Type of Customers	Description
Young Generation	Primarily under-age of 30, constantly on the move and their main communication channel is SMS
Omni unified	Between the age of 30-50 years. Those are home oriented and well affluent and connected.
Social network users	belong to all age of people which are highly connected to interest or benefits rather than demographic.

Table 2 - Type of Omni-channel Customers: Source: (Cook, 2014)

The customer belongs to such segments demands retailers a convenient and enjoyable way in which the customers could undertake the buying process in their own hands from the initials of product research, selection and towards the final buying decision. This poses a challenge for the omni-channel retailers that how to deliver a consistent and more informative service which makes the customer life easier. To prevent such challenge, each channel requires to have an access to the same product range, data related to product and the promotions. In addition, each channel also needs to be aware of the customer preferences and their experience which they have had throughout the purchase journey via different channels. The channel should know what customer search for, what they view and what they compare, as well as what they reject and what they bought (Cook, 2014).

According to (Verhoef, et al., 2015), omni-channel is evaluated as an integral part of a customer experience because it gives a holistic perspective of a customer interaction with a retailer. The customer expects consistent and uniform services and same shopping experience across channels. The service level which is provided today is what was considered as the state of art services years ago (Blanchard, 2014). Now the customers are not distinguishing between channels any longer which put pressure on the retailers to integrate their channels (Wollenburg, et al., 2018). The customers now want to order a product on a channel which is different than the channel which is used for the delivery of the product. Customers expect that the power of convenience in the omni-channel world should complement the customer in a way which allows them to place an order of a product through online channel and get the product in the nearby physical store location or from a pick-up point (Mercier, et al., 2014).

2.6.2 Profitability

With the expansion of channels choices which are considered as disruptive development, expand the business practices of the retailers. The ongoing digitalization and online channel become very dominant which effect the customer buying behavior and eventually effect the retail market share (Verhoef, et al., 2015). Retailers now realize that an additional channel should be added to enrich the customers value proposition and to improve the operational efficiency. So, retailers now allowing customers to place orders online and pickup their orders from physical stores which eventually helps offline retailers to generate store traffic and increase their sales (Clifford, 2011). According to (UPS, 2015), such a cross selling and delivering options helps the offline retailers to increase their sales because 45 percent of the total customers who come to pick-up their order from physical store, made a new purchase before leaving. To complement such practices, the retailers faces an immense pressure to integrate both the online and physical channels at each step of the customer shopping experience (Rigby, 2011). The dichotomous physical and online retailers need to establish an omni-channel distribution strategy to serve the customer through better order fulfillment, delivery options and post-sale services (Ishfaq, et al., 2016). The advent of the online channel put pressure on the traditional retailers to add new channels while removing the barrier between them and providing cross channel services which could make the services possible such as click and collect, order in store and deliver at home, returning online order to physical stores, showrooming and other combination of online and offline retail activities

(Piotrowicz & Cuthbertson, 2014). Such services will increase the feeling of customer empowerment and will leads towards a higher trust and customer satisfaction which could in-turn increases the profitability of a retailer (Zhang, et al., 2010).

2.7 Sustainability and Reverse Logistics in Omni Channel

2.7.1 Omni-Channel Sustainability

The increasing environmental issues, sustainability of products and energy consumption factors enforce the organization to rethink about their market position as well as to redesign their strategies and their business processes. According to (Enviromental Leader LLC, 2009), a recent survey shows that 82 percent of the enterprises show their willingness in green marketing and realizes the opportunity to manufacture and sell sustainable and recyclable products at reasonable prices because of the green image and social responsibility. In past, manufacturers were recalcitrant that remanufacturing, recycling or refurbishing are not economical and the enterprises struggle to balance the competency between the economic and ecology. As the sustainability is related to climate change, global warming and the impact of it is ever worse, the legislation enforced the manufacturers to implement the sustainability practices and take back the used products in order to reduce the carbon footprint. Manufacturers realizes the need for developing the green competency to have an effective and efficient reverse logistics. As the remanufacturing can reduce the waste and landfill, save energy and in certain cases, it may be found as cost effective as compare to producing a product from the new raw material (C.K.M.Lee & Lam, 2012).

The potential rise in the convergence of online and offline stores which resulted many retailers in moving towards Omni-channel for a seamless and better shopping experience, in addition, the return logistics also plays an important role in Omni-channel fulfillment, environmental sustainability and customer satisfaction. The availability of multiple options in an Omni-channel setting foster that the customers can fulfill their purchases through their smartphones, laptops or tablets which are the essential channels for retailers to grow their sales while this also help in reducing the carbon foot-print as the customers no need to go to a physical store by his own car, public transport or any other means which could eventually resulted in decreasing the traffic congestions, noise and hazardous gases. Additionally, the retailers also need to offers various return options through different channels such as retail physical stores, drop off point and postal services (Barki & Parente, 2014). A well develop

return management is necessary for environmental sustainability and customer satisfaction. But handling the return products is crucial in omni-channel. The main problem in Omni channel with return management is the inventory management as it is needed to develop a mechanism to better know that from where the inventory came from as well as if returned where it will be returned i.e., either in store, in warehouse or in an e-commerce distribution center or a physical distribution center.

2.7.2 Reverse Logistics

Omni-channel retailers faces a common problem in return management and handling of product returns as the customers have many options to return the product. Customer are now expecting an easy and efficient way of product returns. Retailers need to build-up a return logistics mechanism to manage the relevant volume of returns (Handfield, et al., 2013). The retailers need a logistics distribution system which offers both forward and backward process to better serves the customer in stores and simultaneously offers direct delivers options i.e., store pickup, home delivery as well as return of product in store, drop off point or through postal services (Hubner, et al., 2016).

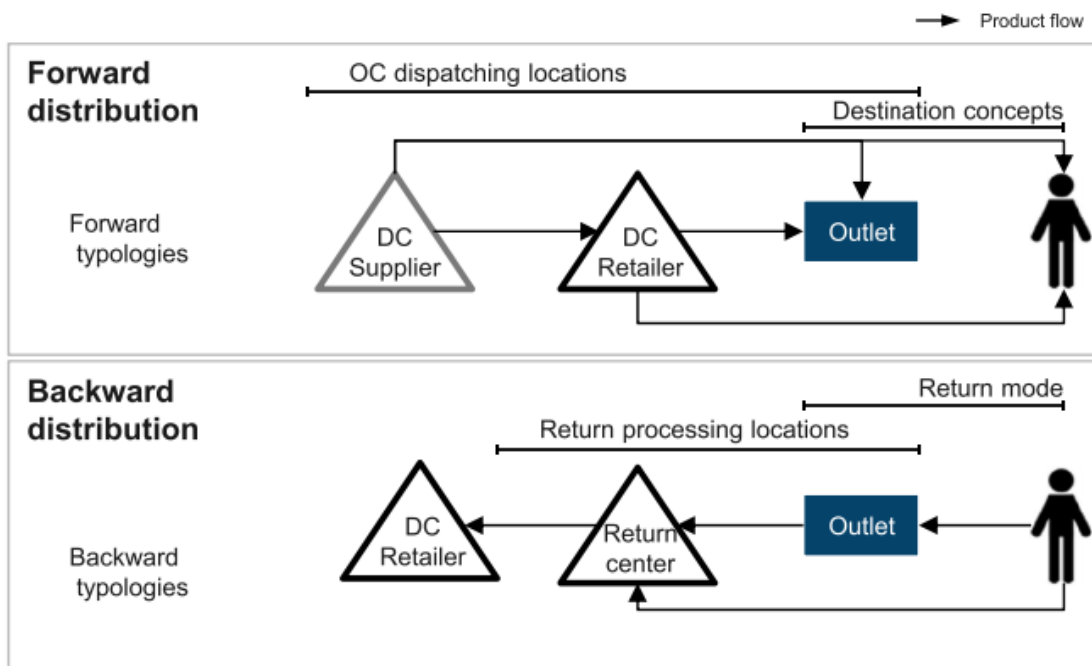


Figure 4 - OC Forward and Backward Distribution, Source: (Hubner, et al., 2016)

In omni-channel, forward logistics consist of multiple nodes through which the order has been fulfilled. Those nodes are store delivery, home delivery and pick-up location. These all start from the point of central warehouse from where the goods are distributed and reaches

to final customers through these different channels. With forward logistics, reverse logistics also initiated through these different nodes or channels. The framework of omni-channel distribution consists of interdependent channels through which both forward and backward logistics takes place. The backwards logistics start from either returning at a physical store, or to a local warehouse or to a main distribution center (Hubner, et al., 2016).

Before Omni-channel, the B&M retailers process the faulty and rejected good in the store but now with Omni-channel, the return process is inadequately complex. Integration across channels is widely needed to allow the returns of products bought at distance channel. Buying online and returning at a physical store is a complex return option because the retailers hesitate to accept such returns due to difficulty faced in terms of challenges associated to IT infrastructure and integration of various channels (Ang & Tan, 2018). Integration across channels is ever changing and the challenge is to implement it in an effective and efficient way (Bell, et al., 2014; Herhausen, et al., 2015). The recent and ongoing transformational challenges forces retailers to structure the Omni-channel distribution system in such a way which fulfil the delivery and return options to match the customer preferences which are evolving over time (Hubner, et al., 2016).

2.8 Omni Channel Value

The modern Omni-channel shoppers has transformed the retail business (Baird & Kilcourse, 2011). The more well-informed and empowered shopper move across the channels and expect seamless shopping experience (Ishfaq, et al., 2016). The Omni-channel shoppers spent 15-30 percent more time than the traditional shoppers (DHL, 2015) and the retailer with a strong Omni channel customer service can get a 91 percent better customer retention then those with the weaker-one (Minkara, 2013). Retailers are rethinking about customer engagement (Mena & Bourlakis, 2016) and for this, retailer are turning towards the logistics specialists to provide a better and personalized logistics services which enables a flexible fulfillment of orders and better delivery options (Varhoef, et al., 2015). Logistics is the backbone of an Omni-channel successful strategy because as of survey in which 410 global retail and consumer goods CEOs were asked about the ability to successfully meet the Omni-channel demand and stays profitably, they point out towards logistics and transportation as the key to satisfying Omni-channel customer demands (JDA, 2015).

Customers mostly look for convenient, enjoyable means which fulfil their desires or needs. The customer mostly focuses on options which offers good value, both in terms of money and the time they spent. Omni-channel brings an opportunity to customer to experience and undertake the buying terms at their own hand and on their own will (Cook, 2014). While selling products, retailers are managing two elements: the physical product as well as the services provided to facilitate that sale. In Omni-channel era, retailers identify speed as the essential service quality and hence implementing strategies to reduce the delivery time (Stevens, 2017). Omni-channel based on the proactive and personalize customer management where it focuses the maximum customer value within a logistics market places. Merging the online and offline is one of the main goals of an Omni-channel. In today's retail business, example like Audi City which opens its first Digital Showroom which provide an interactive and customer focused experience. With this Digital Showroom, a customer can see every possible combination of entire model range which a customer never experienced before. The customer can use multi-touch tablets in order to look for priorities they desire for, they can select design, change color etc., and a full-size car with those specifications presented to the customer on a video wall. Another such example is set by the Burberry's store based in London, where they use the Radio Identification Technology (RFID) tags which are embedded on a fashion item and accessories which enable customer to view the multimedia content on more than 100 digital mirrors in a store which help the customer by displaying information and gives a physical appearance of that product before they go to try it. The same technology is used by Hointer's clothing brand based in US, where a customer scans the barcode tag on a product and get all the information on the mobile app. Hointer aim is to ensure that the in-store shoppers also get the same range of info as the online shoppers have. The micro-warehouse is linked with the fitting room and by clicking on the app, the customer have the item sent directly to fitting room and try it hassle free (DHL, 2015).

