



Getting the most from E-commerce in the context of omnichannel strategies

Valeria Belvedere¹ · Elisa Martina Martinelli¹ · Annalisa Tunisini¹ 

Received: 3 February 2021 / Accepted: 5 August 2021 / Published online: 8 September 2021
© The Author(s) 2021

Abstract

E-commerce in the context of sales and distribution strategy has become a heavily used channel and companies need to manage it correctly and integrate it with a variety of other online and offline channels. Based on the literature, two factors are recognized as relevant for the elaboration of a conceptual framework able to explain the actions undertaken by leading companies to effectively get the most from an e-commerce strategy integrated within the overall omnichannel strategy. The two factors are: main distribution channel (direct/indirect) and product value density (high/low). Through the analysis of four case studies (Luxottica, Henkel, Ikea, and Ferragamo), we show that these factors produce different benefits and challenges that companies face when embracing e-commerce. We analyze these benefits and challenges from the viewpoint of both Marketing and Supply Chain Management.

Keywords E-commerce · Omnichannel · Marketing · Logistics · Supply Chain Management · Distribution channel · Value density

1 Introduction

The current health emergency situation, which has hit several Countries in the world very hard, has demonstrated the incredible importance of e-commerce to reach customers and preserve/increase sales. During the pandemic, some players proved to be already properly organized to sell and deliver products by leveraging the digital channel. On the other hand, several “brick and mortar” companies, with their traditional Marketing and Supply Chain Management (SCM) processes, suffered from

✉ Annalisa Tunisini
annalisa.tunisini@unicatt.it

Valeria Belvedere
valeria.belvedere@unicatt.it

Elisa Martina Martinelli
elisamartina.martinelli@unicatt.it

¹ Department of Management – SEGESTA, Università Cattolica, Milan, Italy

unreadiness to cope with this necessity rapidly and had to promptly design a new value chain for e-commerce in order to face this new challenge. Even companies that had already embraced digital selling suffered seriously from the unexpected amount of orders coming from the digital channel, which resulted in severe inefficiencies as well as the inability to fully satisfy demand. In this context, it becomes apparent that “brick and mortar” firms need to understand how e-commerce can create value and how to properly manage it to reach satisfactory profitability levels.

We conducted an analysis to discover the conditions in which “brick and mortar” companies can derive value from e-commerce in the context of an omnichannel strategy from the viewpoint of both Marketing & Sales and SCM. The paper thus addresses the question of the conditions in which the implementation of an integrated online and offline channel strategy, through the introduction of e-commerce on top of traditional sales channels, allows the company to obtain benefits in terms of improvement in Marketing & Sales as well as in SCM processes.

On the basis of a literature review, we have identified two main factors that can explain the principal challenges and potential benefits inherent the launch of an e-commerce initiative. These two factors are: the level of value density of the product to be delivered (high or low) and the main (if not only) type of distribution channel used by the company (direct or indirect). A Delphi study was conducted involving ten sales and operations managers, consultants, as well as opinion leaders in the fields of Marketing and Supply Chain Management. The goal was to discuss the main strategic decisions and the pros and cons of e-commerce in the context of omnichannel strategies, to validate the two factors thanks to the application of the reference framework to real world cases. Once the reference framework was validated by the Delphi study, we developed an in-depth analysis of four case studies in leading companies. By leveraging the case studies, the paper enters in-depth into the understanding of the value actually generated by integrating e-commerce in a traditional sales channel strategy, discussing the drawbacks and the managerial implications of four different archetypes that emerge from our reference framework.

The article is organized as follows. The next section of the article reviews the literature and theoretical background on both the Marketing and Supply Chain Management perspectives, debating the reasons, benefits, and risks associated with the adoption of the omnichannel strategy, with a specific focus on companies that decide to add the digital channel—e-commerce—to their offline ones. Then, the reference framework and methodology of research, findings, and discussion are presented. Lastly, the conclusions are stated and the managerial and theoretical implications are discussed.

2 Literature review and theoretical background

Marketing literature has recently highlighted the emergence of internet-based channels (Nagariya et al., 2020; Raza & Govindaluri, 2021) and how the introduction of e-commerce in the context of omnichannel strategies generates simultaneous benefits at the Marketing and Supply Chain levels. However, many critical drawbacks hinder the possibility for companies to get the most from the introduction of

e-commerce and omnichannel strategies. In the next sections, the Marketing and SCM perspectives are presented.

2.1 Marketing Management perspective

The widespread adoption of e-commerce in the context of omnichannel strategies (Autry, 2021; Brynjolfsson et al., 2013) has been broadly studied in marketing literature due to the several implications that it can have on customers' behavior and loyalty, as well as on the retail, pricing, and communication choices that companies must adopt to get the most from the digital channel (Verhoef et al., 2015). The attention to the omnichannel strategy is mostly connected to the need for companies to face changes in customer behavior because of the evolution of technology and digitalization. In their pioneering article on transformation in retailing, Aubrey and Judge (2012) observed that a growing number of smarter, digitally connected, and price-conscious consumers exploited multiple shopping channels to get the product they want at the right price. That leads companies to combine physical stores with e-commerce as part of an integrated "omnichannel ecosystem." To engage and keep customer loyalty, it becomes necessary to connect and continuously interact with the customers by simultaneously leveraging numerous available channels and touch points – both digital and physical—in such a way that the customer experience across channels and performance over channels are optimized (Verhoef et al., 2015).

Companies derive a wide number of benefits because of the development of e-commerce and an omnichannel strategy. A first return is the increase in sales. From the traditional literature on multiple and hybrid channels (Moriarty & Moran, 1990) to the most recent literature on omnichannel management, it is stressed that such strategies make it possible to reach various types of customers more easily and increase the market coverage and sales volumes (Jocovski, 2020). The attention is to be focused on the reduction of any overlapping and misaligned activities among channels and the level of conflicts between them (Vishwanath & Mulvin, 2001) increasing the complexity of customer management. Such a holistic and integrated approach appears to be the main challenge in omnichannel management, that makes it possible to expand the possibilities of communication with customers, to sell products and make services available (Lewis et al., 2014).

