



# **E-commerce and Product Sustainability Information: An overview of policies and practices**

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Consumers International is the membership organisation for consumer groups around the world.

We believe in a world where everyone has access to safe and sustainable goods and services. We bring together over 200 member organisations in more than 100 countries to empower and champion the rights of consumers everywhere.

We are their voice in international policy-making forums and the global marketplace to ensure they are treated safely, fairly, and honestly. We are resolutely independent, unconstrained by businesses or political parties. We work in partnership and exercise our influence with integrity, tenacity, and passion to deliver tangible results.

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### **Acknowledgment Note**

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## Executive Summary

E-commerce has grown significantly in recent years. E-commerce retail sales, estimated in 2020 at USD 4.25 trillion, make up a growing share of total retail sales and could rise to nearly a quarter by 2025. The COVID-19 pandemic has accelerated this trend, which is expected to persist as consumers continue to alter their shopping behaviour.

When measured by value, an estimated 62% of global e-commerce retail transactions in 2020 occurred in the Asia-Pacific region, primarily driven by China, which is home to a third of online shoppers in the world. Europe and North America together account for 35% of transactions.

The expansion of e-commerce can have positive and negative socioeconomic impacts. It can enable small firms to access markets and establish direct relationships with consumers, for example. It can also create jobs and improve access to goods and services. As for negative impacts, e-commerce can lead to job loss in traditional retail sectors and facilitate market concentration and anti-competitive behaviour.

The environmental impacts of e-commerce are mixed. While there is extensive research on how e-commerce operations affect the environment, there is less research on the environmental impact of products sold online. An overview of product categories most sold online—e.g., fashion, food, electronics, household appliances, cosmetics—suggests that more can be done to address these impacts.

### *Principles for Product Sustainability Information*

With consumers increasingly interested in the sustainability attributes of the products they buy, e-commerce marketplaces can contribute to sustainable consumption by steering consumers towards more sustainable purchasing choices. This can be achieved through the effective provision of scientifically proven product sustainability information.

Various methods and tools can be used to measure product sustainability and communicate this information, ranging from life cycle analysis and footprint assessments to eco-labels and rating systems. These tools are intended to guide consumers and help ensure compliance with regulations and standards on production processes and sustainability. However, the constellation of tools is diverse and fragmented, and there is no agreement on which are the most appropriate for communicating standardized product sustainability information to consumers. This generates confusion and undermines the effectiveness of these tools in driving more sustainable consumer behaviour.

Against this background, in 2017, the United Nations Environment Programme (UNEP) produced a document entitled Guidelines for Providing Product Sustainability Information. These guidelines are structured around five fundamental principles to help information providers to

convey this information to consumers in a standard and effective manner: reliability, relevance, clarity, transparency, and accessibility. The guidelines also include five aspirational principles that go beyond the fundamental principles. In 2021, UNEP adapted the guidelines to online shopping and launched new Guidelines for Providing Product Sustainability Information in E-commerce. E-commerce actors can leverage these 2017 and 2021 principles to incentivize more sustainable purchasing and consumption habits among consumers.

### *The “aspiration-to-action” gap*

Research shows that while consumers are increasingly price-sensitive, they also aspire to purchase more sustainable products. However, recent surveys indicate that consumer awareness of environmental crises and their stated intention to change lifestyle does not always lead to more sustainable choices.

This “aspiration-to-action” gap can be explained by:

- decision-making factors, e.g., conventional criteria such as price, quality, performance, and convenience prevail over sustainability criteria.
- situational factors, e.g., time-related or peer pressure.
- consumer conviction, e.g., scepticism about the effectiveness of individual action and the reliability of sustainability claims.
- consumer knowledge, e.g., grasp of socio-environmental issues across complex value chains. Consumers also suffer from information overload that can breed confusion and inaction.

To reduce this gap, consumers need to be better guided in their choices when purchasing products online. Behavioural studies show that effective tools exist that can influence and alter consumer decision-making through interventions in what is referred to as choice architecture. The most well-known is nudging, a process which facilitates access to decision-relevant information. A popular example is to make the default option the sustainable option when shopping online. A related approach is to use opt-out rather than opt-in clauses for sustainable alternatives in buyer-supplier contracts. The positioning of product and of information is also an important nudge.

