WORK IN PROGRESS

This version of the scoping paper is likely to evolve over the course of the project.

Foresight on Demand:

Retail Ecosystem 2040

Scoping of the ecosystem

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1 THE BROADER RETAIL ECOSYSTEM

1.1 Introduction

The retail sector is undergoing a tremendous transformation, even beyond the trends imagined in a sectoral innovation report a decade ago (see AIT et al, 2010). COVID-19 “has dramatically disrupted the sector, with the shock differing massively between brick-and-mortar versus online shops, essential versus non-essential stores, and small versus large retailers” (OECD 2020). One of the measures to mitigate the effects of the crisis lies in the diversification of the sales channels “in particular by helping small brick-and-mortar retailers go online” – as the OECD suggests. The Annual Single Market Report (European Commission, 2021b) highlights the importance of support measures “to minimise the ongoing disruption caused by COVID-19”. Support can be used to “assist retailers in their transition to online presence and sales”, increasing their resilience to these types of shocks. This is massively supported through sectoral studies – the key concept being the ‘omnichannel supply chain’. Changes in this sector will not only affect the many people who work in the sector, but every consumer and thus every citizen. Thus, it is important to describe the changes in the ecosystem, to understand its future potential shape.

This chapter provides a delineation of the broader retail ecosystem at European level. We aim at the definition – or better delineation - and characterisation of the European retail ecosystem, its segments and actors and a thorough understanding on market developments of the retail ecosystem (challenges). Box 1 presents and overview of the main concepts that will be used and discussed in the report.

Box 1 Main concepts presented in the report

The Value Chain was described by Porter (1985) as the “collection of activities that are performed by a company to create value to its customers”. It captures all primary activities (inbound logistics, operations, outbound logistics, marketing and sales, and service), as well as support activities (firm infrastructure, HR management, technology development and procurement) that are required to develop the firms’ activities and deliver value to its customers.

Different value Chains are aggregated and brought together in the same Supply Chain (Nagumey, 2006). The Supply Chain is defined as the “is a chain of actors directly involved in the upstream and downstream flows of inputs and outputs from a source to a customer” (Sterman, 1989). Different value chains can be integrated at different stages of the retail supply chain.

Ecosystems are sets of interconnected actors that interact in specific ways within the framework of specific conditions and factors that are either hampering or being conducive for success (such as the availability of finance, market demand and consumers, human capital, education, technology, or a supporting regulatory framework). From the functional perspective of the wider ecosystem, we will take the definition of a business ecosystem as “the community of organizations, institutions, and individuals that impact the enterprise and the enterprise’s customers and suppliers … including complementors, suppliers, regulatory authorities, standard-setting bodies, the judiciary, and educational and research institutions.” (Thomas and Autio, 2019).

Ecosystems are distinct from a value chain, as they are not defined by contractual relationships alone and exhibit specific roles or functions that co-evolve and become attributed to different kinds of actors, which enable them to interact and collaborate to reach the expected system-level outputs (Ibid).

Identified as one of the 14 Industrial Ecosystems for the Recovery,1 the Retail Ecosystem encompasses grocery and non-grocery retail, both offline and online, the relevant wholesale and online platforms. It includes both large companies and SMEs. The retail ecosystem encompasses all companies, actors, knowledge providers, organisations providing retail-relevant products and services (such as suppliers, transportation services, logistics, relevant real estate) as well as consumers.

The ecosystem description is based on a systematic analysis of the key documents and statistics to define the main types of actors and their roles. This presents a current system’s perspective, to underpin further horizon scanning.

In terms of geographical boundaries, the desk review will encompass findings from studies on developments in both EU27-MS and non-EU geographies, from retail and related sectors which target EU consumers, to non-EU suppliers that provide products to be sold in the EU.

The identification of relevant studies required for the systematic analysis and characterisation of the retail ecosystem was based on the screening of a variety of types of literature, including policy papers, academic publications, sectoral advocacy papers, market research analysis and survey-based analyses, etc.

1.2 Statistical delineation

Traditionally, the retail sector has been described based on the generic definitions provided by Eurostat related to retail trade (Table 1). Retailers are the businesses involved in (re)selling goods to consumer or end-user in smaller quantities, while wholesalers sell goods in bulk to various users. There is a diversity of forms of retail, depending on the goods sold, which can be food- or non-food items, specialised or non-specialised retailers, sellers of new or second-hand items, or the channels through which the goods are sold (in-store, online, marketplaces, etc.). As Box 1 indicates, all actors involved in the retail and wholesale sectors build together the broader concept of retail ecosystem, which is the subject of this report. Furthermore, this report takes a wider view of the retail value chain, including sectors beyond retail, but directly related and with high influence on the retail sector, such as manufacturing or agriculture. More details are provided in chapter 2.4.

Retail trade is a form of trade in which goods are mainly purchased (bought) and resold to the consumer or end-user, generally in small quantities and in the state in which they were purchased by the retailer (or following minor transformations). Wholesale trade refers to the sale of goods in bulk to resellers, professional users, or groups, who then sell the products to final consumers. The retail sector includes, for example, the sale of items related to fashion, food, consumer electronics, do-it-yourself & gardening, furniture & decoration, home ware, footwear & leather, personal care, baby ware, sport & leisure, toys & games, books & magazines, jewellery & watches, optical, pet care, petrol, telecom. Table 1 provides an overview of the statistical definition of retail and wholesale trade that we take into account in this report.
<table>
<thead>
<tr>
<th>NACE</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| 46,1 | Wholesale on a fee or contract basis | includes:  
- activities of commission agents, commodity brokers and all other wholesalers who trade on behalf and on the account of others  
- activities of those involved in bringing sellers and buyers together or undertaking commercial transactions on behalf of a principal, including on the Internet.  
This group also includes:  
- activities of wholesale auctioneering houses, including Internet wholesale auctions |
| 46,3 | Wholesale of food, beverages and tobacco |  |
| 46,4 | Wholesale of household goods | includes the wholesale of household goods, including textiles. |
| 46,5 | Wholesale of information and communication equipment | includes the wholesale of ICT equipment, i.e. computers, telecommunications equipment and parts. |
| 47,1 | Retail sale in non-specialised stores | includes the retail sale of a variety of product lines in the same unit (non-specialised stores), such as supermarkets or department stores. |
| 47,2 | Retail sale of food, beverages and tobacco in specialised stores |  |
| 47,3 | Retail sale of automotive fuel in specialised stores |  |
| 47,4 | Retail sale of information and communication equipment in specialised stores | includes the retail sale of ICT equipment, such as computers and peripheral equipment, telecommunications equipment and consumer electronics, by specialised stores. |
| 47,5 | Retail sale of other household equipment in specialised stores | includes the retail sale of household equipment, such as textiles, hardware, carpets, electrical appliances or furniture, in specialised stores. |
| 47,6 | Retail sale of cultural and recreation goods in specialised stores | includes the retail sale in specialised stores of cultural and recreation goods, such as books, newspapers, music and video recordings, sporting equipment, games and toys. |
| 47,7 | Retail sale of other goods in specialised stores | includes the sale in specialised stores carrying a particular line of products not included in other parts of the classification, such as clothing, footwear and leather articles, pharmaceutical and medical goods, watches, souvenirs, cleaning materials, weapons, flowers and pets and others. |
| 47,8 | Retail sale via stalls and markets | includes the retail sale of any kind of new or second-hand product in a usually movable stall either along a public road or at a fixed marketplace. |
| 47,9 | Retail trade not in stores, stalls or markets | includes retail sale activities by mail order houses, over the Internet, through door-to-door sales, vending machines etc. |

Source: NACE REV. 2 ((EC) 1893/2006)
2 THE BUILDING BLOCKS OF THE RETAIL ECOSYSTEM

Based on desk research, this chapter provides a basic understanding of the different actors’ roles in the development of the retail ecosystem. Beside the companies that are at the core, this includes policy and regulatory actors, actors involved in knowledge production, circulation and use, innovation support actors such as business intermediaries, as well as actors engaged in the education sector. Framework conditions such as regulation, competition, infrastructures, etc. are also discussed.

Furthermore, this chapter provides a broad value chain analysis, by considering new combinations and links to other technological developments.

2.1 The landscape of European retail SMEs

The EU’s retail sector (NACE G 47) has more than 3.6 million enterprises, while the wholesale sector (G 46) is roughly half the size of retail (1.8 million enterprises). In total, there were **over 5.4 million enterprises in the wholesale and retail sector in EU in 2018** (Eurostat). **99.9% of the retail sector enterprises are SMEs** (European Commission, 2021b). They account for 60% of the total number of employees, 50% of the turnover and 50% of the value added in the sector.

As shown in Figure 1, in 2018, roughly 55% of enterprises in the retail sector are owner operated with no employee, about one third has 1-4 employees and only one in ten companies employs more than 5 employees.

A gradual decrease in terms of retail businesses was already happening before the COVID-19 pandemic: **between 2014-2018, a net of 200,000 retail businesses ceased to exist** (an average annual loss of -1.3%) with the highest loss in the group of owner-operated businesses (-2.0%) (Eurostat) (Figure 1). At MS-level, some countries have seen a more massive ‘consolidation of the market’ than others: Poland has lost almost a quarter of its retail businesses with an annual average loss rate of – 6.2% (Eurostat).

---

2 It should be noted that although this study only considers the subsectors G46.1, G46.3, G46.4 and G46.5 as part of the retail ecosystem, this data reflects the whole sector as Eurostat does not provide this low level of granularity.
This consolidation has been a trend in almost all the economic sectors as a consequence of mergers and acquisitions and a need to increase efficiency. By consolidating volumes, wholesalers and retailers can achieve economies of scale, hence reducing production costs and prices for their manufacturing clients. As a result, larger businesses have increased their presence within the ecosystem (EuroCommerce, 2021). This trend is considered as significant in impacting the retail ecosystem: the shift from non-organised (individual shops) to organised retail (food and non-food chain stores) is ongoing and here for the long-term. The share of organised retail has been growing as a share of total retail sales (Wyman, 2021). The trend varies per country, as there are more organised retailers in Northern European countries compared to Southern Europe. The latter still have higher numbers of retail stores per capita however, the trend towards more organised retail can be seen in all the countries studied (see Figure 3 below). At the same time, the density of retail stores was equally decreasing in all the covered countries (Wyman, 2021).

Between 2011 and 2020, the number of enterprises taking up electronic sales has been gradually increasing in the EU27. With the exception of the financial sector, online sales grew from 13% to 18% (Eurostat). For SMEs, the share of turnover from online sales increased from 8.5% in 2015 to 11% in 2020 (European Commission, Digital Scoreboard). There are marked differences within the EU: between 30-40% of companies in...
Denmark (38%), Ireland (33%) Sweden and Croatia (30% each) sell online, while Bulgaria (8%) and Luxembourg (10%) had only low shares in 2020 (Eurostat). At a global level, the e-commerce share of global retail trade grew from 14% in 2019 to about 17% in 2020 (UNCTAD, 2021).

2.2 Large retail companies

Among the global top 10 retail companies, five originate in Europe (Schwarz Group, Aldi, Ahold Delhaize, Carrefour, Ikea) (see Table 2). They are active mainly in the field of discount grocery, grocery, and furniture. The largest e-commerce businesses are located in the US (Amazon.com) and China (Alibaba, JD.com). Out of the Top 50, EU is well represented: roughly half of the Top 50 global retail companies originate in the EU (NRF, 2021).