An effective e-commerce operation within an omnichannel management strategy is also related to the possibility for the company to better meet the single customer's specific requirements during the so-called customer journey (Lemon & Verhoef, 2016). It has also been observed that major international brands make use of omnichannel management to meet the rising demand for quick and easy access to products/services by digital technologies (Cai & Lo, 2020). Studies show that the customer uses mobile devices before and during their visits to physical stores, obtains and processes information, and makes comparisons before buying. During this process, the customer wants a personalized, seamless, and unified experience and expects coherent and uniform returns from all the channels. Combining digital stores with websites, mobile apps, and social media to contact, accompany, and support the customer during their buying journey, lets the company meet the needs

of the specific customer in their buying behavior. The main challenge faced by the company in implementing an effective omnichannel strategy in this respect is given by the need for combining online and offline channels and managing them as a single entity, offering an individualized experience to each customer. This can generate benefits in terms of customer satisfaction, customer loyalty, and customer retention.

An effective omnichannel strategy can also allow the company to achieve an integrated synergy among channels, thus pursuing increased efficiency thanks to the elimination of duplications and overlaps and to a better combination between fixed and variable costs, economies of scale and economies of scope (Mirsch et al., 2016).

Finally, a key fundamental benefit stemming from the introduction of e-commerce and the implementation of an omnichannel integrated strategy is the direct and rapid collection and integration of data about customers, price, and inventory across all channels, flowing among the different channels, and the sharing of such data, resources, and information received by the different touch points among the company's Marketing and Sales functions as well as the company's retailers (indirect channels) (Brynjolfsson et al., 2013). The explosion of data coming from social, mobile, and local channels represents an enormous opportunity to make predictive analytics, and thus improve demand forecasting. Moreover, data makes it possible to get customer insights and to offer a personalized consumer experience in the channel environment (Trenz et al., 2020). An improved learning process regarding the customer enables greater awareness, trust, and control over the customer, which can result in ad hoc promotions targeted to specific customers. All of this, however, demands the implementation of an entirely new IT infrastructure that is a huge investment that not all companies can face.

Based on all the above considerations, what emerges is that even though the concept of distribution is extensively analyzed in the literature (Shi et al., 2020), less attention has been addressed to the drawbacks of the introduction of e-commerce and in particular to the factors that positively and negatively affect such introduction.

2.2 Supply Chain Management perspective

Despite the fact that e-commerce in the context of omnichannel strategies can generate a better customer experience and higher customer loyalty, data collection, increased sales and improved efficiency, there is the need to pay increasing attention to operations and logistics solutions suitable for supporting companies in this new scenario (Autry, 2021). As a matter of fact, e-commerce and the related omnichannel strategy that many firms are pursuing produce remarkable effects on SCM processes (Marchet et al., 2018; Raza & Govindaluri, 2021).

E-commerce can result in considerable risks from a logistic standpoint because it entails the phenomenon of the home delivery, which is burdened by such problems as missed deliveries, vehicles travelling long distances with a low level of saturation, and higher complexity of warehouse processes (Lim & Winkenbach, 2019; Morganti et al., 2014). Thus, the successful implementation of omnichannel strategies relies heavily on the company's ability to manage the trade-offs between several performance attributes, providing customers with a good logistic services at

reasonable costs (Lim et al., 2016). For this reason, omnichannel related operations challenge companies to make the “right” decisions in the new business context (Cai & Lo, 2020). In the early stages of the e-commerce, nearly two decades ago, several companies started offering a limited variety of items to customers characterized by high speed, but most of them failed in their attempt to gain reasonable market share due to the high delivery costs (Laseter et al., 2015). Nowadays, these trade-offs are becoming even more challenging and complex to manage because companies are offering a much wider product variety, coupled with fast and flexible deliveries at competitive prices, while delivery costs continue to be a critical success factor, driven by labor costs, product value density, and average order size (Lim & Srail, 2018; Lim et al., 2018).

The need to properly manage the trade-off between cost and service is demonstrated by the attempt by many companies to adopt alternative delivery solutions in which a lower transportation cost is coupled with an acceptable service level for the customer (Jindal et al., 2021). Examples are such systems as Click&Collect, Click&Reserve, Click&Drive, and attended and unattended pick-up points and lockers (Cao & Li, 2015). While these delivery systems can differ from each other from several perspectives (e.g. opportunity of cross-selling, speed of delivery, and risk of missed deliveries), all of them enjoy a remarkable reduction of the transportation cost. Such an achievement becomes a must when companies deliver goods with a low value density, i.e. with a low unit value and a high volume/weight (Cooper, 1993; Gevaers et al., 2011; Lovell et al., 2005; Von Falkenhausen et al., 2019). This discussion is leading scholars and managers to think about the kind of logistic service that can be offered under reasonable conditions of efficiency, while still providing the client with good levels of speed, dependability, and availability of products for digital purchases.

Despite the logistic problems that can arise when adopting e-commerce, as stressed above, it can be posited that the use of online platform for digital selling can produce some positive outcomes in SCM processes, which are mainly related to the Sales & Operations planning process (S&OP). Indeed, there is extensive literature in the field of forecasting (namely judgmental forecasting) according to which the accuracy of sales forecasts can be improved when forecasters are able to leverage contextual information (Fildes et al., 2009). Such information (that is not necessarily numerical) can help the decision maker to better frame the forecasting process by collecting any informative input (trends, customers’ preferences, relevant events, etc.) that is suitable for understanding future demand (Seifert et al., 2015). In this regard, an e-commerce website can be a source of such contextual information, since it is possible to track the customer’s journey on it (even when it does not end with an actual purchase), and better identify the products that more than others can catch his/her interest. Thus, the adoption of e-commerce enables companies to establish a direct contact with the end consumer. This seems to be valuable especially in cases where companies mainly adopt indirect distribution channels, which prevent the company from obtaining real-time sell-out data on the purchasing behavior of the customers. In these contexts, the use of the digital channel enables a sort of virtual downstream integration that is beneficial mainly for the effectiveness of the S&OP

process, since it leads to more reliable sales forecasts, which enable a more effective production planning process (Armstrong, 2016).