E-commerce marketplaces can help build consumer knowledge and address consumer conviction problems by implementing UNEP’s fundamental principles. The range of tools available is vast—from explanatory pop-ups on eco-labels, embedded emissions, or plastic waste to better policing of greenwashing in product marketing and encouraging user interaction on product sustainability. As consumer interest in circularity grows, marketplaces can also, for example, mainstream information provision on product characteristics such as durability, reparability, and recyclability. They can also request that sellers systematically provide accurate and verifiable sustainability information.

### *Public Policies on Consumer and Sustainability Information*

In the policy realm, various factors explain the need for governments to act in the field of consumer information. These include the right to information about a product's intrinsic properties as well as broader contractual obligations between consumer and seller. Information asymmetries, in particular, have prompted governments to adopt consumer laws that impose information requirements to protect consumers.

While a mandated provision of sustainability information should, in theory, incentivize consumers towards more sustainable choices, the literature shows that complementary policy tools may be needed for reasons that can be general or specific to e-commerce.

At a general level, the growing complexity of products and their production implies that approaches to consumer information and protection legislation could be updated. There are also concerns about the reliability and comparability of information given to consumers. Looking specifically at e-commerce, consumers can be vulnerable in an online environment. For example, a recent European Commission study on online shopping and information policy found that two-thirds of the screened websites did not comply with basic European Union (EU) consumer rights. Effective enforcement of online consumer rights is also a challenge.

This vulnerability can stem from several factors, which include the entangled or indistinct nature of product information, advertising, ranking, and review; a lack of clarity on where the onus of responsibility lies for providing product information among parties; and the influence of algorithms and artificial intelligence in shaping the manner in which product information is presented.

### *Review of Policies and Legislation on Consumer Rights and Product Information*

Against this background, this study reviewed legislation on product consumer protection, sustainability information, and digital policies in selected jurisdictions.<sup>1</sup> The main focus was on the EU, and also France, due to recent policy developments there. The review also covered Chile, China, India, Morocco, South Africa, and South Korea.

In the jurisdictions under analysis, the review identified consumer legislation as distinct—and separate—from contract rules. In some instances, consumer protection laws are concentrated in horizontal legislation, while in others they are fragmented across different texts. There is also sectoral legislation for product categories such as food and beverages, medicines, toys, and hazardous goods.

The legislative framework on consumer protection is in constant evolution, with newly adopted texts and ongoing reforms. For example, a new regulation enacted in Chile aims to strengthen the transparency and quality of product information provided to consumers on e-commerce

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<sup>1</sup> The review is not meant to be exhaustive, nor is it an assessment of the policies or plans of an individual jurisdiction.

platforms. The objectives are to encourage informed decision-making and reinforce consumer freedom of choice. Another example can be found in the EU, where the European Commission is proposing new consumer rights and a ban on greenwashing. The objective here is to enable the green transition by empowering consumers to take informed and environment-friendly choices when buying products.

With varying depth and detail, all jurisdictions reviewed have consumer laws stipulating information provision requirements, notably on a product's main characteristics, consumption, or quality, and they have all introduced the right for consumers to cancel an online purchase (right of withdrawal).<sup>2</sup> They also all have rules on unfair commercial practices and unfair terms and conditions.

With the exception of the EU and France, sustainability and the circular economy have yet to be fully considered from a consumer law perspective. Regarding sustainability information, France is the only jurisdiction with cross-cutting legislation on mandatory sustainability information requirements. The country's recently adopted Climate and Resilience Law contains mandatory disclosures on the environmental impact of certain products and strict rules on green claims. The country's Anti-waste Law further includes provisions aimed at better informing consumers on a product's environmental characteristics. It also encourages repair and reuse, including through the mandatory display of a reparability index. As noted, the European Commission is proposing far-reaching legislation on product sustainability information. In addition, South Korea's consumer law has a provision on the formulation of public policies on information relating to the environmental friendliness of goods.

In the specific case of sustainability labels (for example, labels about energy efficiency), there is great diversity in terms of products covered, methodology, criteria, and rules on the reliability of claims. Other than the EU and France, no comprehensive legislation or legislative proposal exists on green claims.

Regarding digital policies, all jurisdictions have legislation regulating e-commerce transactions at different stages of development. This includes information obligations. One of the main challenges is how to allocate responsibilities on the provision of information between a platform and a trader. All jurisdictions also have privacy rules, with varying approaches to data protection. The EU and South Korea are examples of robust and comprehensive data protection laws for processing personal data.