Table 2. Top 10 global retailers in 2021

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Retailer</th>
<th>Home country</th>
<th>Business foundations</th>
<th>Total company revenues (US $ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Walmart</td>
<td>USA</td>
<td>Mass/Hyper</td>
<td>519.93</td>
</tr>
<tr>
<td>2</td>
<td>Amazon.com</td>
<td>USA</td>
<td>E-commerce</td>
<td>280.52</td>
</tr>
<tr>
<td>3</td>
<td>Schwarz Group</td>
<td>Germany</td>
<td>Discount Grocery</td>
<td>133.89</td>
</tr>
<tr>
<td>4</td>
<td>Aldi</td>
<td>Germany</td>
<td>Discount Grocery</td>
<td>116.06</td>
</tr>
<tr>
<td>5</td>
<td>Alibaba</td>
<td>China</td>
<td>E-commerce</td>
<td>71.99</td>
</tr>
<tr>
<td>6</td>
<td>Costco</td>
<td>USA</td>
<td>Club</td>
<td>163.22</td>
</tr>
<tr>
<td>7</td>
<td>Ahold Delhaize</td>
<td>Netherlands</td>
<td>Grocery</td>
<td>78.17</td>
</tr>
<tr>
<td>8</td>
<td>Carrefour</td>
<td>France</td>
<td>Mass/Hyper</td>
<td>82.60</td>
</tr>
<tr>
<td>9</td>
<td>Ikea</td>
<td>Sweden</td>
<td>Furniture</td>
<td>45.18</td>
</tr>
<tr>
<td>10</td>
<td>JD.com</td>
<td>China</td>
<td>E-commerce</td>
<td>82.86</td>
</tr>
</tbody>
</table>


The e-commerce share of retail is higher in countries with more organised retailers (chain stores) (Wyman, 2021). Organised retailers’ sales in Sweden take up more than 80% of total sales in Sweden, and over 60% in the Netherlands, Germany, France, and Poland. In Italy and Spain, the share is somewhat lower with 55%. In the UK, the top 50 retailers accounted for 81% of e-commerce sales in 2019 (ibid). This suggests that large retail companies have an advantage in the race towards digitalisation, and SMEs and smaller retailers are slower to adopt digitalisation and electronic sales. Geographically, the countries with less organised retailers are slower to adapt to the new models. This analysis was made based on 2019 data, therefore more recent data is needed to analyse the impact of the pandemic on e-commerce take-up at country level. The digitalisation trend is bound to have been accelerated among all types of retail companies.

2.3 Innovative start-ups in the retail ecosystem

Since 2015, there were about 10,430 start-up companies active in the area of retail3 born in the EU, which are investment-backed, technology active and innovative (Crunchbase).4 The majority of the start-up companies (72%) are active in the field of e-commerce, but the rest of the companies also use some form of digital technology to serve the retail ecosystem (see more on technologies in the next chapter on value chains) (Figure 3).

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3 Based on the Commerce and Shopping industry group on Crunchbase, extracted in September 2021

4 It is important to note that these companies are generally the ones that have already generated venture capital or seeking for venture capital. The database does not reflect all the start-ups founded in 2020 or 2021, as they are not yet at the maturity stage to seek for venture capital, and thus are not yet registered on the platform; the data is more reliable up to 2019.
Figure 3  Start-ups in the field of commerce and shopping

Source: Crunchbase, treatment by Technopolis Group (2021); n=11,983.
Note: the industry categorisation may sometimes be overlapping (i.e., a company may be tagged with two or more industries, such as e.g., e-commerce and gifts), which is why the number of start-ups counted here is more than the overall nr. of start-ups in the field of commerce and shopping.

Taking a broader view at the retail ecosystem level (including a selection of 8 industry groups considered as relevant to the retail ecosystem), the Commerce and Shopping category accounts for 45% of the innovative companies found on Crunchbase (see Figure 4). It should be noted that Commerce and Shopping is a broad industry group, in which other categories such as Food and Beverage, or Clothing and Apparel might be included by default. Design is also a relevant group as it accounts for 20% of the start-ups relevant to the retail ecosystem, and also represents other categories such as Clothing and Apparel or Consumer Electronics.

Figure 4  Distribution of young innovative companies by most relevant industry groups for the retail ecosystem

Source: Crunchbase, treatment by Technopolis Group (2021); n=23,771; companies considered are those established in 2015-2021
2.4 Key retail ecosystem value chain segments

A value chain consists of all the stakeholders that are involved in the coordinated production and value-adding activities that are required to obtain a final product or service. Each of the functions that the segments perform need the input of different actors with diverse business activities, and the sum of all of them compose the ecosystem of the segment.

In order to understand the segments that compose the retail value chain, we will use a functional approach to group the ecosystem actors by the segment of the chain to which they add value. Accordingly, we consider that the value chain of the retail ecosystem contains companies beyond the retail and wholesale sectors, active in sectors traditionally supplying the wholesalers and retailers such as manufacturing and agriculture, but also in supporting sectors such as logistics, or other business services to retailers and wholesalers (online or offline). While both part of the retail or wholesale sector, and sometimes not mutually exclusive as business models / channels for the retailers, digital platforms have been described separately, to briefly describe their function as enablers of the (digital) retail ecosystem, and also introduce specific technologies (relevant to the retail ecosystem) that have been recently rising.

2.4.1 Primary production

Primary production concerns the activities related to the extraction and preparation of the raw materials that will enter the retail manufacturing phases. Due to the scope of this report, we restrict ourselves to illustrate the role of primary production through the example of agricultural activities, which provide the raw materials for some retail products. Although it mainly generates inputs for food production, it also impacts other non-food products such as textiles or household goods.

The agriculture sector is classified under the category A in the NACE code, which involves economic activities under “Agriculture, forestry and fishing”. The main three blocks of activities under this segment are:

- A1 - Crop and animal production, hunting and related service activities
- A2 - Forestry and logging
- A3 - Fishing and aquaculture

The agriculture industry created (gross) value added of EUR 177 billion in 2020, and accounted for 1.3% of the European GDP (2020) (Eurostat). The number of employees has decreased 18% since 2011 to 2019. (Eurostat). However, agriculture remains a big employer within the EU; about 9.54 million people work in agriculture (Figure 5).

![Agricultural labour force](source: Eurostat, 2021)
There has been a rise in short or local supply chains for instance through “farm-to-table” or “farm-to-fork” type of models, which circumvent wholesalers or retailers as intermediaries between the farmers and consumers (be it citizens or catering or restaurants). This trend has been facilitated by the introduction of digital solutions such as apps or platforms, whereby farmers are directly connected to the end-customers, also as a means to promote “greener” lifestyles, or sources of food.

2.4.2 Manufacturers

Manufacturing includes a large array of production techniques and activities, ranging from the production of traditional artisanal products, to technologically complex products delivered across a large supply chain (Eurostat, 2021). They are classified under the category C in the NACE codes; the ones that are of interest for the retail value chain are:

- Manufacture of food products
- Manufacture of beverages
- Manufacture of tobacco products
- Manufacture of textiles
- Manufacture of wearing apparel
- Manufacture of leather and related products
- Manufacture of paper and paper products
- Printing and reproduction of recorded media
- Manufacture of rubber and plastic products
- Manufacture of computer, electronic and optical products
- Manufacture of electrical equipment
- Manufacture of furniture

The manufacturing sector that contributes the most to the retail ecosystem is the manufacturing of food products, which absorbs 28% of the total turnover of manufacturing retail products (Figure 7). Although fashion retail is a big contributor to the retail turnover in Europe, the related manufacturing activities (manufacturing of textiles, wearing apparel and leather and related products), only absorb 6% of the total turnover of manufacturing retail products. This disparity can be attributed to outsourcing production to cheap labour countries, mainly the Global South.

**Figure 6** Distribution of turnover between retail manufacturing companies

<table>
<thead>
<tr>
<th>Turnover or gross premiums written - million euro</th>
</tr>
</thead>
<tbody>
<tr>
<td>940,137</td>
</tr>
<tr>
<td>700,000</td>
</tr>
<tr>
<td>339,120</td>
</tr>
<tr>
<td>266,646</td>
</tr>
<tr>
<td>321,000</td>
</tr>
<tr>
<td>190,534</td>
</tr>
<tr>
<td>755,489</td>
</tr>
<tr>
<td>68,018</td>
</tr>
<tr>
<td>54,408</td>
</tr>
<tr>
<td>152,455</td>
</tr>
<tr>
<td>36,087</td>
</tr>
</tbody>
</table>

Source: Eurostat, 2021
In 2018, there were more than 320,000 enterprises classified as manufacturers for the categories above, employing more than 320,000 people in the EU (Eurostat, 2021). The manufacturing industry for retail generated 850 EUR billion of value added at EU level in 2018. Germany’s manufacturing sector contributes one third (33.4%) of the EU’s value added in 2018, followed by Italy (12.7%) France, Spain, and Ireland (ibid).

Even if 98% of manufacturing enterprises are small in the EU, almost half of the employees are in large enterprises (47.6%), while 30% are employed by small, and 22% by medium-sized enterprises (Eurostat, 2021). Roughly 64% of the gross value added in manufacturing in EU is brought by large enterprises (ibid, such as Danone (food), Heineken (beverages) or L’Oréal (cosmetics)).

There are also manufacturing companies that act as retailers selling products of their own label. In this scenario, the focal firm performs the “strategic control” of the whole value chain, distributing their manufacturing facilities, managing the production processes, and supervising the upcoming phases such as distribution and selling. Some examples of companies that act as manufacturers and retailers at the same time are Inditex (fashion), H&M (fashion), or IKEA (furniture). At the same time, some retail chains or supermarkets (e.g., Carrefour) produce their own brand of products, and sell it next to other brands.

2.4.3 Wholesalers

Wholesalers provide the link between the suppliers and business clients. Wholesale trade refers to the purchasing, storing, developing, and selling of goods and services, generally to retailers, business (industrial, service providers or commercial) users, public authorities, or other wholesalers or retailers. As mentioned earlier, there are over 1.8 million wholesalers in the EU, employing 10.6 million workers and generating 660 billion euros in added value (EuroCommerce, 2020). Wholesalers are the interface to industry, playing a key role on several dimensions (EuroCommerce, 2014):

- Ensuring that raw materials and semi-finished products are further processed on time
- Support product design for consumer products due to their proximity to the market
- Collaboration with industry to optimise the product flow of material acquisition from consumption to utilisation
- Adapting the quantity of products to the needs of different retailers
- Securing the quality of products, also in cross-border transactions
- Providing value-added services to business customers
- Support and stimulate economic activity in cities, small towns, and rural areas
- Diminishing risks related to goods (e.g., from availability, financing, depreciation of value), or risks related to currency, transport, countries

The wholesale sector is very broad and includes company models such as cash-and-carry businesses, which serve especially the hospitality, gastronomy, school or company cafeterias or other professional caterers; import / export trade companies, which are intermediaries between international manufacturers and clients worldwide; industrial distributors, who sell products like technical equipment, accessories, personal protection equipment, lubricants adhesives etc; commercial agents; pharmaceutical full-line wholesaling. Micro-business (less than 10 employees account for 91% of the enterprises and 9% are considered SMEs (between 10 and 250 employees). (EuroCommerce, 2021).

Wholesalers have traditionally also offered adjacent B2B services, such as goods management systems, product information, environmental information, training, and advice. Wholesalers have also managed the logistical systems, storage, assembling of goods, organizing transport. More details on these segments of the value chain are also provided below. Moreover, providing finance for SMEs through financing procurement contracts, storage or delivery has been a further function taken over by wholesalers, which enables the purchase of goods by small retailers (EuroCommerce, 2014).
2.4.4 Retailers

Retailers constitute the last segment of the value chain, acting as the selling point of products or services to the final customer. There are over 3.6 million enterprises in the retail sector in EU. In addition, according to Retail-Index, there are over 6.800 retail chains in Europe (each owning a minimum of 5 stores and minimal €3 million turnover).