3 Reference framework and methodology

According to the previous literature, the adoption of the digital channel can produce several opportunities and challenges for both Marketing and SCM processes. This means that companies willing to undertake a process of adoption of an omnichannel strategy through the launch of an e-commerce initiative should clearly identify all the outcomes of such a path in order to effectively cope with its complexities and fully exploit the related opportunities. For this reason, we propose a reference framework that, building on extant contributions, describes four different archetypes of companies that embrace an e-commerce initiative, classified according to two factors:

- the main (or even sole) distribution channel of the company (direct or indirect),
- the value density of the product (high or low).

The first factor is linked to the concept of marketing distribution strategy. A successful marketing distribution strategy guarantees that the desired product is distributed in a desired amount to a desired channel to satisfy the desired consumer (Kotler & Keller, 2014). As pointed out by past studies also cited above, the adoption of multiple (or hybrid) offline channels—whether direct and indirect—can generate advantages for the company if it is capable to use each of the two channels for specific target segments and also able to create synergies among them (Moriarty & Moran, 1990). Technological advances and online channels, and e-commerce platforms first of all, increase opportunities despite the challenges given by the difficulties related to implementing an effective omnichannel strategy. We think that attention should be focused on both the opportunities and also the burdens related to the introduction of e-commerce. Moreover, we think that a main distinction can be made between situations in which e-commerce is introduced in companies that mostly use direct distribution channels and companies that rely on indirect channels.

Regarding the first type, companies that mostly adopt offline direct channels can create value through the introduction of e-commerce if they achieve integration and alignment between digital and physical channels. If a company is able to foster this synergy, data integration among channels is essential (Mirzabeiki & Saghiri, 2020). Data management is a crucial aspect for omnichannel distribution and is broadly studied in the literature, focusing on aspects such as: channel transparency (Shen et al., 2018); online and offline data available on customers' behavior and needs (Park & Kim, 2019); and sharing information between websites, stores, and manufacturing (Li et al., 2018). Most academic contributions presume that once an omnichannel strategy is understood, companies implement it easily. However, further studies should be conducted on barriers and obstacles to data management integration and development of a unique and coherent marketing strategy (Zhang et al., 2018; Xu & Jackson, 2019). Valentino, the luxury brand, started a digitalization

strategy in order to implement its omnichannel strategy and e-commerce. This strategy was improved starting at the beginning of the health emergency. In fact, the company immediately implemented a business development and digital entertainment plan, as well as omnichannel integration, which generated double-digit growth in online sales, reaching +62% (Milanofinanza, 2021).

Concerning the indirect channel, companies that mostly sell through traditional indirect channels can leverage the digital channel to establish direct contact with the customer. Indeed, e-commerce allows for a better understanding of the customer, having immediate contact with buyers in order to understand changes in behavior and needs, and to adapt in real time the product development process, the communication strategies, and the promotional campaigns. This solution overcomes the main issue of traditional indirect channels represented by intermediation. A typical problem that can rise using indirect channel concerns the difficulties suffered by the company to obtain customers' information. In such cases, implications in terms of confidentiality with third-party companies and mechanisms of information use emerge (Song et al., 2019). Nike is an example of a company that decided to enhance its direct contact with the customers thanks to the implementation of e-commerce and creation of its own direct-to-consumer network (Forbes, 2008).

For companies that mostly sell through the indirect channel, from the SCM perspective as well the adoption of e-commerce can be beneficial since it enables downstream integration in the supply chain and the establishment of a direct contact with the end consumer, who can choose to buy online instead of using traditional "brick and mortar" stores. In these contexts, the use of the digital channel enables a sort of virtual downstream integration that can boost the effectiveness of the S&OP process (Armstrong, 2016). Indeed, the analysis of sell-out data and of customer behavior on the company's e-commerce platform (e.g. number of page views for each product or category, next-page path, exit rate, bounce rate, etc.) can lead to more reliable sales forecasts, which enable a more effective production planning process. Moreover, from the marketing perspective, e-commerce allows for a deeper understanding of consumer behavior, making it possible to achieve remarkable benefits, namely a higher effectiveness of the new product development process, communication strategies, and promotional campaigns.

Several experiences confirm the importance of direct contact with the end consumer. For instance, Yoox Net-a-Porter (YNAP), a well-known player in online sales specialized in fashion items from major international brands and designers, has recently launched its own brand, called 8 by Yoox. Its collections are developed through an innovative system based on the adoption of Artificial Intelligence, that identifies major market trends through the analysis of content from social media and digital magazines (Yoox Net-A-Porter Group, 2018). These outcomes are then crossed with qualitative and quantitative pieces of information coming from the company's e-commerce website concerning customer preferences and actual sales. The joint adoption of these inputs leads the Design Department to develop effective collections, with 8 by Yoox being among the top 20 brands sold by yoox.com in 2019. Zara has also based its business model and market success on the ability to leverage a wide variety of data and information to develop its products and to properly predict sales volumes (Sorescu, 2017). Among others, sell-out data collected

through the directly-operated stores and qualitative information gathered by shop assistants about customers' preferences are key conditions for Zara to understand what and how much to produce, thus further demonstrating the importance of direct contact with the end consumer.

Given the literature studies cited above, we can develop our reference framework based first on the type of distribution channel—direct or indirect—as a factor influencing the value-adding potential of the introduction of e-commerce. To operationalize this classification factor (i.e. “distribution channel”) through a quantitative indicator, we use the percentage of the company's revenues obtained through the direct offline channel.