2.9 Omni-Channel as a Disruptive Innovation

Everybody bandied hear about Disruptive innovation in today's business world. It sometime stands controversial and sometime embraced. Some people believe it didn't exist or the theory behind is incorrect while the other perspective is, disruptive innovation does exist and has been proven over time. The term Disruption is described in HBR as, Disruption is a process whereby a smaller company with minimum resources successfully challenge an already established incumbent business (Christensen, et al., 2015). Clayton Christensen

Institute wrote that disruption is a positive force (Akdeniz, 2014). Disruptive innovation is not a breakthrough of technology but rather is an innovation that makes products or services more accessible and affordable and hence make it available to the wider population (Akdeniz, 2014). By definition, disruptive innovation is defined as, it is an innovation which disrupt an existing market and eventually replaced the old with the new (Akdeniz, 2014). Disruptive innovation theory is described first by Christensen in 1997 and originally the theory focused on disruptive technologies. Over time, the theory is explained and expand to all kinds of disruptive innovation. According to (Markides, 2006), this is a mistake because different innovation has different kind of competitive effects and produce different kinds of markets. Every distinct innovation should be treated differently (Markides, 2006). In (Christensen, et al., 2015), Christension emphases that every distinctive innovation requires a unique and specific type of strategic approach. Thus, the same level of disruptive innovation will not apply to every innovation in a shifting market.

Most of the time sustaining and disruption are mixed together. Disruptive theory differentiates the disruptive innovation from the sustaining innovation. Sustaining and disruptive innovation are widely different terms and having different implications. Most of the technologies foster improved product performance which are recognized as sustainable technologies because sustainable technology is based on the improvement of a performance of an established product which alongside the dimension of the performance, valued historically by the customers in the major markets. Examples like the clear picture of a TV, and a better mobile perception are the major improvements in product by a company and these can be an incremental advantages or major breakthrough but these all are additional add-ons which enables a firms to sell more products to their existing profitable customers (Christensen, et al., 2015). The disruptive innovation on the other hand, is considered as inferior by the most of the incumbent customers. Products based on disruptive innovations are based on technology which are typically cheaper, simpler and frequently more convenient to use (Akdeniz, 2014). Typically, customers are not willing to switch to new offering because of its less expensiveness but instead wait till it increases the quality enough to satisfy them and once it happens, they happily accept it with a lower price. This as a result, disruption also fosters to drive prices down in the market (Christensen, et al., 2015).

The retail industry and shopping practices are going under a massive transformation. Major retail chain closes their physical stores and a new format of stores are opening. The example of Sears and Macys are the best fitted examples of such transformation. Sears and Macys

closes their physical stores and relying on new ways to overcome market challenges (Snyder, 2016). Technological innovation endures the dominance which is also experienced by the traditional brick and mortar stores. Technology is one of the agents of disruption which is present in our hands in the form of smartphones, tablets, laptops and many other gadgets which are transforming the future of shopping (Shankar, et al., 2010). The shopping journey of a customer is now changing. The path used by customers to purchase a product is no more linear. Today, it crosses and passes through numerous channels and different touch points. The customer's shopping is now more like a “fighting map” than a funnel. Their shopping journey based on AIDA which stands for Awareness, Interest, Desire and Action (Fulgoni, 2015). Their journey starts from online search to offline channel gratification which poses challenges to retailers and market. Despite the significantly increasing trend in online shopping, yet a larger proportion of buying decisions still made in physical stores and the today's physical stores are designed differently as compared to the traditional physical stores (Hui, et al., 2013). Retailers are evolving towards a “smart retailers” with innovative ideas to provide seamless and superior shopping experience to the always connected customers (Iyadurai & Subramanian, 2016). Omni-channel brings a disruptive innovation as it brings an opportunity to customers to do cross-shopping and interact with the brand in numerous ways at the time and place which suits them. To survive in such a challenging environment, retailers are implementing the Omni-channel strategy in order to remove the boundaries between the physical and digital channels which blends their operation into one seamless experience with multiple touch points. Omni-channel helps the retailers in gathering the valuable and relevant data about the customer's buying behavior which reduces the challenges faced by the retailers while providing seamless and consistent shopping experience (Guillot, 2015).

2.10 Summary of Literature Review

In this literature review, several key features of omni-channel have been explored and omni-channel retailing has been defined. First, omni-channel is described and then different types of sales channels and their integration importance has been explored. It is evident that despite the growing importance of online channel, physical channel still plays an important role in omni-channel retailing landscape. However, both physical and online channel have their own distinct benefits and advantages. Multi-channel retailing strategy has been studied and explored which is a combination of several channels, omni-channel later on has been understood on the framework of multi-channel retailing. In omni-channel literature, omni

channel retailing is defined in the customer point of view as well as mapped to the retailers current omni-channel implementation practices. Furthermore, omni-channel supply chain challenges faced by retailers while delivering seamless customer experience, are highlighted and described briefly. Additionally, motives of omni-channel implementation are broadly defined. There are certain number of studies which focuses on the omni-channel supply chain challenges face by a retailer. A very rare and a smaller number of studies describe that how an omni-channel retailer can implement an efficient and responsive supply chain approach. In conclusion, the omni-channel disruptive innovation and omni channel value has also been extensively described on the bases of previous studies frameworks and explained in the best practices of an omni-channel retailing.

Chapter 3: Research Methodology

In this chapter, the methodological considerations are discussed and presented. The aim of this chapter, is to provide a transparent view of the research that how it is conducted and evaluated in order to rationalize the decision. The structure of this chapters is as follows: first, methodology and techniques applied in this research are presented. After this, the research design is defined which is followed by the data gathering in the fourth step. In the fifth and final step, a detailed discussion about research quality is presented.

3.1 Methodology and Techniques

Methodology is basically concerning with an individual development as a researcher or investigator in one direction or another (Arbnor & Bjerke, 2008). According to (Arbnor & Bjerke, 2008), methodology is like mode of thinking or acting which contains number of different concepts, to describe the stepwise-process and the relation between them while creating or searching for a new knowledge. In business, there is allot of many different views and thinking regarding how and when to use the specific method for studying or researching a reality. Additionally, there is different opinion on what really “method” means. These opinions refer to methodological views (Arbnor & Bjerke, 2008). These different opinions create an ultimate presumption which we study about as a researcher or investigator. The ultimate presumptions later are become base for these different views which present different ways of understanding as well as explanation and improvement (Arbnor & Bjerke, 2008).

Since the aim of this research is to find the impact of omni-channel on supply chain issues, the more valuable source of information is the previous research held on these issues. To generalize and being able to create and present a clear picture of omni-channel impact on supply chain, a more detail descriptive case study approach is being implanted and evaluated based on the previous findings about the topic. The omni-channel concept has received less scholars attention and are investigated in few studies, there is also little to no effort has been given in decoding the major omni-channel impact on supply chain which could present a comprehensive review of the current knowledge (Hübner, et al., 2016). To analyze the factors and aspects of omni-channel supply chain issues, there is need to gather relevant data as the phenomena of investigation is quite complex which is affected by number of factors

and needed to be evaluated since those factors also affect the omni-channel implementation process.

To start the research and proceed the finding regarding the topic, the first step was to conduct a pilot study in which multiple of data bases were used i.e., science direct, elsevier and emerald which contain and present largest abstracts and citation of multiple journal articles, conference proceeding, books and other peer-reviewed literature. The aim behind the pilot study was to conduct and reveal the development stages regarding the selected topic and for this thesis as well as to measure the volume of relevant data and information available for conducting the research. The selected preliminary keywords with the following search strings for this thesis topic were: omni-channel retailing, omni-channel supply chain, omni-channel supply chain issues, etc., and the articles are selected on the bases of scope of Article Title, Abstract as well as data ranges from all years to present which yielded and limited to a single digit hits. The lack in the research regarding omni-channel supply chain lead to a conclusion that the research about the topic is at earlier stages which need to be explored and explained in further research. Additionally, a need of approaching omni-channel concept, other research stream regarding the topic is extremely needed in order to inform the scholar and researchers to direct their future efforts towards this particular topic (Petticrew & Roberts, 2006).

3.2 Research Design

This thesis aim is to find and generalize the current and the future trend of omni-channel in the retail market. Additionally, the supply chain challenges in omni channel are the main objective to be covered. Yet, there is no existing plausible theory of omni-channel and with due course, our research question is widely scoped to cover the broad idea of omni-channel as well as supply chain consequences. According to (Eisenhardt & Graebner, 2007), the omni channel is a research driven phenomena but there is a lack in the existing literature as well as their research questions which are broadly scoped, needed to narrowed down. The existing literature review shows that the supply chain in omni-channel is not widely studied and yet not received much attention which is why a needed theory is still lacking. This research study aim is to analyze and find the key supply chain issue in omni-channel which could support the seamless omni-channel customer shopping experience and to create an omni-channel model which to be based for understanding and implementing the omni-channel strategy.

The quantitative data is limited and is not available on a wider scale and thus lead to qualitative based descriptive case study approach. According to (Eisenhardt, 1989) qualitative research approach and case study often goes in parallel. Additionally, the wide spread of the COVID-19 which emerged from the eastern part of China and spread around the world enormously, make difficult to collect the relevant primary data. In Norway, the COVID-19 cases emerged from the start of March 2020 and by the Government of Norway intervention, the public and private offices as well as public places has been closed which makes difficult for us to be in contact with the companies from whom the data were to be collected. By the help of Steffen Larvoll, four companies were willing to give their valuable data about omni-channel implementation and current proceeding which will enormously help us to give the research a more realistic view. But unfortunately, due to the COVID-19, the data from those companies is not collected which is why the framework of thesis has been changed and a general qualitative case study approach has been implanted.

The nature of this thesis is directed and based on a general case study format. According to (Benbasat, et al., 1987; Yin, 2009), the case study format is useful when you try to answer questions based on “why” or “how” as well as when you have to explain the current circumstances and when the case is based on the contemporary phenomena of a natural context. Furthermore, in case study, there are multiple of methods for collecting data from single or multiple entities (Benbasat, et al., 1987). According to (Eisenhardt, 1989) the inductive case study approach also tries to create understanding of the dynamics in a single setting as it includes multiple of case examples. Hence, our research approach is also based on inductive case study approach and thereby taking it into account, basis on multiple theories, a more generalizable approach is selected. (Yin, 2009) stresses that it is important to build a theory before starting the field study and consequently, in this research, the case is evaluated on the basis of the already developed framework which help in developing the theory further ahead.