Physical stores are the traditional serving point, which have been heavily disrupted by the rise of digitalization. They can be categorised as non-organised (individual) shops or organised retail (food and non-food chain stores). Physical stores still play a key and unique role for consumers that want to ask for personalised advice, socialise and try out products (Oliver Wyman, 2018). For the case of food products, the prevalence of physical stores has been significantly higher than for other retail products, such as fashion.

The emerge and prevalence of technology has integrated e-commerce and online sales channels in the majority of retail products. Its growth is expected to continue, and to play a more holistic role within the buying experience (Oliver Wyman, 2018).

In this context, together with the rise of e-commerce, the store concept has changed and become more inclusive with the online activities and operations, opening up to a new type of sales paradigm known as omnichannel. Customers increasingly use online services to research, compare and order products. They are using physical stores also in combination with online retail services e.g., for click and collect services and to return products bought online. Additionally, this creates a new paradigm of skills and responsibility on retail salespeople working in store.

According to a study surveying retailers and consumers, the most important roles of the stores are now to a) sell products, b) capture customer preferences and behaviours by collecting data and c) act as a customer relationship centre (Mercaux, 2021). The retail executives surveyed also believe that the stores can be seen as a showroom for e-commerce, integrating the omnichannel experience (ibid).

As result of this omnichannel type of sales, new in-store technologies that facilitate the integration between the online and instore channels have emerged:

- **Handheld terminals** that are connected to a live inventory, so the store staff can check the product availability instore and across the overall inventory.
- **Cloud-based customer management systems** that provide real-time data on customer’s behaviours such as average units per sale, purchasing history, brand preferences, sizing preference, and average transaction value.
- **PC, tablet, or wearable tech** allows salespeople to keep abreast of marketing activities so they are informed and can better deal with customer queries providing a more connected in-store experience.
- **E-commerce in-store services** such as click and collect and online refunds. Click and collect services have implied the development of new store infrastructures that facilitate the collection of the product without having to wait in the payment queue. Likewise, as e-commerce has introduced new payment solutions online, new processes to complete refunds in store have also increased.

2.4.5 Digital platforms and apps (e-commerce enablers)

E-commerce has become a key activity through which marketing, customer and data analysis activities are merged in a single interface. Today, it is estimated that around 1 million EU business are selling their products and/or services through online platforms (European Commission, 2021c). In Europe, there is an estimated number of over 10,000 online platforms, the majority of which are SMEs (European Commission, 2020c). It is important to note that the online platforms play an important role in supporting the internationalisation of SMEs, as over 50% of SMEs selling through online platforms sell across borders (European Commission, 2021c).

Online platforms can take different forms, such as online marketplaces, app stores, social media outlets, price comparison websites, search engines, or collaborative economy platforms (European Commission, 2021c).
Online marketplaces (e.g., Amazon, eBay, AliExpress etc.) are the types of digital platforms that account for the largest share of online purchases globally (Statista, 2021). Their use has increased during the pandemic, with company revenues growth projected to increase by 41% in 2021, globally (ibid). In addition, several other platforms’ use also increased during the pandemic such as Asos, Ocado, Farfetch, Hello Fresh, Autohome.com, Scout24, Zillow etc. Only the use of online travel platforms has decreased given the travel restrictions during the pandemic. (Statista, 2021).

Different technological services have emerged to complement and improve the e-commerce experience. These tech services can be grouped depending on the purchasing phase in which they operate:

- **Digital marketplaces**: which integrate the online shop with payment methods and other functionalities.
- **Pre-transaction phase** is mainly focused on providing marketing and research tools to facilitate and engage with the customer’s journey through the online platform.
- **Transaction phase**: payment platforms fully integrated in the online channel have become key in providing flexibility, security, and instant transactions.
- **Post transaction phase** attends to the delivery of the purchased goods. Same day delivery options or flexible delivery points are the most common services that have emerged in the last decade.
- **Operational services** related to analytics, inventory and logistics, pricing tools and cybersecurity

Digital e-commerce marketplaces can take a diversity of models, including:

- **business-to-business (B2B)**, where the goods or services sold or provided are intended for businesses, and the sellers are businesses themselves; usually, the sellers are selected or curated by the platform owner (e.g., Shopify, BigCommerce, OpenCart, etc.)
- **business-to-consumer (B2C)**, where goods or services are sold to final consumers (e.g., Amazon, Alibaba, Zalando etc.)
- **consumer-to-consumer (C2C)**, where consumers themselves can become sellers (e.g., eBay, Vinted etc.)

Companies can also be hybrids of the above models. Companies that especially sell Software as a Service (SaaS) are prone to offer these different levels of service to different types of clients, combining the above models.

Grocery delivery platforms have also been rising as a new model combining “dark stores” (or own warehouses) with different delivery methods (e.g., bikes, carts, cars etc.), some even promising 10-minute delivery times from the point of ordering (Pitchbook, 2021). The companies are combining the e-commerce / supermarket model with their own transportation and warehousing model and have attracted significant amounts of venture capital since the start of the pandemic, many of them growing at very high speeds (e.g., Berlin-based Gorillas).

### 2.4.6 Warehousing and storage companies

Warehousing is an intermediate segment of the value chain, where the product is finished and stored until its delivery to a sale point or final costumer. The industry operates storage units for products of very diverse kinds, such as grain silos, general merchandise warehouses, refrigerated warehouses, storage tanks (IBIS-World, 2021). Wholesalers may be the ones offering these services as well, or they can be provided independently. The total number of enterprises in the warehousing and storage industry amounted to over 14,000 in 2016, with France topping the numbers (2241 companies), and Italy, by Poland and Spain equally represented (roughly 1700 companies each) (Statista, 2021). At the same time, for comparison, in the UK there are over 7,000 companies operating in this sector, roughly half of the EU size. The companies with the largest market share in Europe include Deutsche Post AG, XPO Logistics, Inc., Kuehne + Nagel International AG and A.P. Moller – Maersk A/S (IBISWorld, 2021).

With the e-commerce boom, quick and efficient delivery has become increasingly relevant and therefore has placed warehousing at the heart of the retailers’ operations. In this context, and to comply with the current customer demands on accuracy, efficiency and traceability, common technologies have emerged within the warehousing segment:
• **Inventory/warehouse management** software are tremendously relevant in the context of an omnichannel retail landscape. Inventory management software monitor consolidate different variable and aspects such as electronic point of sales, e-commerce, suppliers, finance, CRM, logistic, reporting, shipping and returns and much more.

• **Blockchain.** Blockchain is a growing technology that is transforming supply chain. It ensures transparency and accuracy and has diverse applications such as product traceability, payments, production details etc.

• **Robotics and automation** complement human labour across the warehousing function. The automatically separate product cases and allocate storage space, select optimal routes, pick and pack customers’ orders.

• **Internet of Things (IoT):** A good example of IoT application to warehousing is radio-frequency identification (RFID), which increases inventory accuracy and real time data, enabling faster responses to stock disruptions.

### 2.4.7 Transportation and logistics companies

Transportation is a key segment of the retail value chain as it acts as the enabler of the product flow between the different actors of the ecosystem, with customers being the last destination. Within this segment there are two main types of activities: transportation and logistics management.

As a response to the increasing consumers’ demand for speed and immediacy, the role of logistic management has become a strategic and essential activity for the retail industry in the last decades, as well as an area where retailers can differentiate themselves from their competitors.

Some common technologies that retailers are implementing to their logistics services are:

• **Data driven methods such as AI and machine learning** are powering intelligent, autonomous systems that can better foresee logistic processes and therefore can plan more efficient transportation routes.

• **Automatisation equipment** that can handle parcels that are of a certain measure.

• **Same day delivery / or “last mile” delivery methods, for example through drones are already tested by some retailers such as Amazon or JD.**

• **Global Positioning Services (GPS) technologies** that provide visibility to navigate, track, and locate goods in transit. GPS improves management, accountability, and resource management, leading to a reduction in costs and increased

### 2.4.8 Key research and academic players in the retail sector

There are some dedicated **academic research units** working on the retail sector. The Centre for Research in Retailing⁵ (IFH) is an institute at the University of Cologne (Germany). Founded in 1929, it has since then developed scientific retail research and its practical application, while also working very closely with the Department of Retailing and Customer Management of the University. The Centre for Research in Retailing is providing its support for the data collection and monitoring of the retail sector on the German retail data platform handelsanalyse.de In addition, it provides presentations of scientific results in scientific results such as “Fascination Retail”.

The university of Lund (Sweden) hosts the Centre for Retail Research⁶, where more than 40 researchers work on retail research projects. The projects are divided in two main categories: retail destination, researches the growth of city retail and how retail can be integrated into future urban growth, and retail innovation, focusing on different aspects of innovation capacity within the retail sector.

The Center for Retailing⁷ at the Stockholm School of Economics (Sweden) focuses its research on four main topics: the development of sustainable retail models, the future of grocery retailing, employee leadership and retention, and retail analytics/big data. The Center for Retailing has also developed the CFR Research School in Retailing in collaboration with the Swedish Retail and Wholesale Council.

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⁵ Institut für Handelsforschung – Centre for Research in retailing. As a so-called ‘An-Institut’ it has an own legal entity. More information: https://wiso.uni-koeln.de/en/research/affiliated-institutions/center-for-research-in-retailing

⁶ Centre for Retail Research. More information: https://www.ch.lu.se/english/research/centre-for-retail-research/

⁷ Centre for Retailing. More information: https://www.hhs.se/cfr/
Outside the EU, the United Kingdom hosts several universities and research centres that develop their work in the retail sector: the SAID Business School and its Institute of Retail Management\(^8\) at Oxford University, the Retail Institute\(^9\) at the Leeds Beckett University or the Institute for Retail Studies\(^10\) at the University of Stirling among others.

The H2020 framework programme for research and innovation also provided funding opportunities in the context of the retail sector (Cordis, 2021). Most of the projects funded through H2020 had a focus on the development and uptake of digital technologies (e.g., Artificial intelligence, sensors, big data and analytics, mobile apps), this is aligned with the trends seen in the sector, where digitalisation is playing a bigger role.

Despite the future of retail not being a heavily researched topic, there is a body of academic literature and several dedicated journals (e.g., International Journal of Retail and Distribution Management, Journal of Retailing, Distribution and Consumer Research, or the International Journal of Value Chain Management), which analyse the current situation and a number of soon to be expected changes. In addition, significant data collection through company CEO or consumer surveys are performed by international consultancies, such as Bain&Co, McKinsey & Company, KPMG, Deloitte etc.

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\(^8\) Institute of Retail Management. More information: https://www.sbs.ox.ac.uk/research/networks/oxford-institute-retail-management

\(^9\) The Retail Institute. More information: https://www.leedsbeckett.ac.uk/the-retail-institute/

\(^10\) Institute for Retail Studies. More information: https://www.stir.ac.uk/about/faculties/stirling-management-school/our-research/research-areas/institute-for-retail-studies/
3 KEY RETAIL AND WHOLESALE MARKET DEVELOPMENTS

3.1 General market developments

The retail ecosystem – thus retail and wholesale - is an ‘economic heavyweight’: at the European level, the performance of the ecosystem in terms of gross value added was of 1.069 billion euro in 2018 (Eurostat, 2021). Its value added has increased by 18.7 percentage points from 2011 to 2018 (Figure 7. By 2018, it accounted for 11.5% of the total European value added. The retail ecosystem employed 29.8 million people, accounting for 8.9% of the European active population (Eurostat, 2021). In addition, retail is one of the top three sectors for employment in 95% of all European regions (EuroCommerce, 2021).

![Figure 7 Retail and wholesale value added (2018)](image)

Source: Eurostat, 2021

The retail and wholesale sector turnover for the EU27 reached €7.6 trillion in 2018, up from €7.1 trillion in 2011 (Eurostat, 2021) (Figure 8. Estimates show that, in spite of the turbulences caused by the COVID-19 pandemic, total retail sales volume recovered to pre-crisis volumes by April 2021 (Eurostat, 2021). The positive trend in retail companies’ growth following the pandemic is confirmed at European level by another recent study the ‘COVID-19 pandemic’ effects on the retail companies’ (Deloitte, 2021a).