The second factor in our reference framework is the value density of the product, which can be considered a proxy for the importance that efficiency has in the design and management of the distribution process. Due to the importance of the logistics process and specifically of last mile logistics for the success of any digital selling initiative, several studies have tried to identify the main factors affecting delivery costs, as well as the organizational solutions suitable for properly managing the trade-off between logistic services and transportation costs (Lim & Winkenschach, 2019). According to Gevaers et al. (2014), the main drivers of the latter rely on the service level promised to the customer, the delivery security, the geographical features of the market in terms of customer density, and the technological level of the fleet. Boyer et al. (2009) focused on customer density and the delivery window as conditions that sharply affect the efficiency of delivery in the context of e-commerce. Wollenburg et al. (2018) highlighted the importance of the nature of the product in the design of last mile logistics. High speed of delivery and short delivery windows also prevent the consolidation of parcels thus negatively influencing the efficiency of the whole process (Park & Regan, 2004). Furthermore, the value density of the product (i.e. unit value/volume or weight) is traditionally used in logistics to assess the impact of transportation costs on sales profitability (von Falkenhausen et al., 2019; Gevaers et al., 2011; Lovell et al., 2005; Cooper, 1993).

In our research framework, we decided to adopt the value density of the product as the classification factor. As a matter of fact, in the decision-making process of a company willing to embrace an e-commerce project, choices such as the length of the delivery window, the speed of delivery, and the geographical areas to serve actually depend on the value density of the product (Rushton et al., 2014).

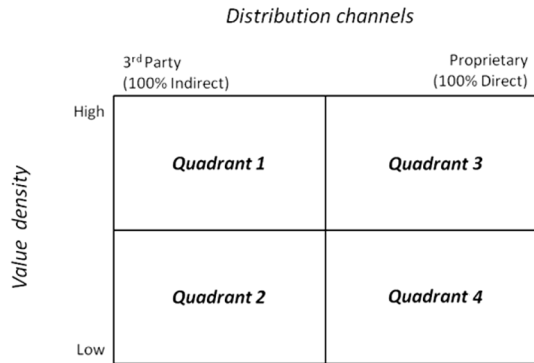
Considering the product's value density, it is not surprising that, when such a parameter is high, companies tend to apply generous delivery policies. For instance, Gucci promises deliveries of all products everywhere in Europe in 1–2 working days for free (Guccio Gucci S.p.A., 2020). On the contrary, Nestlè guarantees free delivery for its Nespresso pods only if a minimum number of 100 is bought in the same order (Nespresso S.A., 2020).

In our study we operationalize the “value density” factor by dividing the product's unit value by its volume or weight, depending on the feature of the item that mostly affects its transportation cost (either volume or weight).

By crossing the two factors, the following framework emerges (Fig. 1).

In order to confirm the reference framework, we adopted a specific methodology formed by two parts. The first part was based on a Delphi study and successive focus

Fig. 1 Reference framework.
 Source: Authors' elaboration



group. A Delphi study was conducted on ten SCM Managers, Marketing Managers, consultants, and opinion leaders in the field of Marketing and SCM in order to identify the most important issues that can drive the success of an e-commerce initiative from the perspective of Marketing and SCM processes (among those that emerged from our literature review). These included six experts from multinationals in the fields of consumer and packaging goods, pharmaceutical furniture, and mechanical industries, and four consultants who are experts in the field of Marketing and SCM and are also responsible in professional associations.

The outcome of this study led us to confirm the soundness of the two classification criteria of our reference framework. As a conclusion of the Delphi study, we organized a focus group with the ten persons involved in the first part of the study to discuss more in detail the key issues that emerged during the interviews. Namely, during the focus group we moderated a discussion on the main opportunities and threats of e-commerce and we explicitly asked whether the above-mentioned factors (value density of the product and distribution channel type) could actually drive the most relevant decisions on the design and implementation of e-commerce projects. The comments received from members of the focus group provided us with further positive feedback on our reference framework.

Based on this evidence, we moved to the second part of the empirical study, which consisted of a multiple case study investigation (Yin, 2014). For this purpose, we identified four branded companies, one for each of the four quadrants: quadrant 1—Case A; quadrant 2—Case B; quadrant 3—Case C; and quadrant 4—Case D. These four branded companies were selected so as to fit with the features of the quadrants, cited by the managers and professionals of the Delphi study as valuable examples of applications of e-commerce that were useful for our exploratory research (Table 1).

External validity was achieved by using a replication logic to conduct and analyze each case. In all companies, both the Marketing Manager and the SCM Manager were interviewed to capture the perspective of these departments concerning the e-commerce initiatives of the firm. A semi-structured interview protocol was used, thus increasing reliability, and each interview lasted between 45 and 90 min. Furthermore, the companies' reports and presentations related to

Table 1 Interviewees of the four branded companies. *Source:* Authors' elaboration

Interviewees' role	Company
Group S&OP and Demand Director Chief Corporate Officer	Case A—Luxottica
E-commerce Manager Sales and Marketing Manager	Case B—Casa Henkel
Retail Operations Sales Support Manager	Case C—Ferragamo
E-commerce Operation Manager Global Category Manager Logistic Units	Case D—IKEA

the topic of this study were acquired, as were newspaper and magazine articles focused on the companies' e-commerce projects.

4 The reference framework: empirical insights

4.1 Case A: Luxottica

Luxottica is one of the major Italian manufacturers of eyeglasses, with a world-wide presence and well-established proprietary and licensed brands.

From a logistics standpoint, the company sells through a few directly operated stores; however, most of its revenues come from the wholesale indirect channel. It has recently launched an e-commerce project, whose sales are expected to grow quickly and become a considerable percentage of total revenues. The products bought online are shipped directly to the customer's location from the company's nearest warehouse, with a home delivery approach. The omnichannel strategy has a relatively low impact on the costs connected to the delivery process due to the high value density of the product. Thus the company mostly uses home delivery, since it does not have a strong impact on profitability and shipment is organized from one of its three logistic hubs in the world, a choice that involves long distances between the point of origin and the point of destination.

For this company the value of an omnichannel strategy is definitely high and is mostly found in the data and information gathered through the strategy, which enables a more effective understanding of demand from both a qualitative standpoint (i.e. what the emerging trends are in the market) and a quantitative standpoint (i.e. how much a product is going to sell in a given period of time). Leveraging data collected through e-commerce, Luxottica has been able to get important information on customer preferences. This has led the company to reduce its product range, focusing on the most popular products. Furthermore, tracking the customer journey of the e-commerce website, it is also possible to detect improvement opportunities in the pricing policy for some items, which are frequently clicked on, but seldom bought.