3.3 Data Collection

The data has been collected from multiple sources. Before this, a preliminary meeting has been held with Steffen Larvoll who had the four-client organization from where the primary data were to be collected. Steffen Larvoll suggest to write up the relevant interview framework which will later be send to the interviewees but due to the pandemic COVID-19,

the relevant primary data from the companies did not collected. Due to the current situation, Supervisor Per Engelseth suggested to conduct an interview with Steffen Larvoll as he has been working on omni channel since long and have a good understanding of omni-channel challenges. The main source of data was then collected from the semi-structure interview with Steffen Larvoll. Additionally, secondary data from other multiple sources such as research articles, books, published reports and other previous research held on omni channel supply chain management are also collected while creating a theoretical framework for this thesis.

3.3.1 Semi-Structure Interview

According to (Bryman & Bell, 2015), semi-structure interview has been widely used as one of the common methods for gathering the relevant data in qualitative research. Multiple interview structure has been followed by the researchers to conduct an interview i.e., structure, semi-structure and unstructured and the most important is to select the suitable method according to a specific research approach (Corbin & Morse, 2003). Semi-structure interview has been mostly followed by the researcher as the most prominent method for conducting an interview because it directs as well as gives freedom to the interviewee to freely responds to the question in such a way which seems most appropriate and suitable to them (Patel & Davidson, 2011). As the omni-channel is in the initial stage, there is a huge lack in the research in terms of availability of sufficient knowledge which could help the organization in implementing the effective and efficient omni-channel supply chain. Additionally, it will also be difficult for companies to cover all the aspects of the omni-channel as those all are not cover in the current academic literature. Thus the semi structure interview has been selected due to the fact that it allows the responders to freely speak and share information which seems most important to them (Bryman & Bell, 2015). It also encourages the interviewee to speak freely as the interaction between the interviewee and interviewers are based on open dialogue. Additionally, in semi structure interview, it can also be possible to make a pattern from the respondents' answers to collect the relevant data and develop a deeper understanding which could later be used in developing the framework for this new concept as well as developing hypothesis to look after the challenges which are faced by an organization while implementing omni-channel strategy.

3.3.2 Interview Framework

The interview framework was design in such a way in order to link it to the omni-channel literature as well as the supply chain challenges a retailer may faces during the change process. The questions are based on the themes of omni-channel and supply chain challenges which arrived with the implementation of omni-channel strategy. The main research question is “*What consequences the Omni-Channel may have for the supply chain?*” with two sub questions which are related to logistics cost, customer value and omni-channel disruptive innovation. Most of the interview framework questions are related to supply chain challenges, customer value and change management. For example, *how omni channel effect logistics and supply chain in an organization?* refers to the omni-channel supply chain consequences. Furthermore, the rest of questions are related to the omni-channel customer value, logistics cost, disruptive innovation, change management, omni-channel motives as well as how omni channel effect the overall business strategy. The questions regarding these were asked to get the direct response from the interviewee and to take their point as well as to connect it theoretically with the academic literature of the omni-channel. The question on omni-channel motives is “*why do you think an organization should implement an omni-channel strategy?*” refers to the motives of a retailer that why they should implement the omni-channel strategy and bring the change process in their business practices. The interview is conducted in the English language and the full interview guide is presented in the appendix one.

The interview respondent was Steffen Larvoll, Market Development Manager at DRIW. The primary data regarding the research objective is collected from his interview. He is experienced and have work on multiple of omni-channel project for their client organizations. He is very knowledgeable when it comes to omni-channel logistics operations and challenges. Therefore, this interview conducted with him provide a valuable data which helps in compiling this thesis and hence used as a primary data source for empirical findings chapter of this dissertation. Down below, the interview schedules with dates are presented.

Date	Activity	Respondent	Source
23, April 2020	Send Interview Guide	Steffen Larvoll	Email
05, May 2020	Interview Conducted	Steffen Larvoll	Skype Business

3.3.3 Primary Data

The primary data source is the information that the authors gather explicitly which is directly related to the research purpose (Saunders, et al., 2007). Primary data can be of qualitative and quantitative data type. In qualitative research approach, the data can be collected through observations, interviews or audio & video material (Hox & Boeije, 2015). Since the approach of this thesis is qualitative, the primary data for this thesis is collected through a semi-structure interview.

3.3.4 Secondary Data

Secondary data has been used as the main source for collecting the data while producing this thesis. Because of the COVID-19, the primary data sources, the interviews with the different companies has been cancelled, so secondary data is widely used as the reliable and main data source. For secondary data, different academic articles, books and scientific reports were used to collect and retrieve the data from. The Himolde University College library database Oria, Emerald, Science Direct, Elsevier and Google Scholar has been used while searching for systematic and relevant data about omni-channel. They keyword used while searching for data includes: Omni-channel retailing, Omni-channel supply chain, omni-channel supply chain challenges and omni-channel as a disruptive innovation.

3.4 Research Quality

Research quality is to check the credibility and legitimize the research to the readers. It is an essential part in the research as it guarantees that the data is trustworthy, specific and can be applicable to other setting as well as to provide consistency (Lincoln & Guba, 1985; Bryman & Bell, 2015). According to (Bryman & Bell, 2015), in qualitative research it could be more questionable as the focus is more on the subjective approach rather than the measurements. To evaluate the qualitative research, (Bryman & Bell, 2015) suggests to examine the quality of research by trustworthiness and authenticity. Trustworthiness has four parts which includes credibility, dependability, transferability and conformability. This thesis is being evaluated on these factors to ensure the trustworthiness and authenticity.

Creditability is the initial and first step in evaluating the research to examine its trustworthiness. It shows how trustworthy and authentic the study is. Credibility also concerns with the perception of the social context of a research which can be vary between

several sources. Thus, credibility is an essential and most important part of a research (Bryman & Bell, 2015). To measure and address the credibility, first a pilot study has been conducted where a preliminary case study context has been discussed and further implication about omni-channel has been noted and considered. Additionally, the secondary data including academic literature and relevant theories has been studied on basis of which, the research framework as well as the interview guide has been compiled.

Transferability is being considered as the second most important factor of the trustworthiness and authenticity. According (Bryman & Bell, 2015), the transferability is to measure the generalizability of the thesis. This study is more about to define the omni-channel and supply chain consequences which may be faced by an organization while implementing the omni-channel strategy. It also evaluates the degree of change process as well as the disruptive innovation. So, because of these objectives, it can be argued that the generalizability of this thesis is quite low. However, it can suggest and help a manager by giving indications to readers to highlight the stepwise process required while implanting the omni-channel strategy.

The third and fourth factor is the dependability and conformability which consequently represent the consistency and level of biasness. Dependability is the consistency in the research which means that the research is consistent and can be repeatable by another researcher in a different setting. According to (Bryman & Bell, 2015), achieving consistency in a thesis is like auditing the research by keeping the comprehensive documents of the research as well as to clarify the process and make samples and clear notes from the interviews which is used to transcribe the interview later on.

The conformability is about the measuring the level of biasness of the participant which is shown by them towards their research (Bryman & Bell, 2015). Since it is a qualitative study based on a particular subject to complete the specific objective, so it is quite impossible to check the conformability as well as not necessarily desired too. In such a qualitative research, the conformability can be measure by studying and examining the previous research and evaluate them while accepting or rejecting them in relation to the research objective. This evaluate the importance of the selecting the relevant literature as well as keeping the authors personal value aside which is greatly considered during the entire research process.

Chapter 4: Omni-Channel Case Description

In this section, omni-channel case description has been presented which is accompanied by omni-channel Model. First Case description has been presented which is followed by omni-channel model in the second section.

4.1 Omni-Channel Case Description

4.1.1 Omni-Channel Journey

Omni channel is the concept of the multiplicity of sales channels and integration of the physical stores with the virtual one's. The purpose of the omni-channel integration is to serve the customers in a more convenient way which allow them to interact with a retailer in various forms. The omni-channel strategy is based on the idea to let the customers uses the convenient means of shopping. Omni-channel is supported by e-commerce which makes it possible to offer product on numerous channels including online channels, mobile applications, social networks and physical channels etc., (Hubner, et al., 2016).

The advent of technology realizes the retailers need to integrate their channels to provide a better customer experience. The concept of omni-channel is the emerging trend behind such channel integration. In omni-channel the customers are free to shift between the channels and the platform they use to reach retailer (Piotrowicz & Cuthbertson, 2014). The omni-channel has transformed the traditional retail business (Baird & Kilcourse, 2011). The customer now expects the seamless and convenience shopping experience (Ishfaq, et al., 2016). Omni-channel make it easy for the customers to shop in more convenient and essay way. Omni channel fulfil the customers' needs and desire in a more efficient and enjoyable way by considering the utilitarian and hedonic value while providing seamless shopping experience across the channels. The hedonic and utilitarian values are now more valued by the customers. The customers now focus on offers which gives them good value, both in terms of money and the time they spent (Cook, 2014). The utilitarian value is the customer expectation to find and buy the product they needed while the hedonic value is the shopping experience the customer expects in the form of convenience and enjoyment while shopping in a particular store (Chung, 2015).

Omni channel bring disruption in the market and transform the traditional retail businesses. The omni-channel disruptive innovation challenge the existing market practices present in the form of multi-channel, cross-channel, single channel approach etc., and bring more convenience in the customer shopping journey. The disruptive innovation is an innovation which disrupt an existing market and make a product or service more convenient and accessible. By definition, disruption is the changing of the existing business practices and eventually replaced the old practices with the new one (Akdeniz, 2014). Omni-channel changes the business activities and allow customers to interact with the retailer in many ways and at the time and place which suits them best. To survive and to serve the customers in a more efficient way, retailers start implementing the omni-channel strategy in order to integrate the different channels and create a seamless experience for the customers (Guillot, 2015).

Retailers in Norway, and rest of the world, are struggling with ever changing customer demands. The expectations are all pointing towards a cheaper, faster, more flexible and greener fulfillment of orders. The customers do no longer accept that the wholesaler's controls when, how and where the goods are being sent, and cost issues related to last mile are destroying the margins. The urgency for transparency on costs across the value chain is something that is desperately needed, but something very few can say that they have. The logistics department playing crucial role in it as they are aware of the issues, but they are facing problem while communicating it to the top management. The top management see the collapsing bottom lines but doesn't understand the complexity of the issue. The main challenge for the retailers is to implement a strategy which overcome challenges for the retailers in the form of customer satisfaction, cost reduction, order fulfilment, reduced lead time and fulfilling green logistics.

Omni channel strategy implementation is growing day by day. Many of the organizations now changing their business doings and adapting the omni channel strategy. The challenges face by retailers such as a high competition from the market and the sprint of a competitive advantage as well as to the cutting-edge cost, pushes retailers to work hard to meet and fulfil the tough customers' demands while at the same keeping cost down. The technological advancement also pushes retailers to adopt such trends to sustain in the market. The advent of the internet, the online content and website as well as the new gadgets such as smartphones, tablets, wearables etc., transform the way of business doing. This heavily

affect the traditional retailers while reduces their market shares as the customers now look for multiple ways to comprehend their sales. The traditional retailers who are based on single channel are almost gone off from the market. The blurring boundaries between the offline and online channels is also been disappear and the retailers now need to invest in technology to design and optimize their strategies which could add value to the customers. In such a case, cost is main focal point for the retailers as well as the profit margin too. The trend of adaptation of new technology to add new channels to comprehend sale are also crucial for the retailers to take them under their considerations.