![Figure 8 Evolution of turnover in wholesale and retail sectors (2011-2018)](image)

Source: Eurostat, 2021
3.1.1 Market developments by product categories

In the last years, turnover of retail products has increased. Between January 2017 and March 2020, the turnover of food, drinks, tobacco and supermarkets increased by 6 percentage points, while for the retail of electronic products it increased 11 percentage points.

However, revenues of European consumer retail companies were affected differently by the pandemic, mainly depending on the goods sold and the channels of distribution. As a result of the measures imposed under the first lockdown (March-May 2020), the majority of European countries closed non-essential shops, leaving only food sale points (e.g., supermarkets, corner shops), pharmacies and other essential sale points open. In this context, the turnover for food, drinks and tobacco and supermarkets remained constant while the turnover of automotive fuel and non-food products fell by around 40% and 30% respectively (see Figure 9). The recovery to pre-pandemic levels has been faster in the retail of computers and other electronic equipment, reaching its pre-pandemic turnover in May 2020. However, the retail trade of textiles, clothing and leather goods has not yet recovered to its pre-pandemic level, and has been further heavily disrupted by the second wave in October 2020.

Figure 9  
Evolution of retail turnover by product category January 2017 – July 2021

Source: Eurostat, 2021

3.1.2 E-commerce developments

Worldwide e-commerce sales reached about €2.85 trillion in 2019, accounting for 13.8% of total retail sales in that year (eMarketer, 2021). During the pandemic, global e-commerce sales grew at a rate of 25.7% in 2020 and are forecasted to continue to grow. By 2025, they will reach up to a quarter of total retail sales (ibid).

Globally, the top 10 countries in e-commerce retail as a share of total worldwide retail e-commerce are China (52.1% of the global e-commerce), US (19%), UK (4.8%), Japan (3%), South Korea (2.5%), followed by Germany (2.1%), France (1.6%), India (1.4%), Canada (1.3%), and Brazil (0.8%) (eMarketer, 2021).

At European level, turnover from e-commerce is increasing reaching €636 billion in 2019, an increase of 14.2% from the previous year (EuroCommerce, 2021); prior to the pandemic, it was forecasted to grow to 12.7% and achieve €717 billion in 2020 (ibid). This is almost double than the 2015 turnover value of €373 billion (ibid). Western Europe still makes up for 64% of total e-commerce turnover, followed by Southern European countries (16%), but Eastern European countries are catching up (taking 6% of e-commerce turnover in 2020) (ibid). For instance, B2C e-commerce in Hungary and Romania and Bulgaria increased by 35% and 30% respectively in 2020 (versus 2019) (ibid).
Likewise, the share of online retail trade has been constantly increasing since 2014. It is estimated to have significantly increased during the pandemic in 2020 and 2021. For 2020, an average of 16% of online sales were forecasted for Europe (including the UK), an increase of 4 percentage points from 2019 and more than doubling since 2014 (Statista). In the EU, the largest EU27 e-commerce markets are Germany, followed by France. Germany led with 20% of online sales in 2020, followed by France (14%), and the Netherlands (13%) (Statista, 2021).

Figure 10   Retail e-commerce shares out of total retail in European countries

As a consequence of the first lockdown, online grocery sales accelerated their growth exponentially - what would have developed only over a longer period of time, occurred in a few weeks (Figure 12). Although e-grocery sales increased due to necessity, the figures show that the consumers’ behaviour changes towards more online services are likely to remain (McKinsey, 2021c).

Overall, companies purely active in online retail business have experienced the largest increases in revenues and profits, especially in sectors such as consumer electronics and food retail. Companies active in omnichannel retail (integrating in-store and online retail) have suffered comparatively higher losses or realised only lower revenue increases (McKinsey, 2021c).
3.2 Consumers

In 2019, the expenditure of consumers accounted for 52.6% of the EU gross domestic product (GDP) (Eurostat, 2020).

The number of e-commerce consumers has constantly increased between 2010-2020. In 2010, the share of users of 16–24 and 25-54-years-old was 49% and 55%, respectively (Eurostat). By 2020, the share for users aged 16-54 increased to 78.5%. The older generation has also increased its online shopping behaviour, but at a slower pace, with 57% of internet users aged 55-74 years old having shopped online in 2020, versus 45% in 2010 (Eurostat).

At country level, there are large discrepancies in the EU, with internet users in the Netherlands, Denmark and Germany topping the online shopping chart, while Bulgaria, Romania, and Cyprus as the countries with internet users least interested in shopping (albeit with increasing trends) (Eurostat, 2021).
3.3 Demand by product categories, following COVID-19 crisis

The Covid-19 pandemic has brought important disruptions and uncertainty in terms of consumption and spending intents towards the different products categories which resulted in different trends across categories of products, whether they were deemed essential or non-essential (OECD, 2020). The most discretionary items from this perspective have suffered the most from the pandemic, the disruptions in the supply chain and the implementation of social distancing measures as illustrated in the figure below. In this regard, grocery spending is perceived by the industry as an all-time high with a volume increase of around 8% and value increase of slightly more than 10% in 2020 (McKinsey & Company, 2021a).

Figure 13 Change in demand for essential versus non-essential retail goods

While the retail sector is slowly recovering from the crisis, spending intent outside groceries categories remains negative in most of the biggest EU markets (France, Germany, Italy, Spain) according to both Deloitte’s State of the Consumer tracker (Deloitte, 2021b) and McKinsey’s survey on European consumer sentiment during the coronavirus crisis (McKinsey & Company, 2021). In February 2021, net spending intent of consumers in the five major EU markets was however picking up in most categories including discretionary categories deemed non-essential during the crisis.

In July 2021, a similar pattern of spending intents could be observed among France, Germany, Ireland, Italy, the Netherlands, Poland, and Spain according to the Deloitte state of the consumer tracker. While furnishing, electronics and clothing/footwear present negative trends across all the different countries, groceries and household goods were gathering most of the spending intents of consumers as showcased in the figure below.
The breakdown of consumers by age tend to indicate that in most of these countries, net spending intents for both less-discretionary and more-discretionary items is stronger among younger generations (between 18-34 years old). They are keener on spending in clothing, electronics, furnishing, but also restaurants and take-out, than older generations of consumers (>35).

As the shift of distribution channels described in the previous section towards more digital channels progresses, most of product categories will benefit from lasting influence of online penetration according to McKinsey’s survey on European consumer sentiment during the Coronavirus pandemic (see figure below). While all product categories benefit from the online penetration, one can observe that essential goods such as groceries or household supplies have experienced a less-accelerated shift compared to consumer electronics, clothing, and footwear or even home & furniture related items.

Source: Deloitte, (2021b)

4 FRAMEWORK CONDITIONS FOR THE RETAIL SECTOR

In this section, the surrounding conditions that enable the functioning of the retail ecosystem, including the availability of talent, the regulatory environment, access to finance and the role of the EU, national, regional and city authorities in the retail ecosystem are described.

4.1 Availability of talent

Overall, there were 29.8 million people employed in retail and wholesale in EU27 2018, around 600,000 more than in 2011 (Eurostat). The share of employees with tertiary education level is lower than in other sectors, with only 22.7% of employees having a higher education level. The majority (57.8%) have a medium education level (including upper secondary and post-secondary levels), and 19.3% a low education level (less than primary, primary, and lower secondary) (Cedefop, 2021).

Regarding the knowledge and use of digital skills in the retail sector, the employment share of high-tech occupations\(^\text{11}\) was of 3.9% in 2020 in the EU27. There are disparities among the EU27 countries, while Sweden has a share of 8.1%, Romania only accounts for 1.5%. The percentage share of high-tech occupations is estimated to grow to 4.9% by 2030 (Cedefop, 2021).

In the context of the Pact for Skills initiative launched by the European Commission, representatives of industry, regional and national authorities among other stakeholders stressed the importance of addressing the skills gaps in the retail sector, more specifically digital skills. All actors in the sectors are invited to engage in the Pact for Skills and develop partnerships that would allow best practices to be transferred from the EU level to the local level and from big companies to SMEs (European Commission, 2021a).

4.2 National, regional and local authorities

Member States authorities have the competence to regulate retail establishment and retail operations. In doing so, they must ensure that the rules are compatible with EU legislation (more in the section 4.4.)

As regards the establishment of a shop, national, regional or local authorities may impose requirements such as planning permits (depending on shop size), location-specific rules or size limits (bans on opening shops above certain sizes in certain locations), rules on the range of products sold, impact assessments (e.g. on the impact of the shop on the traffic, environment or local employment or trade) or a requirement to provide economic data in the framework of the authorisation procedure. Procedures to open a shop, in particular above a certain size threshold, may also be lengthy and burdensome.

As regards operation of shops, the relevant authorities may impose restrictions which affect the day-to-day business activities of off-line retailers, putting them often at a disadvantage vis-à-vis online players. Such restrictions typically include regulated opening hours, product-specific sales restrictions (e.g. non-prescription or over-the-counter medicines), restrictions for sales, promotions and discounts, retail-specific taxes and fees. In a few cases, there are also obligations direct or indirect to source a certain share of products nationally, in order to promote national supply chains.

However, Member States authorities, in particular at the local level, also have an important role supporting the development of retail activities. The guide “Facing the future – A practical guide for fostering the revitalisation and modernisation of the small retail sector” (EC, 2018a), provides an overview of solutions that can be implemented by local authorities to boost the retail activities in their towns and cities. The proposed solutions are categorised from the widest scope to the most concrete one:

1. Upgrading digital and public infrastructure
2. Sharing the right information with retailers
3. Building a strong retail community
4. Facilitating the adoption of digital technologies

\(^{11}\) This indicator refers to the share of people employed in science, engineering, and ICT occupations either as professionals or associate professionals.
5. Supporting skills development
6. Assisting marketing and promotion

In order to inspire local authorities, the guide includes several examples of successful good practices implemented at local level under each solution category.

4.3 Access to finance

Given the ongoing digitalisation trends and shift in consumer preferences, retailers need to invest significantly in updating their business model, in order to remain competitive. The major areas where retailers need investments include technology, new stores and store refurbishments (e.g., shift from larger hypermarket to convenience formats and e-commerce) and in training and upskilling people (EuroCommerce, 2021). The European Commission has identified that the retail sector has an investment need of EUR 115 billion, following the COVID-19 crisis, topping all other sectors except for tourism (ibid).

Overall, gross investment in tangible goods in the retail sector is high, albeit at an average level among all industry sectors, reaching EUR 72 billion in 2018 (or 2.3% as share of turnover) (EuroCommerce, 2021, based on Eurostat). However, investment in the retail sector is larger than in almost every sector of manufacturing (ibid).

Private investors have been very keen to invest in retail (technology) start-ups, which has fuelled the rise in the new business models in this field. Especially following the pandemic, the funding for retail tech has had the fastest growth rate in five years, in the first quarter (Q1) of 2021 (CB Insights, 2021): funding for retail tech start-ups had tripled at global level in Q1 of 2021 versus the same period in 2020, reaching EUR 25 billion according to CB Insights calculations (ibid). Investors are especially investing in e-commerce companies (online marketplaces or fast delivery providers).

In Europe, Venture Capital (VC) funding for retail (marketplaces and e-commerce) has been booming especially in 2021. The spike in investment was remarkable in countries such as UK (EUR 5.7 billion raised in 2021 – by October 2021), Germany (EUR 4.2b raised), France (EUR 2.6b), Spain (EUR 1.6b) and the Netherlands (EUR 1b) (see figure below, based on Dealroom, 2021).