4.2 Case B: Casa Henkel

Henkel is a German chemical and consumer goods company, with headquarters in Düsseldorf, Germany. The company operates worldwide in three business areas: Adhesive Technologies, Beauty Care, and Laundry & Home Care. Regarding the latter area, in 2008 the company launched its online store CasaHenkel.it, that in 2020–2021 was recognized as the best Home Care Italian e-commerce (by the German ITQF Institute). The strategic management of the website is controlled internally, while the platform is outsourced.

From a Marketing and Sales perspective, Henkel's e-commerce operation was created with the aim of offering a high-quality service to customers, giving them the opportunity to purchase quality products and services directly from the manufacturing company. The efforts of the e-commerce team are focused daily on optimizing the platform to offer customers the best customer experience. A complete offer is presented, including advice on the best products for certain uses, dedicated discounts, fast delivery ("no weights and no waiting"), previews of new products, etc. The search for a "one-click" purchase is a priority objective. Marketing automation for the customization of the offer, depth of the assortment with the involvement of the company's other product categories, and acceleration of the payment and order receipt processes are the main directions the company follows to offer the customer the possibility to purchase heavy products and those not belonging to the "emotional" category, in a quick and informed way. Thanks to the e-commerce activity the company builds customer loyalty to its brands and gets feedback through surveys on the service offered, sharing possible improvements and acknowledging new insights. Furthermore, the knowledge of the purchasing habits of online consumers allows the company to monitor and evolve its offer in advance. In addition, there is the possibility to obtain evaluations relating to the purchasing process, such as clarity of product sheets, satisfaction with the type of promotions and type of assortment, methods of use, advice on product modifications, and eco-sustainability of the formula.

From a logistics standpoint, the turnover from e-commerce activity have an impact on total revenues of about 2%, with a forecast of a significant increase in the next five years. The e-commerce operations are managed by a logistics operator specialized in the e-commerce sector. The e-commerce and offline channels have different specific warehouses, with various degrees of automation in the storage and picking processes and different transportation logics. The e-commerce operation seeks efficiency through innovative delivery solutions such as multi-brand shared shipments in the same logistics center, including different product categories within the company, but also of different companies operating in the same logistics center (but not competitors, obviously). With reference to the specific CasaHenkel.it project, the company has undertaken initiatives aimed at improving the organization of e-commerce logistics by optimizing shipping times, decreasing stock based on surplus forecasting tools for sell-out, protection of product packaging through the development of a shared strategy with the logistics operator, and making the process "tailor made" to the logistics and expectations of the end customers with a view to developing the "zero complaints" project. In relation to logistics for e-commerce, the company plans projects focused on the development of

eco-sustainable channel solutions, the launch of exclusive products for the online channel able to represent a perfect solution in logistics and management by the customer after purchase, and an increase of service in the field of product collection in dedicated corner points.

4.3 Case C: Ferragamo

Ferragamo is an Italian luxury goods company, with headquarters in Florence, Italy. The company is present in more than 90 countries thanks to direct flagship stores, third points of sales, and department stores. In 2009, the company launched its new website integrated with e-commerce for the main European countries and the USA.

From a logistics standpoint, all European orders from stores and e-commerce sales are managed by the central warehouse located in Florence and delivered through a single third-party logistic operator. The costs incurred due to this type of distribution strategy are high, but they are considered affordable due to the high value of the products. Indeed, the initiatives undertaken by Ferragamo to improve its logistics system are mostly aimed at improving its service level. In the central warehouse in Florence, the stock for the e-commerce channel is kept separate from that devoted to the physical stores, but in the near future the two stocks will be unified in order to achieve integrated inventory management, in line with the principles of omnichannel management. In the meantime, Ferragamo is implementing the Continuous Replenishment System approach in its European stores, in order to guarantee a high service level through the pooling of the stock in its warehouse in Florence and real-time inventory level control in the stores, which enables frequent replenishments. Even though e-commerce generates its own sell-out data, the company currently is not using it to strengthen the demand forecasting process.

From the Marketing and Sales standpoints, the e-commerce channel was introduced mainly to reach a greater number of customers, located in areas where physical stores selling Ferragamo products cannot be easily reached. Furthermore, through its website coupled with the e-commerce channel, Ferragamo has strengthened its relationship with the customers, offering innovative services that are consistent with its digital strategy and with the need to improve the customer journey. For instance, customers can now choose “in-store pickup” as an alternative to “home delivery” for their purchases completed on the web. They can also opt for the alternative, which consists of buying in the physical store and having the product delivered at home. Thus, e-commerce is one more reason for the client to visit the company’s website and get in touch with Ferragamo through it. On the Ferragamo website it is also possible to book an appointment with a sales assistant and visit the shop.

4.4 Case D: Ikea

Ikea is a Swedish multinational company headquartered in Leiden, The Netherlands, specializing in the sale of furniture, home accessories, and other objects for the home.

From the Marketing and Sales standpoints, the company undertook an e-commerce project to follow the global trend of digital selling, which is leading a higher and higher percentage of customers to purchase products on the web.

However, from a logistics standpoint, due to the low value density of most of its products, Ikea is investing heavily to improve the efficiency of its e-fulfillment process. It is redesigning its packaging to make it smaller, thus increasing the product value density as well as the efficiency of the picking process in the warehouse. Furthermore, the central warehouse that serves the Italian market has been divided into two dedicated areas, one of which is specifically devoted to e-commerce and home delivery, where ad hoc picking technologies and procedures have been implemented. Furthermore, the Click&Collect system is being promoted among consumers to reduce the amount of shipments to the customers' site. Given the complexities peculiar to the e-fulfillment process, this company has not yet enjoyed considerable benefits in terms of higher accuracy of demand forecasting, due to the fact that traditionally it sells only through directly-operated stores. From the standpoint of digital marketing, the company has also not reported any significant achievements.

5 Discussion: a variety of approaches to the introduction of e-commerce

By leveraging our exploratory research on the four case studies, we can observe that the companies analyzed have different approaches to the introduction of e-commerce in their overall omnichannel strategy, and how to make the most of it. In particular, the four quadrants underline the most significant differences in terms of value actually generated by investing in e-commerce and the main challenges that companies have to cope with (Fig. 2). Each quadrant has been given a label that qualifies the company's approach to e-commerce.