The central focus of the research is on challenges associated with logistics and handling of the product. However, cost, value and disruptive innovation are also been considered as the sub-topics for the evaluation. The points which to be covered in this dissertation are:

- Challenges associated with omni-channel distribution
- Cost and efficiency in shipping the final mile delivery
- Technological impact on the customer buying behavior
- Adding value to the customer shopping experience
- Green logistics and handling return
- Omni channel as a disruptive innovation

4.2 Omni-Channel Model

E-commerce and the traditional brick and mortar merged together into a new concept called omni-channel which allow customers to shop when, where and how they want. The traditional brick and mortar stores need to develop new channels in order to become an attractive brick-and-click store. The online retailer faces an increase number of order from customers and it is estimated that by the end of 2020, e-retailers will have a 40 percent of market share (Sopadjieva, et al., 2017; IGD, 2014). To efficiently deliver the customers' orders, a comprehensive and integrated omni-channel supply chain model is needed to make the last mile delivery and click-and-collect not only possible but profitable. Therefore, an efficient supply chain structure is needed to fulfil customer orders by delivering products in mean time (Kotzab & Schnedlitz, 1999). Omni-channel retailer in Europe, apply different techniques to deliver and fulfil customer orders such as home delivery, pick-up from store or from a pick-up location, fulfilling orders from central warehouse etc. These different delivery options require different configuration which includes individual planning, picking and delivery options. According to (Hübner, et al., 2016), a more integrated and

interconnected retail supply chain is required to framework the coordination across different channels. (Hübner, et al., 2016) present a supply chain front-end and back-end distribution model which fulfills the omni-channel customer orders. The model based on (Hübner, et al., 2015) which identifies the omni-channel warehouse operation and logistics management as well as the increase importance of the integrated channels. Although, according to (Hubner, et al., 2016), the supply chain framework identifies in (Hübner, et al., 2015) did not represent the comprehensive view of the interaction and possible integration of the online and offline channels. (Miller, 2001) argue that a proper framework is required to define the objectives, constraints and alternatives for fulfillment of orders. He stresses that a compromise between the integration interdependencies, practicability and breaking down the overall planning process into one unified module is needed.

(Hübner, et al., 2016) divides omni-channel supply chain model into two major blocks; back-end fulfillment and front-end fulfillment. Back-end fulfillment defines the framework and procedure of picking, packing and delivery points where in front-end, the last mile delivery importance and challenges are presented. Those challenges and concerns are of particular importance for a retailer in terms of cost of last mile delivery, delivery mode, lead time and returns options.

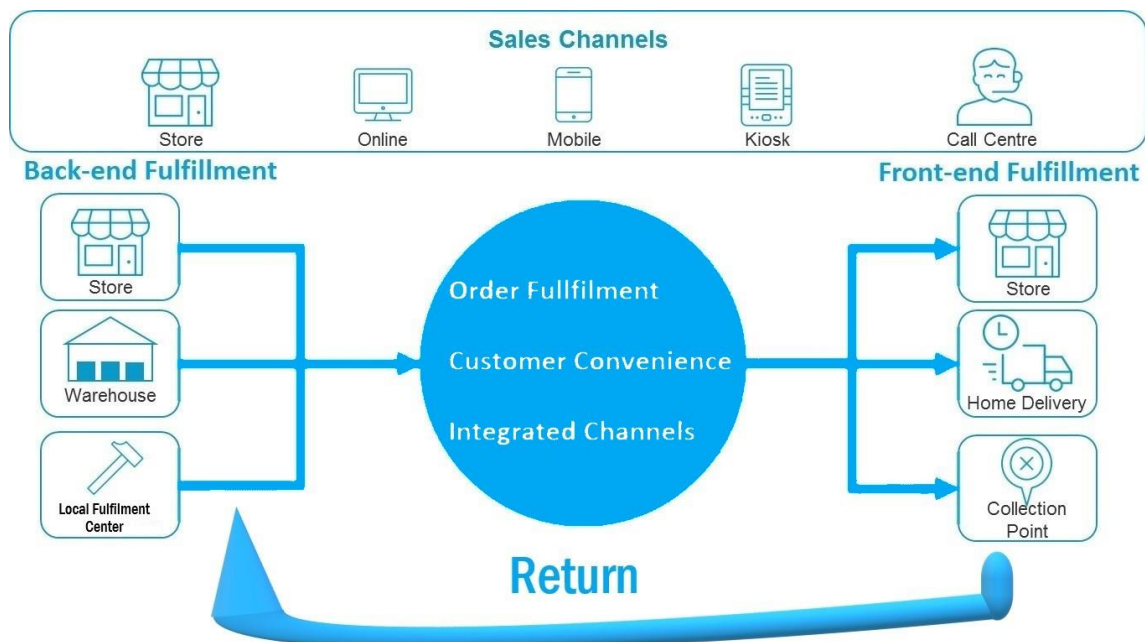


Figure 5 - Omni Channel Model, Source: (Hubner, et al., 2016; Alvin, 2018)

4.2.1 Back-end Fulfillment

The back-end fulfilment represents the different options available for picking, packing and delivering a product. Those option are, brick-and-mortar store, central warehouse and a local fulfillment center. These different bank-end channels are used by a retailer to fulfil online and offline customer orders.

4.2.1.1 Fulfillment from Physical Stores

The traditional brick and mortar store who wants to enter the omni-channel retailing, usually use their brick and mortar store as a primary option to fulfil online customer orders. The merchandiser in the brick-and-mortar stores, pick the product from the shelves in a physical store to fulfil an online order. Most of the retailers uses this as an entry level model because of the less cost associated with it as well as it allows a retailer to offer a full range of products to an online customer with existing structure and have a proven competitive advantage of shortest lead time. However, in a conventional store, it is difficult and expensive to operate the picking operations because the space restriction in the conventional store which doesn't allow the retailer to fulfil maximum online orders and restrict them to a limited e-fulfillments (Durand & Gonzalez-Feliu, 2012). The existing structure should be altered to achieve efficiency in picking and fulfilling online orders. Additionally, an out of stock risk is also associated with the physical store due to the time gap between the online order placement and picking that particular product from, so as other customer in store in meanwhile could buy that item. This out of stock challenge also pushes retailers to keep safety stock for an online order and due to the uncertainty in demand, could eventually lead to a higher inventory cost. Furthermore, the retailer has to decide from which store an online order should be fulfilled considering the picking efficiency in each store as well as delivery distance, lead time and delivery cost (Hays, et al., 2005).

4.2.1.2 Fulfillment from Local Fulfillment Center

Fulfilling online orders from the local fulfillment center avoids any such distraction and challenges as that in a physical store. According to (Hubner, et al., 2016), fulfilling an online order from a local fulfilment center can be more efficiently done as the fulfillment centers are specially designed for such orders and can handle larger volume of orders. The inventory stored in fulfillment centers can easily be measured and track which help in reducing any loss of sale or customer dissatisfaction as well as to keep intact the available inventory and help in avoiding to store any extra unit of product. Also, the distance between the local

fulfillment centers and the customer homes are comparatively shorter than the central warehouse which also help in reducing lead time as well as delivery cost and eventually increase customer satisfaction (Hubner, et al., 2016). Tesco, a UK based grocery retailer, initially uses its existing physical store to fulfil the online orders along the offline customers purchases. With the increase in demand, the Tesco shifted its online orders to a new build local fulfillment center to efficiently fulfil the online orders. Tesco merges all its channel and make possible that the customer gets the convenience while shopping in terms of online order placement as well as to have an easy and enjoyable shopping experience at the physical store. They shift the online order to a nearby fulfilment center called “dot com only store” or sometime called as “dark store” to avoid disturbance in a physical store that the customer may face. Tesco now run six of such local fulfillment centers in UK and fulfil 50 percent of the total online grocery market (Hubner, et al., 2016).

4.2.1.3 Fulfillment from Central Warehouse

Picking and fulfilling customer order and store delivery from an integrated central warehouse needed more comprehensive process. Most of the retailer who also have an online channel, usually use central warehouse to fulfil online customer orders. According to (Hübner, et al., 2016)), an extensive and comprehensive picking system is needed at the warehouse to master and differentiate between the store delivery and the online customer order which either to be delivered direct to customer home, to a pick-up location or to a nearby physical store for pick-up. With central warehouse, there is some advantages of less cost of delivery as the orders are delivered jointly or in a bunch from the warehouse to a customer desired location i.e., home, pick-up location or to a physical store. Additionally, the central warehouse has a consolidated inventory which leads to a higher turnover, lower inventory cost as well as more efficient in picking order from as compare to other options i.e., physical store or local fulfilment center. The disadvantage of the central warehouse is the longer distance to the customer which increase the delivery cost as well as the lead time and could eventually lead to customer dissatisfaction (Hubner, et al., 2016).

4.2.2 Front-end Fulfillment

Front-end distribution is the second building block of the omni-channel distribution which is concerned with the last mile delivery. According to (Kuhn & Sternbeck, 2013; Vanelslander, et al., 2013), the last mile delivery is utmost important for a particular retailer as it accounts for up-to 50 percent of total supply chain cost. In front-end distribution, the

delivery mode, delivery time and returns options which consist of various parameter designs, will be discussed in details.

4.2.2.1 Delivery Mode

Delivery mode is the decision of a retailer about delivering the product to the customer which depends on the large extent of a geographic location. With this, delivery is the only situation where an online customer gets into contact with the retailer personally. Therefore, delivery have an important role in customer relationship management and channels selection by customer for a shopping. (Nilsson, et al., 2015) determine the store accessibility and its opening hours as predominant selection of a store and channel by a customer. However, delivery mode also plays an important role in customer satisfaction and retention. Home delivery and click-and-collect are the determinant delivery concept of the delivery mode. The home delivery option is the delivering of goods to the customer home address by which the retailer not only coop with picking the online order but has to cover the additional cost occur due to last mile delivery. Lead time is another important aspect in the home delivery as it is the only shopping value a customer perceive, above all the customer doesn't want to spend time traveling to and from the store rather to decrease the actual time spent on shopping. This as a result, minimum lead time can provide an additional customer satisfaction (Morganosky & Cude, 2000).

4.2.2.1.1 Home Delivery

Home delivery offer two types of models: an attended home delivery and un-attended home delivery. Attended home delivery means that the customer has to be at the reception point to receive the order. This constrain the customer to wait for the delivery as well as it makes complex for the vehicle routing because of time restriction. Retailer main objective is to maximum utilize the vehicle and reduces the transportation cost while maintaining the service level and customer satisfaction. To fulfil retailer main objective, a dynamic and comprehensive solution is required for assigning time slot for delivery to adjust any new order arrival in the meantime (Agatz, et al., 2011). In attended home delivery concept, a risk of high cost is associated as if the customer is not present in the time of delivery, the retailer has to bear the return product cost in term of transportation cost and storage cost i.e., returning of truck without fulfilment of order and the cost of storing the undelivered goods. Additionally, retailer has to set and deliver goods on a new date with an additional tour which also increase the cost. Moreover, an additional order to same location of the existing

undelivered order could lead to a significant profit as well (Yang, et al., 2014). The attend home delivery concept is widely used in Europe. Example of such is Tesco in UK which is a grocery retailer, mainly fulfil the online order with an attended home delivery and it is the only option offered by Tesco to deliver the online orders. Rewe, a German based grocery retailer, also uses the attended home delivery option to deliver online orders (Hubner, et al., 2016).