![Figure 16 VC investment in marketplaces and e-commerce, Europe (2021)](image)

Source: Dealroom, 2021
4.4 The EU regulatory framework for the retail ecosystem

4.4.1 Key EU regulations

One of the main benefits of the European Union, is the Single Market, and with it, giving access to around 450 million potential consumers across the continent (Eurostat, 2020). However, the market also requires a favourable business and regulatory framework that correspond to the needs of both off-line and online retailers. The Single Market has four different dimensions – products, services, capital, and labour –with products and services being the most important dimensions for the retail sector.

In recent years, the Commission has prepared legislative proposals to ease the process of selling goods across the EU to companies and especially SMEs, and to strengthen controls to prevent the selling of unsafe products for European consumers. The Commission has also tackled the existing contract law-related barriers hindering cross-border trade. The “A new deal for consumers” communication also tackled the improvement of the existing legal framework for consumers and businesses.

In 2015 the EC presented the Digital Single Market Strategy which had the objective of making the Single Market fit for the digital age, also aligning it with the digitalisation trend seen in the sector. After the implementation of this strategy, the Commission developed several Regulations and Directives targeting concrete aspects of the Single Market. The Commission boosted the development of cross-border e-commerce and has also made a proposal on geo-blocking to avoid consumers being discriminated based on their location. The EC further developed supporting and facilitation measures to cross-border parcel delivery services, the modernisation of the VAT rules and systems, the legal framework for digital contracts and helping retailers operate on-line by addressing online platforms. Finally, the Commission addressed the need to develop a fair and effective taxation system for the digital economy and the warranty of independence of payment card schemes and processing entities.

In 2018 the Commission published a dedicated communication on the retail sector, “A European Retail Sector fit for the 21st century” (European Commission, 2018b). The communication identified the increasing importance that the e-commerce is acquiring as a sales channel, and the opportunities and challenges linked with it. The communication has also highlighted a series of regulatory barriers for the sector. Additionally, the Retail Restrictiveness Indicator (RRI) (European Commission, 2018b) was constructed with the objective of monitoring the efforts done by member states authorities to reduce existing retail restrictions in Europe and the impact of the reforms on the market performance. The communication identifies a series of policy actions to support the retail sector: easing the establishment of retail shops, the reduction of operations restrictions and alleviating the cost of compliance with existing regulations. As part of their ambition to adopt new approaches to promote the vitality of city centres, the Commission also published the “Facing the Future - A practical guide for fostering the revitalisation and modernisation of the small retail sector” guide, providing practical and real-life examples and best practices that can be taken by SME retailers.

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14 Amended proposal for a Directive on certain aspects concerning contracts for the online and other distance sales of goods, COM (2017) 637 final.
18 Regulation (EU) 2018/644 of 18 April 2018 on cross-border parcel delivery services.
The Service Directive\textsuperscript{26} (SD) has also enabled retailers to establish outlets more easily in diverse Member States. It ensures that certain very restrictive market access requirements are prohibited and other may only exist when they are non-discriminatory, justified by a public policy objective and proportionate. The SD benefits both business and consumers: businesses from easier establishment, easier provision of cross-border services and simplified procedures and formalities; whereas consumers benefit from strengthened rights of consumers and business receiving services, a higher quality of services, and enhanced information and transparency on service providers.

The Court of Justice of the European Union (CJEU) in the case C-31/16 (Visser Vastgoed Beleggingen v the Municipality of Appingedam), confirmed that retail is a service and as such is covered by the Services Directive.

The main provisions of the Service Directive that have an impact on the retail sector are:

1) \textit{Administrative simplification:}
The Directive set a list of requirements for administrative simplification and modernisation (Articles 5 to 8). As part of it, the directive proposed the establishment of “single contact points” that will act as interlocutors for service providers, allowing them to complete procedures at distance and by electronic means and to make information on national requirements and procedures easily accessible. There can be dedicated “single contact points” for specific sectors.

2) \textit{Freedom of establishment for providers:}
This section focuses on business that seek to establish in a Member State, without discriminating between the start of a new business or an existing business willing to open a new establishment. Existing authorisation schemes in Member States are one of the biggest restrictions to service providers to the establishment of new businesses (Article 9 to 13). Authorisation schemes are formalities applied to service provider in Member States and are a restriction to the freedom of establishment. Therefore, the SD asks Member States to review their national legislation and make it compliance with Articles 9 to 13.

3) \textit{Free movement of services:}
When it comes to the free movement of services, the service directive distinguishes between establishments of service providers (Articles 9 to 15) and the provision of cross border services (Articles 16 to 21). This distinction is key to assess which of the rules of the directive will apply. Article 16 provides for the freedom to provide cross-border services without unjustified restrictions, one of the key aspects of the Service Directive.

4) \textit{Quality of services:}
Articles 22 to 27 set a list of measures to foster high quality of services and to enhance information and transparency relating to service providers and their services. Mechanisms enhancing quality will benefit the recipients of services, mostly consumers. More information and transparency will allow consumers to make better choices, and will contribute to the creation of a level playing field between service providers of different MS.

The introduction of the CE marking also helped raising the health, safety, and environmental protection standards. All products to be commercialised in the European Economic Area need to include this mark in order to be sold. The Commission has also worked in the area of introducing standards and voluntary technical specifications applied not only to products, but also materials, services, or processes. Standards can help manufacturers and retailers to reduce costs, improve safety, or facilitate the acceptance of innovations.

The European Commission has also proposed recently the Digital Services Act (DSA)\textsuperscript{27} and the Digital Markets Act (DMA)\textsuperscript{28} that will influence the functioning of the retail ecosystem. These two Acts form a single set of rules that are applicable across the EU to create a safer and more open digital space. The DSA and the DMA have two goals: the creation of a safer digital space in which fundamental rights of digital services users are protected; and the establishment of a level playing field to foster innovation, growth, and competitiveness in the EU Single Market and abroad.

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\textsuperscript{26} Directive 2006/123/EC of 12 December 2006 on services in the internal market.

\textsuperscript{27} Proposal for a Single Market for Digital Services (Digital Services Act) and amending Directive 2000/31/EC, COM (2020) 825 final

\textsuperscript{28} Proposal for a contestable and fair markets in the digital sector (Digital Markets Act), COM (2020) 842 final
The DSA specifies mostly the rules for online intermediaries and platforms. This would apply for example to online retail marketplaces. The DMA includes rules that govern gatekeeper platforms, digital platforms with a systemic role in the internal market that act as bottlenecks between businesses and consumers of digital services. There are services that are covered in both acts, but each of them includes different scopes and provisions.

In order to better adapt to the new challenges, the Commission also adopted a **New Consumer Agenda** (European Commission, 2020a) in 2020, updating the existing framework of EU consumer policy for the period 2020-2025. The objective is to provide better tools to:

- Address the new challenges of consumer rights and opportunities to further empower consumers as consequence of the green and digital transition, the COVID pandemic and the recovery plans
- More effective protection of vulnerable consumers in the new economic reality of the COVID pandemic and its aftermath
- Address the importance of internal cooperation and effective enforcement ensuring consumer rights in the globalised economy

### 4.4.2 Regulatory Barriers in the retail sector

The EC Communication "A European retail sector fit for the 21st century" (European Commission, 2018b) highlighted several regulatory challenges which have an impact on the competitiveness of the sector. As illustrated by the Retail Restrictiveness Indicator (European Commission, 2018b), there are two main types of restrictions: on retail operations and retail establishment (Figure 12).

The first type refers to restrictions on operations, where five main types have been identified: Restrictions on shop opening hours, restrictions on distribution channels, restrictions on sales promotions, retail-specific taxes and fees and restriction on sourcing.

The second type of restrictions refer to the establishment of retail, where nine main restrictions are identified: size thresholds, regulations specific to location, requirements for economic data, level of detail in planning, number of permits, number of entities to be contacted, number of impact assessments, length of procedure and publication of decisions.

Figure 17 below shows the diversity of constraints that may stem from the regulation in different Member States, based on the Retail Restrictiveness Indicator. Regarding the retail operations restrictions, France, Romania, and Spain are the countries more heavily affected by them, whereas Ireland, Estonia and Hungary are facing the lightest restrictions. In the case of retail establishment, Italy, Luxembourg, and Cyprus display the most types and impact of restrictions, while Estonia, Latvia and Slovakia are at the opposite end. The data refers to 2018. The indicator will be updated in 2022.
There is a significant impact of establishment restrictions on the performance of retailers as well as on consumers. This is shown by an analysis of links between the retail restrictiveness indicator and economic outcomes. In Member States with higher establishment restrictions, fewer new retail companies enter and leave the market and market concentration and consumer prices are higher.

Numerous studies have demonstrated negative effects of such barriers on the functioning of the market. Restrictive and complex regulations may have a negative impact on competition as well as indirect effects on productivity, employment, prices and innovation. They may become a significant burden for businesses, discouraging them from entering the market or inducing their exit.

4.5 Consumer organisations

Consumer organisations have the mandate to defend and protect rights of European Consumers. BEUC\(^{29}\) is the European Consumer Organisation and it encompasses 46 organisations from 32 countries including EU Member States and countries such as Norway, Switzerland, or the UK. ANEC\(^{30}\) is the voice of European consumer in standardisation, protecting the consumers interest in the creation of technical standards, mostly those developed to support the implementation of EU laws and public policies.

4.6 European networks and associations of retailers

The role of networks and support services is very important in developing thriving ecosystems. On the one hand, networks offer a platform for entrepreneurs to convene and align practices, share knowledge, or find partners. On the other hand, networks can build consensus and represent the voice of the entrepreneurs in the particular sector vis-à-vis the policymakers.

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\(^{29}\) BEUC, see [https://www.beuc.eu](https://www.beuc.eu)

\(^{30}\) ANEC, see [https://anec.eu](https://anec.eu)
The European-level networks active in the retail sector are very diverse. There are many associations at European and National level working on diverse aspects of retail such as e-commerce, direct selling, or sustainable retail. Table 3 provides and overview of some of Europe’s retail associations across a range of sectors.

These European associations usually have a thematic or sectoral focus (e.g., EUEW, FECC) or specialise in a type of retail (e.g., E-commerce Europe, Direct Selling Europe, SELDIA). Some others focus on a transversal aspect of retail (e.g., Ecopreneur.eu focus on sustainable business) or the type of organisation they represent (e.g., SMEUnited, Eurochambres). These organisations also connect the national-level organisations and companies in the EU, informing them of EU-level developments, and channelling their positions towards the EU regulators.