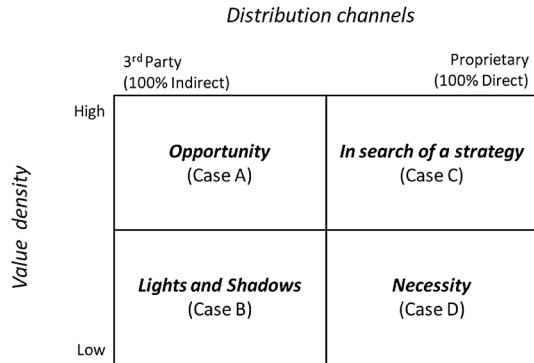
5.1 Opportunity approach (quadrant 1)

This is the quadrant of companies that mostly sell high value density products through indirect channels, as in Case A (Luxottica). For Luxottica, the value of an omnichannel strategy is definitely high and is mostly found in the data and information gathered through it, which allow for a more effective understanding of demand from both a qualitative standpoint (i.e. what the emerging trends are in the market) and a quantitative standpoint (i.e. how much a product is going to sell in a given period of time). In this context, e-commerce generates benefits that consist of more accurate demand forecasting, a more effective customer journey and promotional campaigns, and a more focused new product development process.

Furthermore, the e-commerce channel has a relatively low impact on the costs connected to the delivery process due to the high value density of the products. All of these aspects have been observed in the case of Luxottica, where the company leverages the sell-out data of the e-commerce channel to increase its understanding

Fig. 2 Reference framework: approaches to e-commerce.

Source: Authors' elaboration



of market demand, and by doing so, to improve forecast accuracy and the effectiveness of its marketing and new product development process.

For all of these reasons, we call the approach adopted in this quadrant “Opportunity.”

5.2 Lights and shadows approach (quadrant 2)

This is the quadrant of companies with low value density products that sell mostly through indirect channels (Case B-Henkel). While the possibility to establish a direct connection with the customer can be valuable for Henkel, the low value density of its products represents a significant threat. Thus, in such a case it is necessary to understand whether it is worthwhile to pursue e-commerce, and if so, how the delivery process must be designed in order to mitigate the negative outcomes that it can bring about. This is witnessed by the number of initiatives that Henkel is undertaking to improve its delivery process. In order to outweigh the unfavorable effects of the last mile logistics, Henkel must leverage the digital direct connection with the customers in order to achieve a higher understanding of the demand side, so as to improve the effectiveness of its marketing and promotional activities as well as the accuracy of its forecasting process. In this regard, Henkel is leveraging the e-commerce channel and the direct contact with the consumer to better convey its brand image and increase the customers' level of knowledge about its product offering and the specific features of specific items. All these actions can eventually lead to greater customer satisfaction and retention.

Because of these features, the approach in this quadrant has been named “Lights and Shadows.”

5.3 In search of a strategy approach (quadrant 3)

In this quadrant we can find companies that mostly sell through the direct channel, with high value density products (Case C-Ferragamo). From a logistics standpoint, due to the latter characteristic, Ferragamo does not incur significant transportation costs for last mile logistics, thus it can easily undertake an e-commerce project,

which however can create opportunities that are different from the ones of quadrants 1 and 2. Indeed, in this case the improvement in forecast accuracy is limited since the company is already in direct contact with the customer. In order to get the most from digital selling, the company must carry out a more effective profiling of its customers, offering specific services (such as product customizations through configuration platforms). Ferragamo can also strive to improve the customer experience and customer loyalty through the effective design of the customer journey. Finally, when the direct offline distribution channel does not have a high degree of capillarity, the company can leverage e-commerce to increase sales, offering the delivery of the product in geographical areas that are not served by the traditional channels. We call the approach in this quadrant “In search of a strategy.”

5.4 Necessity approach (quadrant 4)

This is a quadrant where companies mostly sell through the direct channel and deal with low value density products (Case D-Ikea). As in the previous quadrant, e-commerce is particularly attractive for increasing of sales, improving customer experience and customer loyalty, or to carry out more effective profiling of customers. However, Ikea does not gain any significant benefits in terms of sales and operation planning effectiveness through e-commerce because it is already in contact with the customers through its directly operated stores. Furthermore, selling products with low value density, the delivery process can become extremely expensive. Indeed, Ikea has embraced several projects aimed at reducing the delivery cost of e-commerce, such as the redesign of the packaging, the adoption of ad hoc processes and technologies of the picking processes devoted to e-commerce, and the promotion of alternative delivery systems (e.g. Click and Collect). At Ikea, from the standpoint of the sales and operations planning process, there isn't any specific reason to significantly embrace the e-commerce strategy, the pursuit of which can be due to the willingness to conform to an overall trend (i.e. digital sales) and to the possibility of exploiting the introduction of an e-commerce strategy from the marketing and customer satisfaction perspectives. We call the approach in this quadrant the “Necessity” approach.

Several comments can be made to leverage the evidence of the case studies discussed. It can be affirmed that the omnichannel strategy with the adoption of e-commerce is particularly valuable for companies that mainly operate through the indirect channel, regardless of the product's value density. Through the digital platform firms can achieve a higher understanding of the demand from both a qualitative and quantitative standpoint. Moreover, they can properly convey the brand image of the company that is often threatened (or at least poorly communicated) by the independent retailers. This risk is particularly high in countries like Italy, where the distribution system is still very fragmented and populated by rather small retailers with constrained resources (financial, human, and space). Furthermore, e-commerce, if managed directly by the company, can reduce the risk of the parallel/gray market because the product is sold directly to the customer. Finally, through the e-commerce

webpage the company can stimulate demand and support the promotion of marketing campaigns that can boost the sell-out.