Unattended home delivery enables the retailers to deliver the products regardless of a customer to be present at the reception of the order delivery. The distributor placed the shopping basket in front of the recipient home door to be collected by the customer upon arrival. A Swiss pioneer Leshop, a grocery retailer based in Switzerland, mainly fulfills the customer order through unattended home delivery. They use cooled delivery boxes which makes possible for retailer to drop twice as many orders per ship as the retailer with an attended home delivery option, but this also leave an additional cost of buying cooled boxes and cost of collecting those boxes afterwards. According to (Kämäräinen, et al., 2001), despite these additional costs related to unattended delivery, the delivery cost of the unattended home is comparatively 40 percent lower as compare to the attended home delivery. However, it is specific to a geographical location or may be different from country to country which include a risk of theft and other problem associated with unattended home delivery (Hübner, et al., 2016). Another concept to fulfil the last mile delivery is the click-and-collect (C&C) option which is a dominant delivery option in omni-channel retailing. In France, the omni-channel groceries mainly use the C&C concept through the already established stations or pick up locations from where the customer pick their product more conveniently. Walmart is also testing C&C concept in rural areas of United States and found that with the right demographic and right operator, it could be implemented and successful as it makes sense for American customers (Walmart, 2014). Even in countries with strong home delivery channel, the C&C which is accounted for less than five in an online purchase, is expected to grow over the next five years (IGD, 2013). With C&C, the orders are packed and pick from a store or from a central warehouse or a local fulfilment center and then delivered to the pick-up location. In C&C, the customer itself fulfil the last mile delivery of the product by picking it from a pick-up location which significantly reduce the delivery cost by 70 percent for the retailer but retailer still has to deal with many other challenges such as product availability and picking and packing process (Hübner, et al., 2016).

4.2.2.2 Delivery Time

Delivery time represents the lead time which is the time taken by a product to reach to the customer. It is an essential and important aspect for a retailer in terms of convenience, customer satisfaction and service level. The retailer goal is to minimize the lead time so that the customer waiting time should be reduced as well as to reduce the distribution cost and increase service level. The delivery time is further divide into two aspects: delivery velocity and time slot (Hübner, et al., 2016). Delivery velocity is the speed and rapidly delivering the product in the minimum time. The delivery velocity is measured and present in terms of days required for delivering a product i.e., same day delivery, next day delivery or two or more days delivery option. Same day delivery option present greater challenges for the logistics in term of cost associated with delivery and the planning complexity. In comparison to same day delivery, the next day delivery or two or more days delivery option, are less costly as well more flexible as it gives a greater degree of freedom. As the customer satisfaction and the delivery time are negatively co-related, the retailer should not expect the higher customer satisfaction when the customer receives the product more than one day from the time, they place an order.

Time slots are the specific time during a day which are offered by a retailer to a customer to place an order. With the defined time slots, there are certain challenges which a retailer faces. Those challenges include the availability and displaying of the latest time slot to the customer. According to (Agatz, et al., 2011), during a certain time slot, the on-time delivery will be complicated because of the higher demand during that specific time. The more the customer have control over the selection of time slot, the more challenging for the retailer will be. To minimize such challenges, the retailer charges the time slot and certain time slot may have high charges due to the fact to minimize the traffic congestions and to manage and deliver the product more efficiently. By charging the time slots, the retailer could create most effective and better schedule for deliveries (Campbell & Savelsbergh, 2005). During peak time, it is useful to charge the delivery based on the demand during that specific time as it will help retailer to balance the demand in peak hours (Hübner, et al., 2016). With defined delivery time slots, there is undefined times slots which in contrast, need less planning but could instead reduce the customer satisfaction. With the unattended home deliver mode, the undefined time slot can achieve a significant cost saving as it enables delivery route and schedules to be flexible and optimized which can also increase delivery efficiency.

According to (Punakivi, et al., 2001) an enlarge time slot which is between one to three hours, could lead to a significant cost reduction. In contrast, if the customer has more control over the time slot for home delivery, it will increase the delivery cost for the retailer as the retailer has to fulfil the customer order within that specific time (Punakivi, et al., 2001).

4.2.2.3 Returns

Return is last and major framework of the front-end fulfillment. Returns play an important role in satisfying customer satisfaction. The customer who uses online channel to purchase a product are unable to see and feel the product physically before placing an order for it. Therefore, to ensure the safety and increase the customer expectations, the retailers offers multiple complemented return options in order to increase customer value. Those options include check and return to physical store, money back guarantee, return by a courier or return through an express and parcel delivery. Omni-channel allow customer to exchange or refund the product at the physical store which are bought online, can exceptionally increase the customer value (Hübner, et al., 2016).

Chapter 5: Empirical Findings

In this chapter, first a detail interview description has been presented. After this, findings regarding omni-channel, omni-channel agility and supply chain strategy in an omni-channel is presented. Those findings are supported by the primary data taken from the interview.

5.1 Interview Description

As discussed in the data collection of the third chapter, both primary and secondary data has been used while conducting this research. This is because to give the readers a comprehensive and broader framework of omni-channel while presenting them an enlarged view about supply chain consequences as well as how the logistics cost and customer value is affected can be influenced by omni-channel strategy. Additionally, combination of primary and secondary data is used to explain further, to what degree an omni-channel is a disruptive innovation as well as how the customer buying behavior is being influenced by the omni-channel. In this research, primary data is being of a limited amount due the pandemic COVID-19 which limited us while conducting interviews and collecting primary data. Secondary data is utmost used as a major source while compiling this research.

It is also mention before in the 4th chapter of methodology that secondary data is obtained from the different sources including academic articles, books, reports, scientific journals etc. (see *Data Collection* part in chapter 3 for further explanation). In addition to this, an interview was conducted with the Market Development Manager of DRIW, in order to get the primary data for this research. We were supposed to conduct Four interviews with multiple companies but as the COVID-19 start emerge in Norway, the companies get closed and unfortunately, we could not proceed with those interviews. We only conduct a single in-depth interview with Steffen Larvoll who has been working sethon multiple of omni-channel projects for their client organizations. He has a good understanding of omni-channel strategy and its implantation.

Our research purpose is to generally evaluated the omni-channel retailing strategy and the supply chain consequences a retailer may face while fulfilling omni-channel customer orders. So, the qualitative research approach is selected and based on that, a semi-structure

interview has been selected as a suitable source to collect the primary data. The interview and the respondent were selected according to some common criteria (see interview framework section in chapter 4). The company DRIW is based in Oslo with a large client data base and the preliminary Four companies with whom the interviews were planned, are also the client companies of DRIW. DRIW help their client firms in implementing the change process within the omni-channel strategy.

5.2 Moving Towards Omni-Channel

Omni-channel is a retailing strategy which encompasses with the digital and non-digital channels in order to give a seamless shopping experience to the customers. These different digital and non-digital channels are presented by offline, online and mobile channels. According to the Steffen Larvoll, *“omni-channel is a term used from quite long and is a quite complex in terms of its development. Omni-channel is when you integrate the different supply chain and sales channels while making convenience for the customers. It doesn't matter where the customer buy from but, to deliver them the product on their own terms i.e., when they want it, how they want it (in terms of delivery options), also customer should get the better information as well as the customers should be free to change the delivery address at any time during the delivery. The retailer should do what a customer wants and that is how omni-channel can create value for customers.”* Omni-channel is the integration and merging of different channels. From the reviewed articles, the different channels represent the touch points where a customer get in touch with a retailer more conveniently. The offline channels are often referred to physical stores while the online channel refers to the e-commerce platform of a retailer and the mobile channel represent the mobile apps, call center, smart payment solutions etc. In Omni-channel, customer expects the convenience and raises voice that the information available in omni-channel should be sufficient and accurate while fulfilling their demands. This also refers to creating value for customers. Steffen Larvoll explain creating value perspective in this way; *“retailer around the world looking for the product range with a lower price. This is to fulfil the customers desire for a product with a cheaper price tag. With this a lead time in final mile delivery is also an important factor in creating and obtaining customer value. Fulfilling customer orders from a local fulfillment center and a physical store is much more convenient in terms of lower transportation cost as well as shortest lead as the local center and physical stores are mostly located near to the customers which enormously helps in obtaining the customer value. He further added that theoretically it makes sense but in real case , it is quite complex and*

difficult because to change the last mile process, you have to change your entire strategy as well as the internal incentives and the way you make profit which is quite difficult to change.

The physical store setups are now changing from the traditional brick & mortar store to a new concept click & collect which is another factor helping the retailer in creating value by offering multiple services at a same store i.e., picking online orders, fulfilling in-store orders, providing in-person relationship, information availability, convenient and enjoyable shopping experience etc., which helps the retailer by increasing customer loyalty. Steffen Larvoll argue that *click & collect not only give value to the customers in terms of shortest lead time as well as a physical gratification of a product but it will also help the retailer while maximizing their profit. The retailer who have an online channel will pushes the customer to go to the physical store which help the franchise of that retailer to make profit as they hold the products through which the online orders will be fulfilled as well as the additional purchase could be possible from those customer who step-in to the store to collect their orders. This will be a win-win situation for all, the retailer, the franchise as well as the customers.*

Omni-channel integrates all the channels which makes easier for the customer to get the same shopping experience irrespective of the channel they prefer to use. In omni-channel, the customer gets the same shopping experience and the amount of information in online channel as same as they get that in a physical store. According to Steffen Larvoll, *e-commerce is just 10 years old and is a quite new platform. The companies in a situation like today because of Corona Virus, are badly effected and some of them may bankrupt. The retailers who have an integrated structure is now operating through their online channels without any hurdles. Online channel is now the only viable option for the retailers to continue their business. But here in Norway, most of the retailer's e-commerce platform income is just 5-10 percent which is quite low. Even it is increasing by 30-40 percent in a year but still it has a quite small proportion in a total income. The retailers have a 95 percent of profit margin from the physical stores and as the physical store gone closed because of pandemic outbreak, they loss a huge amount of profit and they are only remaining with the 5 percent of online channel profit. This is why because the retailers take the online channel as a side project which is a big mistake of the retailers and now they don't have a well-developed online platform. They are likely to loss allot of profit and in extreme case, will be bankrupt. This is a wake-up call for the top management. They should think of it and should*

develop extra channels with their existing physical store and should integrate them in a most suitable and possible way. They should take their online channel as their main project and not as a side project. The only thing in online channel the management should put a lot of focus on, is the transportation cost because fulfilling online orders are most costly and need an optimized last mile distribution strategy.