Table 3 Overview of European retail associations

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EuroCommerce <a href="https://www.eurocommerce.eu">https://www.eurocommerce.eu</a></td>
<td>EuroCommerce is the main European organisation representing the retail and wholesale sector. National associations from 31 countries and 5.4 million companies are represented. Companies can be multinational retailers such as Carrefour, IKEA, Metro and Tesco, and many small family operations. EuroCommerce is the recognised European social partner for the retail and wholesale sector. Its mission is to: Bring together a broad diversity of associations and companies under one roof; Inform about EU policy and legislation; Advocate with a unified voice for policy and legislative outcomes in line with what we stand for; and communicate about contribution of commerce to society and the European economy.</td>
</tr>
<tr>
<td>Independent Retail Europe <a href="https://independentretairoleurope.eu">https://independentretairoleurope.eu</a></td>
<td>Independent Retail Europe is the European association that acts as an umbrella organisation for groups of independent retailers in the food and non-food sectors. Their members are groups of independent retailers and associations representing groups of independent retailers, which are cooperative/associative purchasing entities of independent SME retail entrepreneurs that provide a purchasing and support service to their member retailers whilst fully respecting the independent character of each individual retailer. They represent 386,000 independent retailers and 24 groups and associations of groups in Europe.</td>
</tr>
<tr>
<td>E-commerce Europe <a href="https://e-commerce-europe.eu">https://e-commerce-europe.eu</a></td>
<td>E-commerce Europe is the sole voice of the European Digital Commerce sector. As a result of joining forces with EMOTA, E-commerce Europe now represents through 23 national associations, more than 100,000 companies selling goods and services online to consumers in Europe. E-commerce Europe acts at European level to help legislators create a better framework for online merchants, so that their sales can grow further.</td>
</tr>
<tr>
<td>ECSP - European Council of Shopping Places <a href="https://www.ecsp.eu">https://www.ecsp.eu</a></td>
<td>The European Council of Shopping Places provides a European voice for an industry that designs, creates, funds, develops, builds and manages places anchored by retail across Europe. ECSP aims at: advocating at a European level for the vital economic and social importance of retail and mixed-use destinations; bringing together the entire value chain of who invest in, create, manage and support these places and destinations; facilitating the outreach, exchange of information and organisation of events, networking and education this community needs to succeed; and encouraging a sustainable and a level playing field for market participants and stakeholders.</td>
</tr>
<tr>
<td>DSE - Direct Selling Europe <a href="https://directsellingeurope.eu">https://directsellingeurope.eu</a></td>
<td>Direct Selling Europe (DSE) is the trade association for European Direct Selling, and it represents the interested of the sustainable, ethical and consumer oriented direct selling actors in Europe. The work of the DSE is to promote the interest of its members at EU level by making sure the interest of the members is considered by EU decision makers, cooperating closely with relevant stakeholders to improve awareness of the sustainable direct selling industry, and collaborate with EU institutions to improve the quality of EU legislation, reducing costs and uncertainties for business and ensuring a competitive environment.</td>
</tr>
<tr>
<td>EDRA/GHIN <a href="http://www.edra-ghin.org">http://www.edra-ghin.org</a></td>
<td>EDRA/GHIN brings together the world of home improvement, including 215 home centre companies operating over 32,000 stores in 74 countries. Their members generate over 1.6 million jobs and total revenues of approximately €320 bn. They work together with legislators at EU level in order to promote the work done by their members and to defend their interests.</td>
</tr>
<tr>
<td>EUCER – The European Consumer Electronics Retail Council <a href="https://www.eucercouncil.org">https://www.eucercouncil.org</a></td>
<td>The EuCER Council represents European Retail Groups and Chains which are active in the sale of Technical Consumer Goods, such as Major Domestic Appliances, Computers, Smartphones, Healthcare Products, and Audio and Video Devices. The annual turnover of the members of the EuCER Council exceeds 45 billion euros, with more than 300,000 employees within the 27 countries of the European Union.</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
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<tr>
<td>FECC – Chemical Distribution Industry in Europe</td>
<td>FECC is the voice of the Chemical Distribution Industry in Europe, representing around 1,600 companies of which many are small and medium sized companies (SMEs). Its members employ more than 30,000 workers and have €28 bn in sales.</td>
</tr>
<tr>
<td>SELDIA – The European Direct Selling Association</td>
<td>SELDIA, The European Direct Selling sector, was founded in 1968. It represents 28 member associations, 16 companies, 9 service providers, as well as the voices of the sellers engaged in a direct selling activity. SELDIA works with range of European stakeholders to promote the benefits of direct selling, centred on their core values of freedom, trust, and personal connection. This includes maintaining and building contacts with EU officials, business organisations and consumer interest groups.</td>
</tr>
<tr>
<td>SMEUnited – Crafts and SMEs in Europe</td>
<td>SMEUnited is the association of crafts and SMEs in Europe with around 65 member organisations from over 30 European countries. They represent national cross-sectoral Craft and SME federations, European SME branch organisations and associate members, representing 22.5 million SMEs in Europe which employ almost 82.4 million people. SMEUnited has three main tasks in giving SMEs a voice at European level, Representing the interest of SMEs towards the European Institutions, other stakeholders and in the Social Dialogue; Networking and capacity building; and Projects. SMEUnited has a focus exclusively dedicated to the retail sector.</td>
</tr>
<tr>
<td>Eurochambres - Association of European Chambers of Commerce and Industry</td>
<td>Eurochambres was established in 1958 and represents over 20 million businesses in Europe through 45 members (43 national associations of chambers of commerce and industry and two transnational chamber organisations) and a European network of 1700 regional and local chambers. More than 93% of these businesses are small and medium sized enterprises (SMEs). Chambers’ member businesses employ over 120 million workers in the EU.</td>
</tr>
<tr>
<td>Ecopreneur – European Sustainable Business Federation</td>
<td>The objective of Ecopreneur.eu is to develop advocacy activities to influence on sustainable development and the green economy, advance the interests of green SMEs and green economy projects across Europe, and work towards the achievement of better environmental standards. Ecopreneur.eu is founded by seven associations from diverse EU member states, representing more than 3000 sustainable business, mostly SMEs. Ecopreneur.eu is the only cross sectoral business organisation advocating for the implementation of sustainable economy policies.</td>
</tr>
<tr>
<td>ETRC - The European Travel Retail Confederation</td>
<td>The European Travel Retail Confederation (ETRC) is an industry association for the duty free and travel retail industry in Europe, serving the industry and its members to help create the right environment to allow the industry to achieve its potential and protect it when challenges arise.</td>
</tr>
<tr>
<td>GIRP - European Healthcare Distribution Association</td>
<td>GIRP, the European Healthcare Distribution Association, is the umbrella organisation for full-service healthcare distributors in Europe. It represents the national associations of over 750 pharmaceutical wholesalers serving 34 European countries, as well as major international and pan-European healthcare distribution companies. GIRP members employ over 140,000 people and distribute around 15 billion packs of medicines as well as a wide range of healthcare products per year.</td>
</tr>
<tr>
<td>EUEW - European Union of Electrical Wholesalers</td>
<td>The European Union of Electrical Wholesalers (EUEW), founded in 1955, is a trans-European organization representing the interests of the electrical wholesaling channel which distributes domestic and industrial products including lamps, lighting fixtures, electrical and electronic wire and cable, household appliances and electronic components. Total membership in the 17 national federations belonging to EUEW is about 1,050 companies with more than 8,250 outlets employing some 103,000 workers.</td>
</tr>
</tbody>
</table>

There are also associations working at international level, mostly acting as federations of the diverse national associations such as Federation of International Retail Associations (FIRA).
5 DRIVERS AND FACTORS INFLUENCING THE FUTURE OF THE RETAIL ECOSYSTEM

5.1 Consumer needs and behaviours

This chapter provides an overview of the trends in the consumers’ behaviour in terms of adopting digital technologies or sustainable consumption approaches, as a factor influencing the retail ecosystem. In addition, demographic and societal changes are reviewed.

5.1.1 Adoption of digital technologies

Trends in consumer needs and behaviour have been evolving in recent years, highlighted, and catalysed by the COVID-19 pandemic. According to PwC’s June 2021 Global Consumer Insight Pulse survey, consumers had to pivot and adopt new habits while retailers had to accelerate their transformations to adapt to trends that were already in motion for the last decade (PwC, 2021). In response to retail closures and sanitary restrictions, Europeans increasingly used digital technologies. More than half of the consumers in international markets shifted to shopping online, with young consumers leading the trend (67% of young consumers at global level, surveyed by Shopify, shopped more online since the pandemic started) (Shopify, 2021). As such 92% of consumers expect to continue with the digital behaviour they have developed during the crisis (McKinsey, 2021).

E-commerce has responded to trends and created new habits for consumers in the past years, which have also been further adopted given the COVID-19 pandemic. Some of these trends are mentioned in the EC Communication on the future of retail, based on the consultation of the retail sector stakeholders (European Commission, 2018b), and are confirmed by international market reviews (see below):

- Ability to shop at any time and from anywhere
- Greater transparency on prices, products, and promotions
- Convenience of quick deliveries directly at home
- Increased shopping from online retailers located abroad, increasing cross-border trade
- Shopping performed across a diversity of channels, beyond the physical environment, from online through mobile etc, as consumer further navigate a “multi-channel” or omnichannel environment.

“Passive consumption” is on the rise as well, as digital technologies enable the retailers to profit from it. Some types of shopping are becoming increasingly automated, or machine aided (Euromonitor, 2018). For instance, as part of the connected home concept, goods that require constant refilling may be ordered automatically. Nevertheless, several barriers need to be overcome to spread this practice, including the quality of connectivity of home appliances, data protection concerns, or products built for durability (ibid).

5.1.2 Value-driven shopping and declining consumer confidence

While key trends such as continuous growth of online shopping and an increasing sensitivity to the environmental impacts of consumption have deepened among global consumers, they also reported being more “price-oriented”, “focused on saving”, “health-conscious” and “local” (PwC, 2021). Continuous evolution of consumer needs and shifting behaviours are following similar patterns at the European level according to McKinsey’s March 2021 survey on European consumer sentiment during the COVID-19 pandemic (McKinsey, 2021).

A search in Meltwater, an online media monitoring database shows the rise in the number of articles mentioning specific terms related to products, shopping, or commerce. This confirms the rise in socially or environmentally conscious shopping behaviours, as inferred from the rise in the number of articles dealing with veganism, buying local, social commerce, or resell and repair (see Figure 18).
Together with the digital shift, McKinsey’s consumer pulse survey highlights that the concerns that drive shoppers’ behaviours are changing (McKinsey, 2021). This provides an important advantage for \textit{value-driven consumers} to choose new retailers not only based on product value (e.g., better pricing, better shipping/delivery costs, better value) or on convenience (accessibility, delivery/pick-up options etc.). A third factor that influences consumer behaviour is the extent to which the retailers are 'purpose-driven' - or showcase concern for environmental and social issues. In this regard, supporting local businesses has become a key concern of both European and global consumers. In Germany, France, Spain and Italy, 'value' has become increasingly important and represents the main driver of brand switching.

While consumer behaviours are pivoting along emerging needs, with an increasing diversity of consumer profiles, the customer purchase journey is being transformed to adapt to these ongoing developments. The evolution towards a consumer-centred design aims to \textit{address increasingly consumers’ individual wishes and needs as well as challenges related to consumer loyalty} (AIT, 2010). As such, about 67% of consumers have tried a new shopping behaviour since Covid-19 started in early 2021 and a large majority intend to continue going to new retailers, stores, or websites, trying different brands or private labels as well as experimenting with new shopping methods after the pandemic (McKinsey, 2021b). While the digital shift allows customer to gain better access to information easing the purchasing decisions, often influenced by price-sensitivity, it also erodes brand value (ARUP, 2017). As a direct consequence customer loyalty is becoming increasingly important together with growing emphasis on collecting, analysing, and interpreting customer data. In this regard, the growing number of available datasets encompassing loyalty programme, purchase histories, online browsing data are being used to provide a more complex and granular understanding of customer profiles (ARUP, 2017). This wealth of data is key in improving long-term loyalty and the quality of engagement strategy of customers through more personalised experiences (BCG, 2019) and on-demand experiences (ARUP, 2017). As such personalisation helps creating a fast, seamless, and easy experience that helps them make purchase decision. If customers tend to respond positively to personalisation, it is more for the benefit it can provide such as a streamlined consumer experience than the personalisation per se.

In general, consumer confidence was on a positive trend prior to the pandemics, in European OECD countries, but experienced a sharp decline in spring 2020, at the start of the COVID-19 pandemics. Then, it reached pre-crisis levels during the summer of 2021, when COVID-19 safety measures started relaxing especially for the retail sector (OECD Consumer Confidence Index, 2021).