Focusing on the value density of the product, when it is high, the adoption of the digital channel is easier to implement because the company can afford the lower efficiency brought about by the last mile logistics. However, when the e-commerce operation results in extremely low order size and high number of orders, the risk of a decrease in the overall value density of the shipment must be considered. This can be detrimental to the economic convenience of the e-commerce solution even in the case of high value density products. This risk is even higher when the company does not have directly operated stores, which could act as local distribution centers and reduce the total distance to be travelled to reach the e-shopper. Such concerns hold also for companies with a low value density. In these specific cases, it is mandatory to think of alternative delivery solutions, such as click-and-collect, pick-up points and lockers, and to find design solutions aimed at reducing the weight and volume of the product.

6 Conclusions

In this paper, we conducted an analysis aimed at understanding if and how companies can derive value from e-commerce in the context of an omnichannel strategy from the standpoint of both Marketing & Sales and SCM.

The study has provided a framework that companies can leverage to understand the main challenges and threats that they have to consider when undertaking this path, in order to get the most from digital channel.

Regarding the academic implications, the paper contributes to the creation and improvement of knowledge on the theme under analysis. In particular, it offers a further discussion on the effects of e-commerce in the context of an omnichannel strategy on Marketing and SCM processes, providing insights on both the value creation mechanism and related challenges and constraints.

Concerning the managerial implications, this paper offers useful suggestions for companies on how to better frame their decisions on the adoption of e-commerce, with a higher degree of awareness especially of the factors that should be considered to get the most from these initiatives in terms of Marketing and SCM processes, still mitigating the inefficiencies that can be generated by last mile logistics.

The study has a number of limitations. First of all, from a qualitative perspective a higher number of case studies should be analyzed in the different quadrants, and also distinguished considering variables such as industries, markets, and size of the companies. From a quantitative point of view, to achieve a statistical generalization of the results an extensive survey should be conducted on a significant sample of companies placed in the different quadrants. Further research is needed on how companies handle the e-commerce challenge in the quadrants they belong to. Finally, the returns on investments in e-commerce and omnichannel initiatives should be explored by focusing on a variety of KPIs to capture their actual performance.

Funding Open access funding provided by Università Cattolica del Sacro Cuore within the CRUI-CARE Agreement.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Armstrong, C. (2016). Omnichannel retailing and demand planning. *The Journal of Business Forecasting*, 35(4), 10.
- Aubrey, C., & Judge, D. (2012). Re-imagine retail: Why store innovation is key to a brand's growth in the 'new normal', digitally-connected and transparent world. *Journal of Brand Strategy*, 1(1), 31–39.
- Autry, C. W. (2021). Supply chain research: considering the discipline's evolving relationship with marketing, current issues, and future research directions. *Journal of Marketing Theory and Practice*, 3, 1–13.
- Boyer, K. K., Prud'homme, A. M., & Chung, W. (2009). The last mile challenge: Evaluating the effects of customer density and delivery window patterns. *Journal of Business Logistics*, 30(1), 185–201.
- Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). *Competing in the age of omnichannel retailing* (pp. 1–7). MIT.
- Cai, Y. J., & Lo, C. K. (2020). Omni-channel management in the new retailing era: A systematic review and future research agenda. *International Journal of Production Economics*, 229, 107729.
- Cao, L., & Li, L. (2015). The impact of cross-channel integration on retailers' sales growth. *Journal of Retailing*, 91(2), 198–216.
- Cooper, J. C. (1993). Logistics strategies for global businesses. *International Journal of Physical Distribution and Logistics Management*, 23(4), 12–23.
- Fildes, R., Goodwin, P., Lawrence, M., & Nikolopoulos, K. (2009). Effective forecasting and judgmental adjustments: An empirical evaluation and strategies for improvement in supply-chain planning. *International Journal of Forecasting*, 25(1), 3–23.
- Forbes. (2008). Nike's New Consumer Experience Distribution Strategy Hits the Ground Running. Retrieved September 22, 2020, from <https://www.forbes.com/sites/pamdanziger/2018/12/01/nikes-new-consumer-experience-distribution-strategy-hits-the-ground-running/?sh=3456e6f5f1d0>
- Gevaers, R., Van de Voorde, E., & Vanellander, T. (2011). Characteristics and typology of last-mile logistics from an innovation perspective in an urban context. In *City distribution and urban freight transport: Multiple perspectives* (pp. 56–71). Edward Elgar Publishing.
- Gevaers, R., Van de Voorde, E., & Vanellander, T. (2014). Cost modelling and simulation of last-mile characteristics in an innovative B2C supply chain environment with implications on urban areas and cities. *Procedia-Social and Behavioral Sciences*, 125, 398–411.
- Guccio Gucci S.p.A. (2020). *Shipping & Delivery*. Guccio Gucci S.p.A. Retrieved September 24, 2020, from https://www.gucci.com/no/en_gb/st/faq#shipping-and-delivery
- Jindal, R. P., Gauri, D. K., Li, W., & Ma, Y. (2021). Omnichannel battle between Amazon and Walmart: Is the focus on delivery the best strategy? *Journal of Business Research*, 122, 270–280.
- Jocovski, M. (2020). Blurring the lines between physical and digital spaces: Business model innovation in retailing. *California Management Review*, 63(1), 99–117.
- Kotler, P., Keller, K. L., Ancarani, F., & Costabile, M. (2014). *Marketing management 14/e*. Pearson.