5.2.1 Omni-channel Shopping Experience

In omni-channel, customer look for easy and simple ways to buy the product. They expect a more convenient, cheaper and reliable services in omni channel. Steffen Larvoll mention that *the market control is now no more in the hands of the manufacturer nor the retailer but is now transferred and controlled by the customers.* He further added that *the manufacturers and retailers can't dictate the market anymore. That era is over and the market power is now shifted and transferred to the customer hands. Historically the manufacturers and retailers were dictating the market and the product which they have, sell it in the market on their desired price. But Now, the customer asks for the better quality, lower price as well as convenience in the buying process.* Omni-channel is all about the customer preferences and choices. There is no other way for the retailer but to accept the customer demands. Steffen Larvoll state that *omni-channel is to deliver the product as the customer expects. Now these are the customer who dictates the market and the retailers have to accept the customer terms else they will not buy from them which is like a do or die situation for the retailers. So basically, omni-channel gives the power to the customers who could hold the market and the buying decisions.*

Customers in omni-channel always look for the relationship and attention from the retailers. In omni-channel, the physical channel is most effective for the in-personal relationship while the online is likely based more on transactional relationship. Steffen Larvoll added that *omni-channel gives the freedom of choice to the customer while shopping. The customers who seek for the quick purchase and give priorities to the transactional relation will likely to use the online channel while the customers who priorities the in-personal relationship will mostly use the physical store for shopping. The customer who prefer to use the physical store, can also buy the product from the online channel and this is in the case when the customer doesn't want to buy the product at that particular time but want to purchase at a later stage. This is because of the omni-channel which allow them to have this freedom of choice and pursue their willingness.*

Omni-channel also entails the concern of the customers over the geographic locations of stores. This geographic disparity between the firms and the customer location determines the delivery and accessibility of a particular product. Steffen Larvoll added that *if the geographic location is of a particular concern, then the universal outlook of omni-channel is no more beneficial to the customers. For example, if a customer location is somewhere in Asia and the retailers is based in Europe and the retailer cannot deliver the product to the customer located in Asia, then the customer can no longer get the benefits from the prior omni-channel shopping experience.*

The future of omni-channel lies in the concept where the retailers will open their platform for the third-party sellers. The current example of such practices is being implemented by Amazon where Amazon launch a program called Fulfillment by Amazon (FBA) through which multiple of sellers use the Amazon platform to sell their product. Steffen Larvoll comments on it that *in omni-channel the competing retailers will come together and start cooperating with each other. This is why because the retailers want more shoppers to their store and to increase their sale. On the other hand, the customers who always look for better quality with lower prices, will also get benefits in the form of multiple choices with a minimum price tags at the same stores. This will enormously give the customer shopping experience a new shape.*

5.3 Agile Omni-Channel

Omni-channel agility is about the seamless and frictionless experience which a customer expects. Omni-channel is likely based more on agility concept as it evolves around the change in the market, the customer preferences and choices with the evolution of technology which could make possible the frictionless customer shopping experience across the integrated channels. Steffen Larvoll argues *that agility is a big challenge in omni-channel which need to be addressed.* He explains that *agility is more about flexibility which is something every retailer is lacking. The omni-channel offers multiple channels in order to gives the freedom and choices the customer wants but as the e-commerce platform is not yet developed and in Norway it is about only 5-10 percent of the total profit of a retailer, in Norway fulfilling agility is questionable in omni-channel. The customer wants the product today while setting at his comfort zone and now it is the retailer who have to deliver it within the specific time to their door step. That is what omni-channel is all about but it is not as*

simple as it seems to be. The well developed and integrated last mile delivery and logistics framework is required for such quick response. The complexity behind fulfilling agile omni-channel is the lacking in the supply chain transparency which is to give the information to the customers in a real time. Most of the retailer try to implement such strategy but they failed to do so. Amazon offer express delivery through which they deliver product to their customers within a day but to a certain limit of geographic location and within a certain criterion. Steffen Larvoll added *that to offer such flexibility, you need to have transparency, visibility and the right choice of channel selection for picking the product either prior or in the real time across the supply chain which is not existing today.*

The complication of agility in omni-channel pushes retailer to mitigate these risks but as the retailers are unsure about the outcomes of offering any such services as they are unaware of the customer response. Steffen Larvoll responded that *the retailers are unaware about the customer behavior of offering such services in terms of either the customer will willing to pay for the express delivery, will the loyalty be increased because from logistics point of view it is quite complex to fulfill each and every delivery within the specific time as well as, will the customer value be increased? These are some of the retailers concerns about agility in omni-channel.* Additionally, the challenge of stock-out is also breaking the agility in omni-channel. Steffen Larvoll added to this, that *the retailer needs to look for different options which could optimizer the last mile delivery as well as fulfill their promise of quick product delivery. The retailer should identify the options from where the delivery to be fulfilled i.e., warehouse, physical store, local fulfillment center etc.* According to Steffen Larvoll, *physical stores are the viable option in such strategy but there is a chance of inventory stock-out which for instance if a customer comes in to the physical store and ask for the particular product and if that is not available, it could lead to a customer dissatisfaction as well as the customer value will also goes down.*

5.4 Omni-Channel Supply Chain

Omni-channel supply chain is based on the agility concept because it needs to be flexible and responsive as the omni-channel customers expects more convenience in terms of shortest lead time, easy return options, predictability, transparency and accurate information about delivery. Additionally, the customers do no longer accept the retailer control over the last mile delivery and they want that the product should be delivered according to their own terms. In omni channel, there is two basic channels either the physical channels and online

channels. Offline channel consist of physical stores while online channels are mostly based on the e-commerce platform which includes online websites, mobile application, call centers, etc. These all channels required a unique supply chain model. Comparatively to traditional business practices where only one type of supply chain model was used and all the distribution and final mile delivery is based on, in omni-channel each channel require a distinct and indefinite supply chain model. According to Steffen Larvoll, *each channel in omni-channel requires different type of supply chain model because each channel have a different last mile delivery approach. If we compare the physical store with the online channel, in physical store, orders has been fulfilled in a normal way and at the time of purchase for which you only need to make sure the product availability at the store and for this, physical store gives a batch order to the warehouse to be delivered which is also cost efficient in terms of per-product marginal cost but if we compare it with the online orders, you have plenty of delivery addresses and all are located at different places. So, each order needs to be delivered within the specific time and at different location which is quite challenging as well as require a well develop and totally different logistics approach as compare to physical store. The required logistics approach for the online channel is quite complex and yet to be capable enough to deliver the product to the customers according to their requirements.*

The profit margin of each product also relies on the efficient logistics and last mile distribution. The different logistics approach for each channel increase the total logistics cost for retailer which also effect the profit margin of each product. Steffen Larvoll added that *you need to have a transparency in omni-channel which could tell you that how much each channel contributes to the total profit. So, this could help you in finding the specific channel and compares them in terms of how much each channel gives you the maximum and minimum profit, so latter on, you decide which channel to be removed on the basis of total profit contribution or even eliminate the ones which are in loss.*

In traditional logistics, the order volumes are of limited quantity while in omni-channel the orders are in bigger volume for which a more integrated channels as well as a good IT system and a well-developed supply chain model is required. Steffen Larvoll argue that *to be effective and efficient in omni-channel, all logistics should go through a proper system and framework. The biggest difference between the traditional logistics and omni-channel logistics is that the orders in omni channel are could be of different type of products as well*

as require different final mile delivery option i.e., pickup in store or from pick-up location, third party logistics, home deliver etc., which require a good supply chain model with a well-developed IT system in order to efficiently pick & pack and finally deliver the goods to the customers efficiently and cost effectively. An IT system also helps you in identifying the product in a warehouse where multiple of products are stored.

Chapter 6: Analysis

In this analysis chapter, the research questions will be analyzed on the bases of the theoretical framework. The supply chain challenges associated with omni-channel will be first analyzed which is followed by the psychological factors needed for the successful implementation of omni-channel strategy. Afterwards the omni-channels motives as well as omni-channel value and disruptive innovation is analyzed on the basis of both theoretical review and current practices.

In this chapter, the omni-channel strategy and the supply chain consequences are analyzed on the bases of the literature review framework. The analysis is primarily based on secondary data and also been done with some limitation as the primary data were of limited because of the pandemic COVID-19 which makes it difficult to conduct the maximum interviews and collect the primary data. Furthermore, this whole chapter is divided into three blocks which is based on the research questions. The research questions are:

1. What consequences the Omni-Channel may have for the supply chain?

1.1 How the different channels have impact on logistic cost and customer value?

1.2 To what degree omni-channel is a disruptive innovation?

The first question is a primarily the main research question along with the two sub-questions. In this analysis chapter, the aim is to find answers to those research questions as well as to develop further understanding of the omni-channel environment. In the first part, the supply chain consequences in an omni-channel strategy is analyzed. In the second part, the cost related to last mile and how omni-channel gives value to the customer as well as to the retailers is analyzed on the basis of the proposed framework in the literature review. In the last part, how omni-channel is a disruptive innovation is presented and addressed.

6.1 Challenges Associated with Omni-Channel Supply Chain

The challenges associated with omni-channel supply chain are based on the factors that affect the frictionless last mile delivery and thus divided into four categories. The first challenge associated with omni-channel supply chain is the managerial control which is when the power sharing within an organization is diversified and the clear discrepancy is lacking. The second challenge is the data gathering and its usability. Consequently, the third challenge with omni-channel supply is the lacking of IT system and technological

framework and lastly the accuracy of channel evaluation is the utmost challenge needed to analyzed.

6.1.1 Managerial Control

Number of challenges arrived when an aim is to implement a changes process. Those challenges mainly emerged because of the lack of coordination in organization while thriving the new market approach. Omni-channel strategy is pushed by the customers demand and the fierce competition from the competitors. Traditionally, the business activities were based on the multi-channel approach where the different channels and their supply chain were built and optimize separately. This as a result, the management team of each channel is often separated and function individually. This also separate the development focus and the degree of freedom as well as innovative ideas which were mostly focused on individual and separate channel attributes. Also, when it comes to inventory and product management, the different channel strategic implications i.e., online and offline channels, were also dissimilar because of the differences in the customer demands between the channels (Zhang, et al., 2010).

The omni-channel strategy requires more integrated channels as for both pre-purchase as well as after sales services i.e., return or changing of product, which constitute challenges for omni-channel supply chain (Hübner, et al., 2016). In comparison to the multi-channel, omni-channel supply chain requires more managerial control as degree of integration between the channels as well as flow of products and information is comparatively higher than the traditional business approach. Omni-channel also requires high interaction capabilities and capacity in order to integrate the channels with each other (Hultman, et al., 2017). In omni-channel, due to the high integration between channels, pushes each other sales opportunities which lead to the high degree of interdependences too. Online channel pushes customers to the physical stores i.e., to pick-up their orders, or return a product or changing their products at a physical store etc., which helps the physical store to generate profit in terms of fulfilling the online orders with their existing inventory as well as an additional purchase could also be possible from those customers while in store. This requires the retailers to thinks strategically about the physical store location and if so, may re-evaluate the physical stores locations. In comparison to physical store which not only comprehend their customers but also serve the online customers too, the online channel also helps boost the band value in terms of offering ease and reliable services i.e., information availability,

instant shopping, help & support as well as providing convenient shopping experience (Åsbrink, et al., 2017; Deloitte, 2017).