5.1.3 Demographics and societal challenges

Changes in demographics represent a focus point for retailers with two main emerging growth areas within the senior market (i.e., Silver demographics, aged 65 or older) and the youth market (i.e., Generation Z, born between 1995 and 2010).
As global population is ageing due to rising life expectancy and declining fertility rates in most part of the world, it is expected that the share of the global population aged 60 or over to account for 20% of the population by 2050 (ARUP, 2017). The demographic change will greatly influence the needs of consumers and requires adaptation from the retail sector. As such, an ageing society will have an impact on the design of products and services as well as the retail environment, especially considering the spending power of the elderly population. Already some adaptations can be observed in some ageing societies such as Japan, where shopping experiences are designed to fit the specific needs of older people (i.e., signage, speed of the escalators, etc.). Other facilities might be needed to accommodate their needs such as seating and resting places in physical stores as well as adapted omnichannel approaches. Health and well-being related product and service categories will also gain specific importance for this segment of consumers such as health monitoring devices, physical fitness, or care navigation (ARUP, 2017).

On the other side of the demographics, they must consider the shifting preferences of younger generations, known as Generation Z. This generation is characterised as those born after the Millennials and present specific attitudes towards brands and ways to interact with the retail environment (ARUP, 2017). During the pandemic, younger consumers saw the highest shift to online spending from all generations, greatly influenced in their decision-making by their impact on society and the convenience of shopping via social media (Shopify, 2021). As digital native, this generation has important expectations in terms of on-demand and personalised experience. While they currently have less disposable income than other generations, they appear to have more time to spend online and in-store and for seeking purchasing advice (ARUP, 2017). Following the pandemic, according to a 2020 survey by the Morgan Stanley Institute of Sustainable Investing, 95% of millennials are interested in sustainable investing, with 75% of them being aware that their investments can impact climate change (GreenBiz, 2021).

As such, to adapt to the new generation of shoppers, retailers will need to keep pace with the newest technologies both in-store and online, offering a seamless, on-demand, personalised shopping experience to this demographic group. The relationship of this new generation to ownership might also differ from the previous ones, which might influence the emergence of new business models based on sharing, lending, gifting, swapping, and bartering but also based on access rather than ownership (CE100, 2018)

5.2 New business models

The demand-side and demographic trends outlined in the previous sector, coupled with the availability of new technologies have made way for a massive wave of new business models, which are shaping the retail and wholesale sectors’ value chains, bringing in new players alongside or to the detriment of traditional ones. This section provides insights into these trends, especially looking into digital business models, the responses of small retailers, and sustainable retail business models.

5.2.1 Store format and distribution channels

One of the recent developments in the retail sector is the increased number of channels through which customers can choose to do their purchases. There are a number of points of interaction where customers are faced with the choice to use digital or physical services in the retail sector. In the race to simplify the customers’ access to their shop and products or services, digital technologies have been integrated at the pre-purchase, purchase and post-purchase level (see ).

The large retailers have especially adopted this ‘omnichannel’ approach meaning the integration of multiple shopping channels available to consumers such as physical shops, online, or mobile. By 2018, 84% of the European top 50 retail companies had adopted online sales (EU27 plus UK, Norway, Switzerland and Iceland) (EuroCommerce, 2021b). This number is bound to have increased during the pandemic. However, when looking at the situation among retail SMEs, the majority (2 in 3 retail businesses with at least 10 employees) did not have e-commerce sales in 2019. This shows the large difference between large and small enterprises and the gap between their strategies.

In return, no customer was buying exclusively online in 2019, but more of them (58%) preferred the omnichannel choice (to buy either online or offline) (EuroCommerce, 2021b). In addition, the e-commerce sales have been shifting from direct sales to sales via aggregating platforms (ibid).
Even if in the future, the physical store is projected to still remain a cornerstone of any retail strategy, some adaptations will be needed, and they will need to integrate digital technologies, providing a seamlessness strategy. The physical store is especially seen as suitable for providing experiences, trials and intense shopping interactions, supporting decision-making prior to the purchase decision (Reinartz et al, 2019). For example, digital technologies may be further integrated in new ways to pay, or as part of checkout-free stores (an example of this are Amazon stores in which the clients do not need to scan the articles or pay for them, as it is automatically done). Physical stores are expected to be focused mostly on the customers, offering them all services and experiences that online shopping does not provide (ARUP, 2017).

A recent strategy is also that of merging online and offline (OMO – online merge offline) is increasingly adopted by large stores such as Amazon, who announced plans to open large department stores in August 2021 (Spiegel, 2021).

In spite of the increase of channels, the biggest share of purchases is still done in physical stores, with the exception of books, music, movies, and video games, where only 30% of purchases take place in stores (see Figure 20). On the other hand, groceries (72% of purchases), furniture and homeware (60%) and household appliances (59%) are predominantly still done in-store. The reason for the highest in-store share of these categories of products might be linked with their in-store experience such as the option to take possession of the product immediately, and the option to test and try the product before purchasing it (ARUP, 2017). In order to still lure customers to their physical stores, retailers will have to provide added value experiences.
The COVID-19 pandemic has also affected the retail sector distribution channels. Due to the lockdowns and the social distancing measures implemented, physical stores have been more heavily affected than online retailers (OECD, 2020). This impact might accelerate the ongoing shift from physical stores to online retailing, increase the volumes of online purchases. This impact has been different across countries: in the case of France, the market share of e-commerce increased from 6% of the total consumer goods in 2019 to 10% during the confinement period. In the UK, the retail expenses spent online increased from 19.1% in April 2019 to 30.7% in April 2020, the highest value ever (OECD, 2020).

The use of mobile devices showed a fast-paced growth as a distribution channel, with almost 70% of all retail website visits globally having been done on smartphones in 2021 (Statista, 2021). This is especially driven by markets such as in Asia, or Africa, where digital infrastructure is less developed (ibid).

The use of mobile devices as a distribution channel is also strengthen by the use of social media as a purchasing channel. In addition to apps and websites pages, most of social media companies such as Instagram, YouTube, WeChat have added buying options to the posts and advertisements, participating to a seamless consumer experience by removing extra-steps from purchasing. As such, retailers will rely increasingly on third party solutions to drive their sales and adapt to the new purchasing habits of younger generations (ARUP, 2017).

### 5.2.2 Digitalisation of retail

Digital technologies have infused the retail sector and are used in all segments of the retail value chain, supporting warehousing, in-store retail, e-commerce marketplaces and online sales, the transportation and logistics segments, or meal and grocery delivery. New specialised businesses are using these technologies to

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32 The data is based on the PWC (2016) Total Retail survey, 23,000 online shoppers were surveyed across 25 territories: Australia, Belgium, Brazil, Canada, Chile, China/Hong Kong, Denmark, France, Germany, India, Italy, Japan, Malaysia, Mexico, Middle East, Poland, Russia, Singapore, South Africa, Spain, Switzerland, Thailand, Turkey, the UK, and the US.
offer services to companies along the value chain segments. Further connected new businesses that influence the retail value chain are active in the field of loyalty and rewards (allowing global brands and local shops to offer their customers reward programmes enabled by tech); cybersecurity; or on-demand delivery of goods and services (CBInsights, 2021).

We can thus distinguish several ongoing trends in the retail sector related to the use of digitisation and how it affects the value creation in the retail value chain, which also drive the rise of new business models:

- **Automation and human-robot interaction:** processes are becoming increasingly automated (see Reinartz et al, 2019, KPMG, 2021), including:
  - at the customer interface: automation of marketing processes (e.g., through reminders, alerts, chatbots, automated responses etc.), customers are communicating with robots or chatbots to obtain information from online e-commerce platforms;
  - at customer processes level: e.g., simplified purchases like Amazon’s 1-click buying; automatic orders of refills such as Amazon’s Dash replenishment technology; self-checkout in physical stores

- **Hyper personalisation and mass customisation:**
  - manufacturers and retailers obtain in-depth data about their customers to understand their consumer behaviour (also called “deep retail” models); AI technologies, image or facial recognition, Internet of Things, big data for profile or mood analysis are increasingly used tools for this, both in physical stores and online (KPMG, 2021, Reinartz et al, 2019). They support the retailers in offering promotions and interactions that are more tailored top customers’ preferences (Arup, 2017).
  - 3D printing supports manufacturers introduce further customisation options for the clients e.g., through allowing 3D printing parts of clothes, shoes etc., often designed by the customers themselves (Singularity Hub, 2019);

- **Ambient embeddedness:** integration of retail processes and communications (often from fragmented locations and services) into consumers’ routines and lives (e.g., through digital assistants such as Amazon’s Alexa or Google Home applications), geo-targeting through location-based marketing (Reinartz et al, 2019);

- **Experiential and interactive retail:** customers like to be able to virtually test / try fashion, furniture, or clothing products (Reinartz et al, 2019; KPMG, 2021);

- **Access to transparency and control / optimisation services** by consumers: offering customers the options to learn / obtain information through the use of the platforms or products – e.g., customers are able to compare prices or product details on several e-commerce platforms before purchasing an item; smart devices offer consumers information on their behaviours, allowing to optimise product use / choice so that they improve their health, fitness or other parameters (e.g., Colgate offers an electronic toothbrush that allows understanding brushing habits and coaching to improve them; Adidas is connected with the Runtastic app, which offers information on fitness habits and couples it with choices for fitness products, etc.) (Reinartz et al, 2019);

- **Marketing through social media** to actively engage with consumers in personalised communication and promotion; moreover, social media companies (e.g., Pinterest, Instagram, Facebook, WeChat) have enabled advertisers to also add the “buy” option to their ads, facilitating the purchasing process (Arup, 2017).

- **Cybersecurity services for online platforms or wearable devices** Fraud protection, consumer data privacy or protection of digital assets, training the workforce against cyber-attacks are key services offered by retail-related cybersecurity companies.

Overall, the following new business models have been evolving along the value chain services (based on Reinartz et al, 2019; CBInsights, 2021, Nauta Capital & Dealroom, 2021):

- **Logistics and inventory services:**
  - Large delivery companies (e.g., DHL, UPS) offer delivery from online platforms to consumers but new specialised platforms are rising e.g., for parcel shipping, on-demand delivery for businesses, same-day delivery etc.;
  - Door-to-door delivery from grocery and food platforms, often connecting farmers with customers
  - Optimisation services to in-store wholesalers and / or retailers: e.g., inventory management, optimisation of supply of quantities and inventory, allocation across stores
- **Business process optimisation services:**
  - Workforce management for improving the organisational efficiency of retailers (e.g., automated HR processes, onboarding procedures etc.)
  - Marketing through loyalty & rewards: e.g., for acquiring and engaging customers with outreach programmes both online and offline (e.g., mobile wallets for brands to engage with customers, brand interaction based on customer purchasing behaviour, etc.)
  - Marketing through location-triggered contextual messages for sales purposes e.g., through sensors, SaaS software, etc.
  - Payment services optimisation: e.g., cash register systems, software for multichannel retailers, etc.; self-checkout solutions (e.g., mobile, kiosks etc.)

- **Shopping experience and interaction in physical stores:**
  - Services for engaging and supporting customers with digital products in the store: e.g., integrating payments, or virtual experience, etc.

- **Online retail platforms** such as B2C marketplaces that bundle several brands for its products offerings (curated by the platform owner) and employ digital technologies to engage with their customers, e.g., through offering:
  - Product information services: online platforms provide product search engines that allow price and product features comparisons for more informed purchases, including product rankings, reviews etc.
  - Payment services: different payment platforms enable direct purchases of the goods or services sold
  - Customer digital journey: optimisation of product search and marketing on the online marketplace, integrating information on customer preferences, customer experience management platforms; platforms offering the opportunities for customers to provide feedback on brands or products

- **Product platforms**: brand manufacturers have started to integrate technologies for smart products, mobile or wearable devices, IoT and communications between products (allowing interaction with the physical environment or between the smart products). This also allows manufacturers to track the product use and interact with the consumer throughout the product use (Reinartz et al, 2019). In addition, manufacturers integrate further services or complementary products or functionalities to cater for connected needs (ibid, see Table 4), add value to their product offer and bind the consumer for a longer period. This phenomenon is also known as **servitisation**: the types of products that are added by the manufacturers to their offer include logistics and transportation, consulting, design and engineering services, maintenance and repair, after sale services (see Technopolis Group et al, 2018).