Finally, the European Commission guidance from December 2021 on the EU's Unfair Commercial Practices Directive is an important policy development on a range of issues of direct relevance to this review. For example, it provides additional information on environmental claims and how they should be presented to consumers, as well as on practices such as planned obsolescence. It

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<sup>2</sup> The right of withdrawal is a period during which a consumer can cancel an online purchase even when already paid, usually without giving a reason or incurring any cost.



also provides additional legal interpretation on the obligations of online platforms and marketplaces (e.g., not to mislead consumers through action or inaction) and on enforcement and penalties.

In terms of good practices, the review identified initiatives that train traders on consumer protection and also initiatives that strengthen international cooperation. On the latter, the EU provides technical assistance and regulatory support to partner countries, including in Africa, to promote high standards of consumer protection. The Korea Environmental Industry and Technology Institute undertakes activities to encourage green consumption and serves as co-secretariat of the UNESCAP Asia Carbon Footprint Network promoting cooperation in the region. At a broader level, consumer education and awareness initiatives and the engagement of consumer associations in consultative processes for policy formation on product sustainability information were identified as positive and necessary.

### *Preliminary Conclusions*

Further efforts by private and public actors are needed in order to design and implement initiatives and policies that help consumers shift to more sustainable behaviour when purchasing online. Consumer decision-making can be positively influenced by the manner in which sustainability information is provided in e-commerce settings and by observing the five fundamental UNEP principles for providing product sustainability information.

The study considered a range of initiatives undertaken by private actors, especially e-commerce marketplaces. It identified practices to support good communication of product sustainability information and to incentivize consumers to choose sustainable options. It also noted that many of these initiatives are at an incipient stage and that there is scope for improvement.

The study also included a review of policies and legislation in selected jurisdictions that offer a diversity of experiences in different national contexts. It noted that the EU and France are the only jurisdictions with comprehensive legislation or legislative proposals on product sustainability information.

The findings of this review offer a solid foundation for the next phase, which will involve stakeholder participation to share views on the policy frameworks that may be needed to steer consumers towards more sustainable decision-making.

## Chapter 1: The Evolving Nature of E-commerce in a Post-pandemic World

When goods and services are purchased and sold online, the transactions are referred to as electronic commerce (e-commerce). The Organisation for Economic Co-operation and Development (OECD) (2011) defines e-commerce as “the sale or purchase of goods or services, conducted over computer networks by methods specially designed for the purpose of receiving or placing of orders.” While goods and services are ordered over these networks, payment and delivery may be online or offline (UNCTAD, 2021a). E-commerce transactions can involve different types of actors, notably businesses, governments, and consumers, and can take place via multiple configurations: business to business (B2B), business to consumers (B2C), consumer to consumer (C2C), and government to business (G2B), among others. Given that the focus of this report is to understand and promote sustainable consumption patterns through e-commerce, much of the data presented will focus on B2C data.