6.1.2 Customer Satisfaction and Data Integration

The challenge with the data integration and customer satisfaction lies in a direct consequence of the separated history data bases at each channel (Zhang, et al., 2010). To implement the successful omni-channel strategy and be able to get benefit of it, you need to gather and process the information from each channel in a unified way with a focal point of customer centricity. This means that in comparison to traditional business process where each channel has its own data bases and on bases of that their decision makers take decisions individually, in omni-channel all the data across channels are evaluated together and the decision makers make decisions collectively (Verhoef, et al., 2010; Zhang, et al., 2010). (Zhang, et al., 2010) further stated that several data bases are no longer a suitable option as it is important to be aware about the customer buying behavior across the channel and it is only possible by analyzing the data collectively. This is to know the customer purchase decision and on basis of that the retailer will be able think strategically of offering such offers and services across channels to a particular customer. (Herhausen, et al., 2015; Taylor, et al., 2015) further stress on the importance of integrated channel that unified data bases that it could later be used by the retailers to offers such services in order to increase the customer satisfaction and loyalty. The online stores as compare to physical stores can get the information about customers more instantly as well as accurately as the customers store their information by themselves when making purchases. Collectively these two channels can create and present a better picture of a customer behavior. This will eventually helps the retailer while creating the seamless shopping experience (Zhang, et al., 2010). The possible usage of big data in such a change process is still lacking and need to be explored. There is still a great gap between the data gathered and the amount of data required by the retailer to be able to use for developing a seamless shopping experience. This could be possible by the usage of the big data which consequently can increase its usage in the near future as it is an easy accessible tool for the retailers (D'Arezzo, 2019). Additionally, there is a challenge of customer privacy and integrity as (Neslin & Shankar, 2009) argues that it could be problematize if the retailers overstep in the customer data gathering and analyzing.

6.1.3 IT and Technological Development

The third logistics challenge in omni-channel is the IT system and technological infrastructure which limit the retailer ability to successfully implement the omni-channel strategy. Several articles define this constrains and its impact on the ability of a retailer output (Zhang, et al., 2010; Lin, 2012; Lewis & Loker, 2014). They stress that the current IT system of the retailers are not able to fulfil their needs in terms of inventory management, last mile delivery, speed in processing the orders as well as the integrated logistics and information availability across the different channels. The complexity behind the moving of information, material etc., from one place to another lie in the heavy IT investment which makes possible for the retailer to implement the seamless customer experience. This also allows the customers to freely move between the channels which generate high traffic in terms of customers visits to a particular store and the high volume of orders which lead to high profit margin. This also entail that the retailer should look after the logistics complexities which need to be addressed prior to the omni-channel implementation which solely depends on the fully functioned and synchronized IT system (Lin, 2012; Lewis & Loker, 2014).

6.1.4 Cost Related to Logistics

Cost in logistics is determined by several indicators which include the speed of delivery, returns management, multiple order fulfillment options, integrated infrastructure and many other which are essential for customer satisfaction and are main key performance indicator (KPI) for the retailer profit margin too. According to (Scottsdale, 2017), only few retailers are making profit with omni-channel strategy. This is why because the top management of those organizations struggle with successful implementation of omni-channel. The main and utmost problem they are facing, is the cost related to last mile delivery and returns management. Retailers need to implement the change process which brings the change paradigm in the customer shopping experience. According to (Sopadjieva, et al., 2017), retailers need to integrating their online and physical store together which will allow the customers to shop online and collect their product from physical stores or return the product which are bought online to the physical stores. However, the retailers are facing problem with the cost related to returns. In a survey conducted by (Scottsdale, 2017), 75 percent of the of respondent shows concern about the returns management and the cost related to it while only 23 percent says that the returns are not eroding their profit. In logistics, returns

are considered as thorny problems which cut the profit margin by 10-20 percent annually. Additionally, the inventory balance at each channel is also a challenge for the retailers. According to the survey, 25 percent respondent pointed out the out-of-stock as a growing supply chain problem. So, to keep the optimal inventory level, the retailer could bare the higher inventory cost. Furthermore, customers also expect the fastest and free delivery of products as well as multiple choices of delivery. This could also lead to a challenge for a retailer. According to (Jasin, et al., 2019), retailer faces difficulties in last mile delivery and inventory management and especially in the case of single product delivery which increase the logistics cost. The biggest problem in omni-channel is the fulfilling customer expectation of multiple delivery options with lower or zero fee as well as to get their product within a minimum time which is a challenge for the retailer. According to (Gallino & Moreno, 2019), the customers wants easy return options, product availability as well as fastest delivery with minimum or zero fee which enormously increases the cost for retailers while cutting their profit margin by half.

6.2 Factors Affecting Omni-Channel Implementation

Omni-channel shopping experience can be observed through the different acquired channel i.e., online, offline and mobile channels. The basic categories are two, online and offline but to some extent the mobile channel is treated separately from online channel as its usage framework and user interface is different from that of a particular online channel. The factors which effect the customer behavior within each specified channel, has its own psychological impacts. Those factors include hedonic and utilitarian which effects the customer to different extents. Therefore, these factors were reviewed in literature review to study their impacts on the omni-channel shopping experience as well the customer loyalty towards a particular retailer.

6.2.1 Hedonic Value in Omni-Channel

Hedonic value is the convenience the customer receives during shopping which reflects their attitude against towards a particular retailer. (Davis, 2013) argue that hedonic value is more subjective and based on exploration and entertainment. This implies that the customers receive the fun, fantasy and enjoyment as well ease in finding the needed product during the shopping. In omni-channel, each channel is evaluated on the basis of its own strength and abilities. The customer receives the different level of hedonic value on different channel because of different approach of each channel (Chatterjee, 2010). (Swaid & Wigand, 2012)

further added that the customers are likely use those channels which gives more convenience and enjoyable shopping experience. The customer preferences push the retailers to design the user interface of each channel in such a way which could positively impact the customer buying behavior and to increase their loyalty. The hedonic value is more likely represent the customer impulse buying behavior in terms of purchase intention, customer loyalty as well as the word of mouth in the form the customer expression against a particular retailer (Overby & Lee, 2006).

(Keller, 2010), further explain hedonic value as a factor of trust which the customer expects from the retailers. The author argue that the retailers are lacking in the clarity across the channel which obsess the customers. Additionally, (Bell, et al., 2013) stated that the retailer offers the showrooming experience which for instance is like free riding for the customers but as the retailer aim is to attract more customers, they use the physical store as showroom in order to attract more shoppers to the store. This also implies that the hedonic shopping value inclines in the stores where the customers can get the showrooming experience while enjoying the free samples.

6.2.2 Utilitarian Value in Omni-channel

According to (Davis, 2013) Utilitarian value can be gain through the work accomplishment and convenience in the buying process as it is more likely based on the functionality factor of a shopping experience. Utilitarian value is more task specific and the customer shopping trips are more objective. (Kwon & Jain, 2009) argue that the functional aspect of the utilitarian value can be seen among the online shoppers but however the relationship is negatively co-related as it is argued that the online channel of a retailers are capitalize on the hedonic value as compare to the utilitarian because if the customer want to see how the product will look like or how particularly it will good fit in the daily life, they cannot experienced that through the online channel. Additionally, it is hard for the customers to believe in the online messages and marketing content. In utilitarian value, customer seek for the trustworthiness from the retailer. The customers expect the true and accurate information regarding the product. Therefore, it is argued by (Keller, 2010) , the offline touch points are crucial in maintaining the utilitarian value as the customers seek the human interaction to understand the functionality of product, its usefulness and the complete and accurate information in a real layout.

6.3 Motives of Omni Channel

Omni-channel strategy is a key drive to the competitive advantage in retailing. (Brynjolfsson, et al., 2013) argue that omni-channel strategy is becoming more popular as it is predicted to be a key drive to gain the competitive advantage in near future. The two main reasons behind the omni-channel motives are the customer demands and profitability. These two factors will further be analyzed in the sub-sections down below.

6.3.1 Fulfilling Customer Demands in Omni-Channel

The omni-channel strategy is drive by the customer demands (Neslin & Shankar, 2009). The customer shopping behavior is changing. Majority of the customers are now pre-search for a product online and then buy the product at any of the channel. So, it is become apparent for the retailer to have integrated channels. This will help the retailer to use the different channels for different purposes i.e., as online channel could be used as an information provider or as a marketing tool too. This also implies that the online store will help in pushing customers towards the physical store. According to (Jonsson, et al., 2015) online channel is not only act as an e-commerce store but also used as a marketing tool for convincing customer to visit the physical store. Since the use of online channel is continue to increase as compare to the physical store in the retail industry, it is apparent for the retailer to invest in an online channel. (Saghiri, et al., 2017) further added that the physical stores also need to drive the customer towards the online store. The continues growth and the increase importance of the integrated channels in terms of the pre-search for a particular product, information sources as well the factor of convenience, drive the demands of the omni-channel. The notion is not that the customer demands for the omni-channel but it is the customer shopping behavior which is changing and fosters the retailer to implement the omni-channel strategy in order to provide better shopping experience.

6.3.2 Profitability in Omni-Channel

The retailer aim is to gain the competitive advantage by implementing the omni-channel strategy. The competitive advantage is created when a retailer fulfills customer demands with lowest possible cost. The profitability is positively connected with the omni-channel strategy and his has been argued and discussed both by the researchers and practitioners that the maximum profit can be achieved by either lowering the cost or increasing the revenues (Zhang, et al., 2010). Furthermore, (Zhang, et al., 2010) argue that the average cost of the

omni-channel retailer is much higher than the single channel retailer because of the high investment as well as multiple operation associated to omni-channel. But comparatively, in omni-channel, the retailers have also a high potential of profit because of the multiple integrated channels which helps boosts the revenue while conveniently fulfilling customer orders. The main focal point for the retailers in omni-channel is to increase their profitability and the cost saving synergies among the channel. (Herhausen, et al., 2015) argues that the different channels create synergies among the channels which affect the customer perceptions about each channel. Similarly, a positive and convenience shopping experience either at online channel or physical channel, always reflect the brand value. So, each channel in omni-channel is not just function as a sales channel but are also being used as a marketing tool for other channels too in order to create value for the customers which implies the importance of omni-channel. Furthermore, a well-developed framework for the return in omni-channel can also consequently help in increasing the profitability.

6.4 Omni Channel Value and Disruption Innovation

Omni-channel strategy is based on the convenience while providing value to the customers. (Ishfaq, et al., 2016) argue that omni-channel provide value to the customer in a way in which customers are free to move across the channels and have a hassle-free shopping experience. Customers expects the speed and transparency in the omni-channel. For this as stated by (Varhoef, et al., 2015), retailers in omni-channel are offering multiple delivery options as well as personalized services either the last-mile delivery or the customized shopping experience in order to meet the customer expectations. The omni-channel provides enjoyable and convenient shopping experience which customers always looking for. Omni-channel give the opportunity by giving the buying terms at the customer hands through which they could easily and reliably fulfil their needs and desires. Additionally, (Stevens, 2017) highlight the speed as the essential service quality in the omni-channel. This is to reduce the time taken on order processing and finally delivery it to the customer.

Disruptive innovation is the change in the existing product or services which makes the product or service more affordable and reachable. The disruptive innovation in terms of affordability and accessibility is bringing the change and innovation in a product with a lower price tag with high quality as compare to the existing product. (Akdeniz, 2014) argue that disruption is the replacing of the existing practices with the new and innovative ideas which change the total market paradigm. Accessibility is the focal appoint in the disruptive

innovation. It makes the products or service more easily available to the final users. According to (Akdeniz, 2014) the products or services based on the disruptive innovation is specifically cheaper, simpler and frequently available to the final users.