<table>
<thead>
<tr>
<th>Branded platform</th>
<th>product</th>
<th>Core complement(s)</th>
<th>Extended complement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game console</td>
<td>Games</td>
<td>Movies, music, TV streaming, computer software</td>
<td></td>
</tr>
<tr>
<td>Refrigerator</td>
<td>Food, beverages</td>
<td>Cooking videos, movies, music</td>
<td></td>
</tr>
<tr>
<td>Washing machine</td>
<td>Washing detergents</td>
<td>Pre- and post-treat laundry equipment (e.g., ironing, stain removal)</td>
<td></td>
</tr>
<tr>
<td>Hairbrush</td>
<td>Hair care products</td>
<td>Hair salons, nutrition supplements, food, beverages</td>
<td></td>
</tr>
<tr>
<td>Pet activity tracker</td>
<td>Pet food</td>
<td>Veterinary clinics, physical exercise equipment</td>
<td></td>
</tr>
<tr>
<td>Sports tracking application</td>
<td>Sportswear</td>
<td>Food, beverages, specialty sports equipment</td>
<td></td>
</tr>
</tbody>
</table>

Source: Reinartz et al, 2019

In 2021, 53% of the retail sector executives surveyed by KPMG said that their organisation sped up the adoption of AI (KPMG, 2021). The integration of AI in retail is believed by 69% if the CEOs of large companies surveyed by KPMG to have brought more value, which is the highest percentage among the industries surveyed (financial services, tech, government, industrial manufacturing, healthcare and life-sciences) (KPMG, 2021).
AI’s role in retail has been especially valued from two perspectives by retail sector executives. On the one hand, it proves useful in helping omnichannel retailers to understand the needs in local stores, by obtaining customer intelligence, data on the products relevance and placement, locations and formats used (KPMG, 2020). In addition, chatbots and self-checkout are considered by 80 percent of the executives interviewed by KPMG as further key AI tools to meet customer needs (ibid). At the same time, AI is leaving business executives perplexed: 75% of retail executives questioned say that the AI’s role is over-hyped, an increase from 64% in the pre-pandemic year (ibid). Executives also worry that the industry embracing it too fast, and it has an overall less substantial impact on their performance than expected, executives also want to not be left behind and implement AI technologies as fast as possible (KPMG, 2021).

5.2.3 Sustainability trends in retail

The regulatory push towards integrating sustainability into the manufacturers’ and any company’s business models, coupled with the shifting consumption priorities of the consumers towards more sustainable products and retailers, are two factors that are driving the increased success of green business models in the field of retail.

The circular economy provides new models to move beyond the current linear system of “take, make, (consume), dispose” by advocating for integrating three main principles in the economic activities: design out waste and pollution, keep products and materials longer time in use, and regenerate natural systems. These models have been increasingly adopted by large retailers. Such types of models include (see CE100, 2021):

- **Re-designing products** and working with new external partners to generate revenue or to generate savings by reducing consumption of material inputs;
- Shifting the focus on **access – not ownership** e.g., through leasing products instead of selling them (e.g., Mud Jeans leasing jeans, Bundles leasing washing machines);
- Focus on **reuse of products** and maintaining them in the economic circuit.
- Facilitating **recycling** of the waste generated by the goods sold

New business models are supporting the scaling up of the circular economy and sustainable solutions in the retail sector. This is supported by a rise in investors’ appetite to support green businesses, and their recognition of the business potential of such companies: the majority of asset owners across the world are integrating environmental, social and governance factors in their investment decisions (GreenBiz, 2021).

Focusing on **reuse** has been a particularly interesting model for the retail sector, and it has been adopted by large brands like H&M or C&A, through e.g., introducing buy-back programmes, repair centres or donations, or enabling second-hand sales. This also allows retailers to engage with consumers after the point of sale and learn more about consumption patterns. Physical retailers can also take more proactive approaches at a local level, by engaging with the local communities through e.g., encouraging shoppers to declutter, participating in community swap or sell days etc. Several online platforms or mobile apps (e.g., Stuffstr, Refurbed, Vinted) are successfully selling reused goods, some of them, such as the electronics, being covered by insurance. The goods are either provided by a) a network of phone collectors, which then need to be repaired and re-sold; or by b) the customers themselves, who can swap their device or clothes for the item of their choice. In the food sector, new apps are connecting consumers with food waste producers such as grocery retailers or restaurants, and rapid delivery can be guaranteed (e.g., apps like Phenix).

Other tendencies are brought by **indoor farming**. With the use of technologies like aquaponics, businesses are developing infrastructure or business models that allow specific types of vegetables or fruits be grown with low water or energy use and delivered at scale to customers (e.g., Agricool, Plenty). Some businesses even go all the way to install indoor farming units in the supermarkets themselves (e.g., Infarm).

Overall, the new trends in digitisation and sustainability are emphasising a new role for retail centres versus online platforms beyond delivering of products and goods to end consumers, as they are acquiring new functionalities, such as:

- The shop as entertainment or experience centre
- Production centres e.g., through indoor farming or 3D printing outlets in supermarkets or shops
• Waste collection e.g., for electronics or clothing take-back schemes or waste avoidance through reuse schemes

5.2.4 Local shopping trends and the role of small retailers

As illustrated earlier with the rise of internet platform giants such as Amazon or Alibaba as some of the largest retail companies in the world (see Section 2.2), it has become obvious that online retail platforms have shown a “winner-take-all” behaviour, because they are easily scalable, display network effects (offer benefits for both sellers and buyers) and are pushing small competitors out of their markets (Reinartz et al, 2019). Small retailers are understood as “traditional, small and independent shops”, as well as small cooperatives, excluding stores part of larger chains or operating in a franchise (EESC, 2019). They are typically working in the context of financial and liquidity constraints, as well as limits in accessing human resources and skills. The small retailers face challenges in complying with regulatory and administrative burden, and, due to the financial and human resources limitations, have been having difficulties in innovating and adjusting to new consumer preferences, the disruptions brought by e-commerce and digital technologies to retail, and the changes in the value chains (ibid).

Small retailers are also pressured by the challenges of the urban or rural environment they operate in, as well as the demographic challenges (e.g., ageing population, high rental costs, lack of infrastructures and accessibility, competition from larger shops such as malls or department stores, aside from the changes caused by the rise of e-commerce) (EESC, 2019).

Physical shops and especially small retailers in urban centres are increasingly forced to reinvent themselves or go bankrupt. The classical department stores models, which were dominating urban centres, are also diminishing in significance, as shoppers prefer the convenience of online retail platforms especially for goods that are “low-involvement”, for which online platforms offer quick solutions (Reinartz et al, 2019). At the same time, more specialised stores, or shops that offer possibilities for experiential shopping and integrate multi-channel services or specialised advice are bound to be more successful (ibid). Discount retailers have also been rising in presence in the shopping streets in urban centres, selling specialised products such as electronics, shoes, clothing etc (ibid).

Following the effects of the COVID-19 on the retail sector, small retailers have been encouraged to adopt digital technologies through government subsidy schemes (OECD, 2020). One of the actions that can be implemented in the near future is making use of the Recovery and Resilience Fund to improve the digitalisation of and the interoperability between different sales channels (European Commission, 2020b). Business models that support small retailers’ integration into online marketplaces, fast and free shipping, conversational commerce, and shopoppable social media can help independent retailers meet the increasing customer demands for convenience and reliability (Shopify, 2021).

Using more the power of the ecosystems in which retailers operate is a key strategy to support retailers to adjust to the ongoing challenges. In particular, public sector or civil society interventions at the level of cities or neighbourhoods, or, where financially viable, social enterprises or socially minded businesses are taking the lead, by, for example (EESC, 2019):

• Offering digital services to small retailers to connect with potential consumers, or develop a digital presence on a central digital platform
• Developing hub-like platforms in the city centres, facilitating transport connections or alternative mobility solutions to connect with potential customers from other areas of the city
• Revitalising city shopping districts through initiatives such as business improvement districts, where retailers themselves associate to take action to improve the customer services in their own shopping areas

5.3 Supply chain trends

5.3.1 EU-wide and global trade trends in retail

As explained in section 1.1, the retail supply chain refers to the process used to get the products to the consumers. It encompasses every step and actor from obtaining the raw material, making, or producing the
product to the delivery to the consumers. Wholesalers provided added value across the supply chain due to the extra services they provide (EuroCommerce, 2021).

Trade can happen in two directions: export and import activities. In the case of export trade, while European goods are in high demand worldwide, many manufacturers are not present in overseas markets, which forces them to rely on the services of export trading companies to sell their products abroad. These export companies are the link between manufacturers and potential customers abroad. Their role is important to open new markets for EU companies (EuroCommerce, 2021).

Import trade is very relevant, since it allows EU consumers to acquire foreigner goods that are not allowed in Europe. In order to successfully import goods, importers must comply by EU law and import rules. In the case producers are based out of the EU, the import assumes responsibility for quality and origin of products, which imposes difficulties on SMEs. Import trade also refers to the internal distribution networks of international manufacturers within the EU (EuroCommerce, 2021).

At European level, the countries with the largest numbers of consumers shopping cross-border are Germany (45.9 million having made cross-border online purchases), France (32.4 million), and Italy (32.1 million people) (Postnord, 2021).

There is little literature on issues related to the impact of global retail on the EU retail, or on the impact of global trade, imports of goods from outside the EU on EU retail.

5.3.2 Changes in wholesale, retail and connections with other sectors

Retail and wholesale activities are similar but the main difference among them is on the nature of the final consumers. While the retail activities focused on business-to-consumer models, wholesale is focused on business-to-business activities.

The supply chain integrates also other sectors that play a role in the retail process, such as logistics and transport services. The Covid-19 pandemic has increased the volume of online purchases, putting an additional effort on logistics companies, as citizens increased the number of online purchases and as consequence the delivery needs.

In some sectors, mostly on food related activities, small and local producers are also included in the value-chains, which is called short circuits. The inclusion of local providers allows the companies to have a faster reception of goods and products and reduce the transport costs.

Traditionally, physical retailers and wholesalers had a holistic approach, offering virtually all the services needed in the value chain: from logistics, selection of products, payment, information, and service. The use of the digital technologies has allowed the entrance of new market players, which short-circuit the traditional value chain (i.e., producer → (wholesaler) → retailer → consumer) and allow direct interactions between e.g., manufacturers and retailers (B2B platforms circumventing wholesalers), and manufacturers or wholesalers and end consumers (B2C platforms) (Reinartz et al, 2019). This change does not only affect the retail process, but also the product or service use, and who has the “authority over the main interaction point(s) with consumers when preparing and realising purchasing decisions” (ibid). This change has also been enabled by the rise in innovative logistics companies, such as “last mile delivery”, or companies enabling the “farm to fork” trends.

The circular economy trends, where some of the consumers can become themselves “providers / producers” by selling second-hand products on e-market places or having re-furbishers collecting used products to then repair them and place them on the market again has been another trend identified.

With Figure 21, we provide a visual representation of the retail ecosystem, where links between the elements are indicated, with linkages between the segments identified. This will be further enhanced and changed based on the discussions with the stakeholders at the workshop, to contribute to understanding the broad interlinkages within the retail ecosystem actors and segments.
The trends in re-arrangements of the roles of the different value chain segments will be further highlighted based on the discussions with the stakeholders at the workshop, e.g., the business models connecting manufacturers directly to consumers; the changes in the purpose of the retail centres (e.g., production centres, entertainment or experience centres, waste avoidance or collection etc.)

**Figure 21 Draft visualisation of the interlinkages in the retail ecosystem**

Source: Technopolis Group, using kumu.io
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