### *1.1 Market Size and Growth of E-commerce Worldwide*

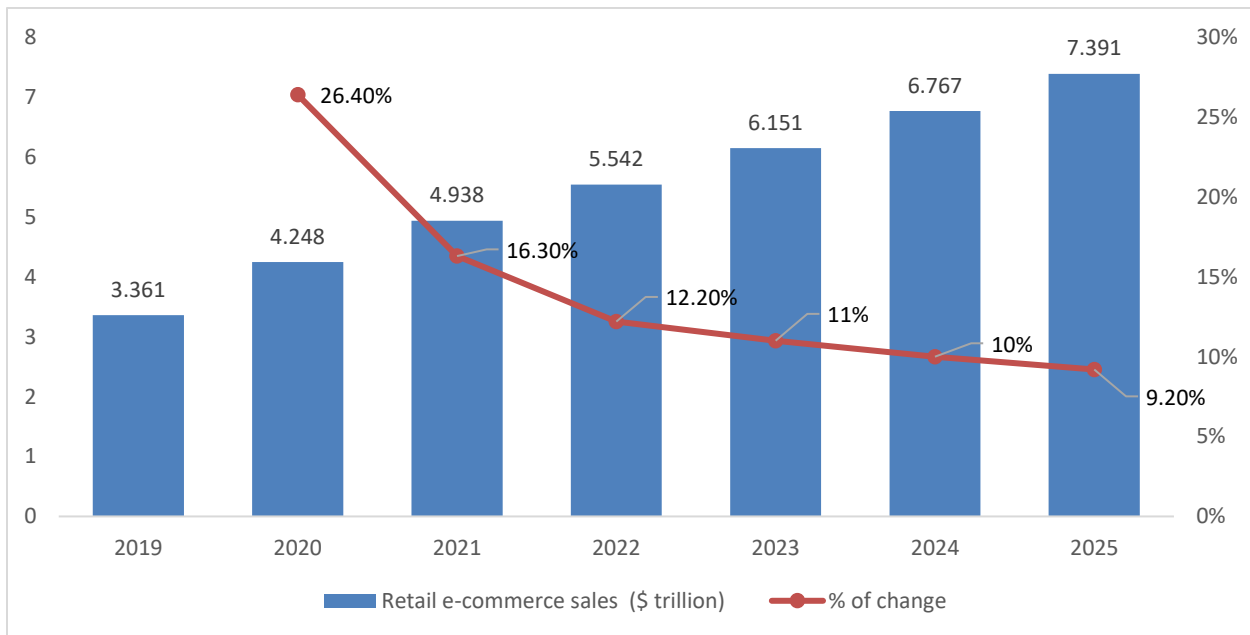
Overall, e-commerce has seen significant growth in recent years and has reshaped how retail operates worldwide. Growing technological awareness among customers, faster internet connectivity due to the development of 4G and 5G technology, and mobile phone usage have been critical for this expansion and are expected to further strengthen its market growth (Grand View Research, 2020). Prompted by the coronavirus pandemic, e-commerce has experienced a dramatic increase globally. This is likely to be sustained, as consumers have shifted their shopping behaviour and are expected to use such platforms increasingly and more consistently going forward.

According to UNCTAD, global e-commerce sales in 2019 are estimated to be valued at \$26.7 trillion, having increased by 4% versus 2018 sales (\$25.6 trillion).<sup>3</sup> The bulk of these sales were driven by B2B activities, which represented 82% of the total e-commerce sales. B2C activities were meanwhile estimated to amount to \$4.9 trillion in 2019, having grown by 11% versus 2018 (UNCTAD, 2021b). Much of the e-commerce sales took place domestically, with cross-border B2C e-commerce sales amounting to \$440 billion in 2019, or close to 10% of total e-commerce sales. However, international sales are consistently increasing, having grown by 9% since 2018. While most shoppers tended to purchase their products from domestic suppliers, roughly 306 million shoppers—which is equivalent to one out of every four e-commerce consumers—had purchased products from foreign suppliers in 2019. The share of consumers who shop internationally rose from 20% in 2017 to 25% in 2019. The most prominent merchandise e-commerce exporters are China, the United States, and the United Kingdom.

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<sup>3</sup> When analyzing global and regional data, an emphasis is placed on using the data collected by the UN body UNCTAD. This body typically relies on official country-level statistics and surveys. In the case of e-commerce, however, this information is often incomplete. In addition, the data is collected yearly, and therefore the latest market size estimates covered by UNCTAD are only up to 2019. UNCTAD does not undertake forecasting activities. Consequently, when synthesizing forecasting data and analysis, the information presented is from leading global market research firms such as eMarketer and Statista.

When examining global e-commerce retail sales specifically (related to B2C), e-commerce retail sales amounted to \$3.36 trillion in 2019 according to eMarketer (2022a).<sup>4</sup> With the onset of the pandemic, there was a rapid growth of over 26%, resulting in sales amounting to \$4.25 trillion. The year 2022 will be the first year in which e-commerce retail sales will exceed the \$5 trillion mark. According to eMarketer (2022a) report forecasts, e-commerce retail sales will continue to benefit from strong double-digit growth rates and are expected to amount to close to \$7.4 trillion by 2025 (see Figure 1).