The traditional business practices are going under a massive transformation. The traditional brick & mortar concept stores are now changing towards the innovative concept of click & collect which not only cover their own customers but complement the online orders too. The shopping journey of a customer is now changed and are more like a “fighting map” which is start by the online search and consequently could end at any channel during the shopping. According to (Fulgoni, 2015), the customer shopping journey is now based on the AIDA concept which is Awareness, Interest, Desire and Action. Their shopping journey is now start from an online search to offline gratification and final purchase at any particular channel they desire for. (Guillot, 2015) further argue that the omni-channel bring disruptive innovation in a way where customers are free to select and buy from any available channel which is for instance, is a convenience and an opportunity of freedom to the customers to undertake the buying terms and the shopping patterns in their own hands.

Chapter 7: Conclusion

In this chapter, the dissertation is concluded which is presented in three parts. First part is about the overall conclusion and discussion combined which is preceded by the limitation of the study and further research directions presented in the third and fourth part.

7.1 Concluding Discussion

The purpose of this thesis is to explore the omni-channel strategy and to find the factors which affect the omni-channel supply chain. Therefore, to address this issue, the main problem statements has been formulated as follow:

What consequences the Omni-Channel may have for the supply chain?

The additional sub research questions are related to customer value and disruptive innovation. These sub-questions are formulated in order to give a more comprehensive view to the proposed research problem and get help while finding the coherent answer to the main research question. The academic research review is based on; how to fulfil the gap between the omni-channel retailing and its operationalization in terms of product delivery and uniform service which is evaluated by implementing a general case study approach in which the main focus was on the hurdles and the solutions related to the supply chain in an omni-channel strategy. The empirical findings suggest the possible solutions to the proposed research problem define in the case study. Prior to this, a pilot study was also conducted by searching and thoroughly investigating the research articles in order to examine the proposed problem. After investigating these journal articles and conducting a systematic literature review grounded for this thesis, the author concluded that the omni-channel retailing is based on three main channels which include physical channel, online channel and mobile channel. With this, the omni-channel supply chain consequences which are based on managerial control in an organization, IT development as well as its enhance infrastructure availability in organization, the customer data integration, cost related to last mile delivery and the integration of the different channels which affects the efficient last mile delivery and customer value, are the important factors for the successful omni-channel implementation. Additionally, the change in the design of the online and offline channels which gives customers a frictionless shopping experience also promote and the fortunate implementation of omni-channel strategy. This also implies to the customers shopping experience which are

driven by the factors of utilitarian and hedonic behavior. The profitability and customer satisfaction are the factors which the retailers are extensively focuses on while fulfilling the omni channel customer orders. The agility in omni-channel is thus taken into consideration as the main factor of responsiveness and flexibility while fulfilling omni-channel customer demands.

Moreover, the findings reveal that the retailers should strategically framework their supply chain in a correspondence to the omni-channel retailing in order to provide the absolute convenience in the omni-channel which the customers expect. Therefore, the retailers need the required skills through which they could deliver what the customers wants and that is how a retailer can create value for the customers in an omni-channel strategy. The logistics cost is thus considered as the most important factor in the fulfillment of the omni-channel order because it is the absolute and the main factor in conveniently delivering the product to the customers. So, the retailer required such supply chain capabilities which could make possible to deliver the product to the customer door step cost efficiently as well as without any hassle. The basic and logical understanding behind it is that, the customer wants more reliable, convenient and easy way to shop while the product they buy, should be delivered to their door step according to their own terms. Consequently, the retailers aim is to maximize their profit which is also cut-off by 12-30 percent by the delivery cost. This is the adjacent and foremost problem which is in one way or another, could disrupt the omni-channel implementation. So, the logistics cost is needed to be considered as the utmost important factor while delivering services like convenient, uniform and consistent.

Furthermore, the disruptive innovation is actually replacing the old mechanism with the new. Omni-channel is seems as disruptive innovation as it consequently challenge the existing market practices present in the form of multi-channel, cross-channel and single channel approach. It brings the change in form of unified and integrated channels which comprehend each other sales. This is the shifting of the paradigm of existing strategies where each channel is envaulted individually and independently. The omni-channel is about the change process which re-design the structure of retail business practices and ultimately lead to the convenient and uniform shopping experience across the different channels. This is what the customers are expecting from the omni-channel which could make easy, reliable and favorable shopping experience.

lastly, the other factors which also seems as the breakthrough in delivering the orders to the customer more conveniently, are the factors like seamless and uniform shopping experience as well as consistency and integration between the retail channels. These factors are deemed considered as the focal factors for successful implementation of omni-channel strategy, but this could be argued that these factors cannot solely implement the successful omni-channel strategy without the flexible and agile omni-channel supply chain management approach.

These factors from omni-channel supply chain consequences till customer value and disruptive innovation have significant effect on omni-channel retailing. The literature review presents the reliable information which lead to a similar claim in regard to omni-channel strategy.

7.2 Limitations

This section will present the limitations and the further studies directions for the inductive researchers. Generally, all researchers faces some limitations whether the research is conducted by a student or an academic body. The study limitation is generally represented by the design characteristics of such methodology which to some extent, restrict the interpretations of the final findings of a study. Furthermore, some of the additional extent like the availability of the relevant data also influence and restrict the final results.

The current available literature about omni-channel is limited and each article have different approach which as a result, getting the unified observation and understanding about the proposed topic was difficult. The research topic and objective also limit the range of the study in order to formulized the proposed problem as well as to find the answers to the selected research questions. This also narrow down the range of the selection of academic articles. Therefore, only those articles were selected and examine which focuses and evaluate the subject of omni-channel with a major focus on supply chain consequences as well as could also contribute to the evaluation of secondary questions based on the customer value and disruptive innovation. Lastly, the impact factors of the articles were also taken into consideration which as a result also limit the selection of the articles to only select the high impact journal articles for an in-depth review and investigation of the proposed topic and the formulated research questions.

Another limitation is based on the collection of the primary data which were of very limited because of the COVID-19 which restricted our approach in collecting the needy primary data. The proposed interviews could not be conducted due to which the research framework is changed from a narrowed down to a general approach of omni-channel based on supply chain consequences. This can be argued that the research is more likely based on the secondary data. Nevertheless, the use of primary data could support and would have been the most important factor in in-depth investigating the research questions and the implications of the research would have been grounded on the basis of a fully objective measurable perspectives.

Consequently, the time frame also presents limitations which was only one semester. This also limit us while extensively reviewing the proposed research objective. So, the systematic review did not cover all the aspects related to the subject. Although, the selected articles have been considered as representing the complete image of a given phenomenon and thus assume that these article presents the complete overview of the research objective.

Furthermore, the selected articles for the systematic literature review does not belong to the high ranked journals because the omni-channel is yet new and related studies are lacking. The scholars have yet not given full attention and this phenomenon has not been comprehensively investigated. Hence, the high rank journals were of limited which could provide the specific review about the topic.

7.3 Further Research Directions

Since this research is based on the evaluation of the omni-channel with a main focus on the supply chain consequences, the future research is required to investigate it comprehensively in order to gain the nuance understanding of omni-channel strategy. Thus, other research approaches are required in investigating the omni-channel strategy and the consequences related to the supply chain in omni-channel. A protentional future research direction is required to look for in-depth causal effect of the factors influencing the omni-channel supply chain. The supply chain in omni-channel is considered as the major factor in successful implementation of the omni-channel. Thus, the researchers need to emphasis on the consequences which could affect the customer shopping journey in omni-channel while fulfilling the customer orders in a more convenient and easy way. This would help the retailers to identify the major factors affecting customer value and omni-channel shopping

experience. This will also help the retailer to generate and implement certain supply chain strategies which could meet the customer's specific variety-seeking behaviors.

Furthermore, this thesis is considered as to be the first step towards the understanding of the omni-channel strategy as well as the customer value which is encompassed by the supply chain consequences and the retail channels. Thus, this could enrich the customer shopping experience. The future research should be directed towards the potential of additional channels which could bring the disruption in a way which changes the current practices of a retailer and bring innovations in its way of doing business i.e., the traditional brick and mortar store shifting its design to a new approach click and collect physical store. This would be a major breakthrough and important change in the retail industry.

Lastly, the agility concept in omni-channel needed to be explored. The current literature is almost unavailable to support such initiative. Agility concept is based on responsiveness and hence the omni-channel aim is to fulfil the customers' orders in a more efficient and effective way. This is to fulfil the customers' orders according to their own terms. So, the agility in omni-channel is likely to push the retailers to swiftly respond to the customer needs. Thus, a needed attention is required to explore the agility concept in omni-channel in order to explore and design the strategic framework for the omni-channel strategy while fulfilling customers' orders more rapidly. Additionally, sustainability in terms of green logistics is also lacking in omni-channel fulfilment. Such an approach is also needed to be examined and this is for instance is the utmost important factor to make the omni-channel efficiency initiative more sustainable and environmentally friendly.

8.0 References

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9.0 Appendix

Interview Guide:

Interview About Omni-Channel Case Study

Interviewed: Steffen Larvoll - Market Development Manager at DRIW

Interviewer: Syed Qasim Hussain - Master Student in Logistics - Himolde

Part 1:

Opening comments

Explaining the purpose of interview and before going ahead, ask the following questions:

- Do you have any question, should ask before we proceed with the interview?
- Do you mind if I record this interview for the purpose of transcribing?
- Would it be okay if your name being mentioned in the thesis?

Part 2:

The Organization and the Interviewee

- Please tell us about your role in the organization you are working with;
 - Your position!
 - Your daily responsibilities!
- How long you have been working here?

Part 3:

Omni Channel Strategy

- What do you know about Omni-channel?
- Do you work on any omni-channel project for yourself/client?
 - What was the nature of those projects?
- How omni-channel influence the customer purchase decision in any way?
- How do you see Omni-channel strategy in your organization/client organization?
- What do you think of the benefits of Omni-Channel?
- How omni-channel can affect the supply chain cost of an organization?
- How do you think the nature of the business of an organization is being affected by the Omni-channel strategy?
- Does omni-channel support green-logistics?
- To what degree, do you think omni-channel is a disruptive innovation?
- How omni-channel can add value to the customers?
- How do you see the future of Omni channel developing?
- What do you think about the future of retail channels i.e. online and offline in terms of their usefulness?

Changes Originated due to Omni-Channel

- How do you see the role of Omni-channel strategy in an organization?
 - What changes did it bring within the organizational culture?
 - Changes within departments?
 - Changes in IT solution and network?
 - Collaboration among departments?

Challenges to Supply Chain in Omni Channel

- How Omni-channel effect logistics and supply chain in an organization?
- What impact omni-channel have on forward and backward (reverse) logistics?
- How omni-channel bring challenges for supply chain in terms:
 - Lead Time
 - Cost
 - Product availability
 - Customer satisfaction
 - Final-mile-delivery

Omni-Channel Motives

- What do you think, why an organization should implement an Omni-channel strategy?
 - Is omni-channel should be for a specific goal?
- Is Omni-channel strategy a healthy state for an organization?

Part 4:

Concluding Interview

- Closing remarks/comments
- Any potential/additional question for the interviewee
- Expression of gratitude