- Laseter, T., Egol, M., & Bauer, S. (2015). *Navigating retail's last mile* [online], New York, NY: PwC Strategy & LLC. <http://www.strategy-business.com/article/00369?gko=ad8b1>. Accessed 1 Feb 2021
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69–96.
- Lewis, J., Whysall, P., & Foster, C. (2014). Drivers and technology-related obstacles in moving to multichannel retailing. *International Journal of Electronic Commerce*, 18(4), 43–68.
- Li, Y., Liu, H., Lim, E. T., Goh, J. M., Yang, F., & Lee, M. K. (2018). Customer's reaction to cross-channel integration in omnichannel retailing: The mediating roles of retailer uncertainty, identity attractiveness, and switching costs. *Decision Support Systems*, 109, 50–60.
- Lim, S. F. W., Rabinovich, E., Rogers, D. S., & Laseter, T. M. (2016). Last-mile supply network distribution in omnichannel retailing: A configuration-based typology. *Foundations and Trends® in Technology, Information and Operations Management*, 10(1), 1–87.
- Lim, S. F. W., Jin, X., & Srari, J. S. (2018). Consumer-driven e-commerce: A literature review, design framework, and research agenda on last-mile logistics models. *International Journal of Physical Distribution and Logistics Management*, 48(3), 308–332.
- Lim, S. F. W., & Srari, J. S. (2018). Examining the anatomy of last-mile distribution in e-commerce omnichannel retailing. *International Journal of Operations and Production Management*, 38(9), 1735–1764.
- Lim, S. F. W., & Winkenbach, M. (2019). Configuring the last-mile in business-to-consumer e-retailing. *California Management Review*, 61(2), 132–154.
- Lovell, A., Saw, R., & Stimson, J. (2005). Product value-density: Managing diversity through supply chain segmentation. *The International Journal of Logistics Management*, 16(1), 142–158.
- Marchet, G., Melacini, M., Perotti, S., Rasini, M., & Tappia, E. (2018). Business logistics models in omni-channel: A classification framework and empirical analysis. *International Journal of Physical Distribution and Logistics Management*, 48(4), 439–464.
- Melacini, M., Perotti, S., Rasini, M., & Tappia, E. (2018). E-fulfilment and distribution in omni-channel retailing: A systematic literature review. *International Journal of Physical Distribution and Logistics Management*, 48(4), 391–414.
- Milanofinanza. (2021). *Valentino tiene. Volano e-commerce (+77%) e Cina (+44%)*. Retrieved February 20, 2021, from <https://www.milanofinanza.it/news/valentino-tiene-volano-e-commerce-77-e-cina-44-202102181224008696>
- Mirsch, T., Lehrer, C., & Jung, R. (2016). Channel integration towards omnichannel management: a literature review.
- Mirzabeiki, V., & Saghiri, S. S. (2020). From ambition to action: How to achieve integration in omni-channel? *Journal of Business Research*, 110, 1–11.
- Morganti, E., Seidel, S., Blanquart, C., Dablanc, L., & Lenz, B. (2014). The impact of e-commerce on final deliveries: Alternative parcel delivery services in France and Germany. *Transportation Research Procedia*, 4, 178–190.
- Moriarty, R. T., & Moran, U. (1990). Managing hybrid marketing systems. *Harvard Business Review*, 68(6), 146–155.
- Nagariya, R., Kumar, D., & Kumar, I. (2020). Service supply chain: from bibliometric analysis to content analysis, current research trends and future research directions. *Benchmarking: An International Journal*.
- Nespresso S. A. (2020). *Delivery Information*. Nespresso S.A. Retrieved September 26, 2020, from <https://www.nespresso.com/uk/en/delivery-information>
- Park, J., & Kim, R. B. (2019). The effects of integrated information & service, institutional mechanism and need for cognition (NFC) on consumer omnichannel adoption behavior. *Asia Pacific Journal of Marketing and Logistics*.
- Park, M., & Regan, A. (2004). *Issues in emerging home delivery operations*. University of California Transportation Center.
- Raza, S. A., & Govindaluri, S. M. (2021). Omni-channel retailing in supply chains: a systematic literature review. *Benchmarking: An International Journal*.
- Rushton, A., Croucher, P., & Baker, P. (2014). *The handbook of logistics and distribution management: Understanding the supply chain*. Kogan Page Publishers.
- Seifert, M., Siemsen, E., Hadida, A. L., & Eisingerich, A. B. (2015). Effective judgmental forecasting in the context of fashion products. *Journal of Operations Management*, 36, 33–45.

- Shen, X. L., Li, Y. J., Sun, Y., & Wang, N. (2018). Channel integration quality, perceived fluency and omnichannel service usage: The moderating roles of internal and external usage experience. *Decision Support Systems*, *109*, 61–73.
- Shi, T., Chhahjed, D., Wan, Z., & Liu, Y. (2020). Distribution channel choice and divisional conflict in remanufacturing operations. *Production and Operations Management*, *29*(7), 1702–1719.
- Song, G., Song, S., & Sun, L. (2019). Supply chain integration in omni-channel retailing: a logistics perspective. *The International Journal of Logistics Management*.
- Sorescu, A. (2017). Data-driven business model innovation. *Journal of Product Innovation Management*, *34*(5), 691–696.
- Trenz, M., Veit, D. J., & Tan, C.-W. (2020). Disentangling the impact of omnichannel integration services on consumer behavior in integrated sales channels. *MIS Quarterly*, *44*(3), 1207–1258.
- Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From multi-channel retailing to omni-channel retailing: Introduction to the special issue on multi-channel retailing. *Journal of Retailing*, *91*(2), 174–181.
- Vishwanath, V., & Mulvin, G. (2001). Multi-channels: The real winners in the B2C internet wars. *Business Strategy Review*, *12*(1), 25–33.
- Von Falkenhausen, C., Fleischmann, M., & Bode, C. (2019). How to find the right supply chain strategy? An analysis of contingency variables. *Decision Sciences*, *50*(4), 726–755.
- Wollenburg, J., Hübner, A., Kuhn, H., & Trautrim, A. (2018). From bricks-and-mortar to bricks-and-clicks. *International Journal of Physical Distribution and Logistics Management*, *48*(4), 415–438.
- Xu, X., & Jackson, J. E. (2019). Examining customer channel selection intention in the omni-channel retail environment. *International Journal of Production Economics*, *208*, 434–445.
- Yin, R. K. (2014). *Case study research: Design and methods (applied social research methods)*. Sage Publications.
- Yoox Net-A-Porter Group. (2018, 6 November). *YOOX launches 8 by YOOX*. Yoox Net-A-Porter Group. Retrieved September 20, 2020, from <https://www.ynap.com/news/yoox-launches-8-by-yoox/>
- Zhang, M., Ren, C., Wang, G.A., & He, Z. (2018). The impact of channel integration on consumer responses in omni-channel retailing: The mediating effect of consumer empowerment. *Electronic Commerce Research and Applications*, *28*, 181–193.