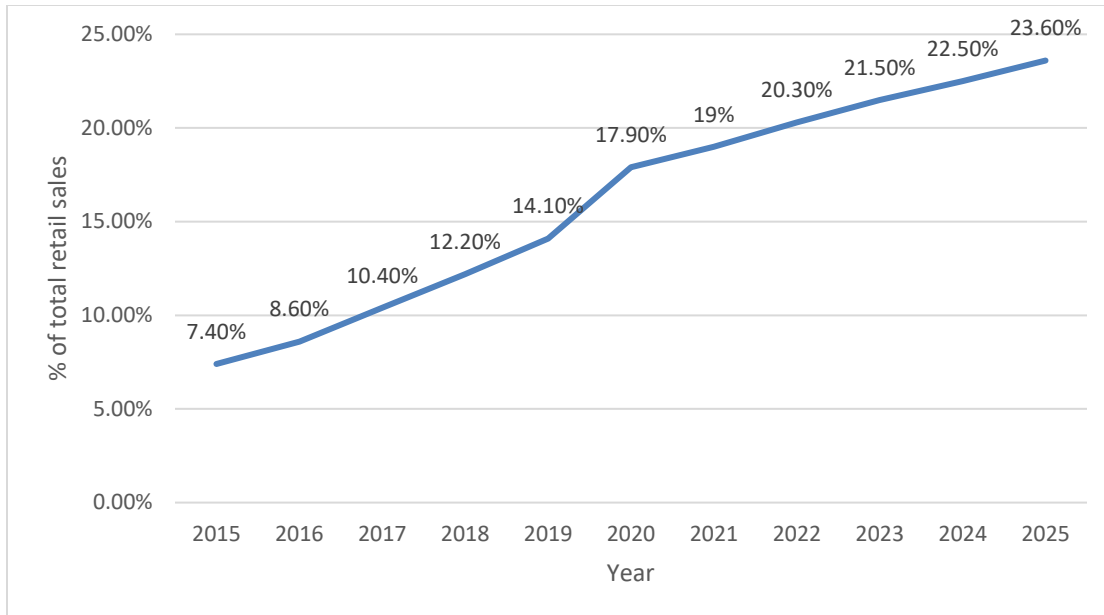


**Figure 1: Retail e-commerce sales worldwide (2019–2025)**

Source: eMarketer (2022a)

The proportion of e-commerce retail sales as a percentage of total retail sales has been consistently increasing. The year 2020 saw an especially drastic increase, with the proportion of e-commerce retail sales increasing by more than three percentage points from 14.1% to 17.9%. As pandemic-related restrictions ease, the proportion of e-commerce retail sales is expected to keep increasing, but more gradually. The latest eMarketer (2022a) report estimates that e-commerce retail sales as a percentage of total retail sales will increase to 23.6% by 2025 (see Figure 2).

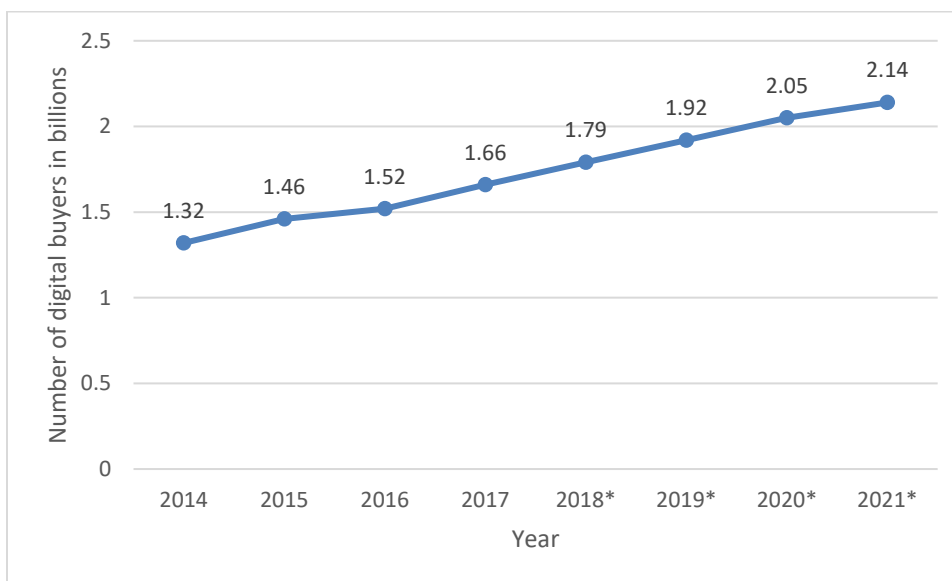
<sup>4</sup> eMarketer retail e-commerce sales include products or services ordered via the internet using any device, regardless of the method of payment or fulfilment. This excludes travel and event tickets, payments such as bill payments, taxes, or money transfers, food services and drinking place sales, gambling, and other vice goods sales.



**Figure 2: The evolution of global e-commerce retail sales as a percentage of total retail sales**

Source: eMarketer (2022a)

In terms of shoppers, eMarketer (study in Statista 2021a) estimated that by 2021, over two billion people (over the age of 14) would buy goods and services online (see Figure 3). They expected that there would be nearly one billion additional shoppers compared to those who shopped online in 2014.

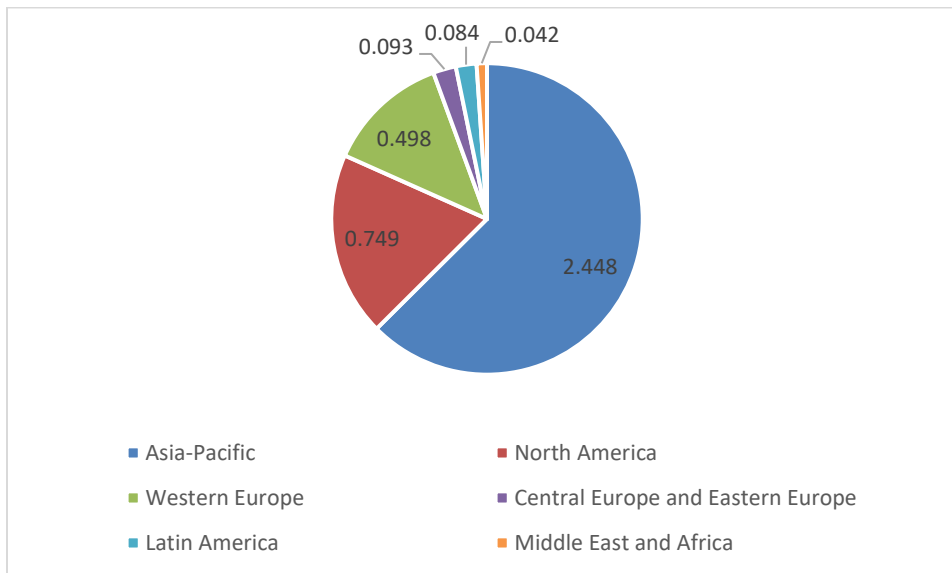


**Figure 3: Evolution of online shoppers worldwide**

Source: Statista (2021a)

## 1.2 E-commerce Trends by Region

From a regional perspective,<sup>5</sup> most e-commerce retail sales took place in the Asia-Pacific region, which is also the region with the highest population density (see Figure 4). According to eMarketer’s 2020 Global E-commerce Report (2020a), it is estimated that roughly 62% of global e-commerce retail transactions by value took place in that region. North American and European countries were estimated to account for 35% of the transactions, whereas the remaining regions of Latin America, the Middle East, and Africa were estimated to only account for 3%.



**Figure 4: E-commerce retail sales by region in 2020 (in \$ trillion)**

Source: eMarketer (2020b)

The Asia-Pacific region is economically diverse, with some of the richest countries in the world (in terms of GDP per capita) and some of the poorest, including several least developed countries (LDCs).<sup>6</sup> The richest countries have high levels of connectivity as hard infrastructure and digital infrastructure are ubiquitous, resulting in a well-established distribution network with widespread digital reach and internet usage. Meanwhile, the LDCs struggle with basic connectivity issues and face significant challenges caused by their geographic positioning. Many of the LDCs in the region are landlocked and their economic activity is dependent on exporting a few commodities to select countries. These countries also faced significant trade shocks due to the COVID-19 pandemic, which affected their GDP even more, thereby further limiting the population’s consumption habits. For richer countries, on the other hand, the pandemic

<sup>5</sup> The regional-level narrative analysis is synthesized from the UN report entitled COVID-19 and Ecommerce: A Global Review (UNCTAD, 2021a).

<sup>6</sup> Unlike the other regions, the UN has yet to prepare an in-depth report on regional e-commerce patterns in the Asia-Pacific region. Nevertheless, certain trends are highlighted in UNCTAD’s general e-commerce report (2021a).

prompted consumers to significantly increase their online shopping, building upon a habit that was already becoming well-established prior to the pandemic.

E-commerce activities in the North American and European regions increased as well due to widespread digital reach and internet usage. Consumers were already engaged in online shopping habits prior to the pandemic. The countries also benefitted from high connectivity, in terms of both hard infrastructure and digital infrastructure, and a well-established distribution and postal network, which enabled ease in distribution and payment methods. In addition, high income levels, welfare safety nets, and pandemic-related economic support measures on the part of governments helped consumers sustain their purchasing power during the pandemic.

The African region comprises mainly developing and least developed countries, which historically have had lower and weaker GDP growth. The region also has significantly lower levels of digital reach and consequently lower levels of internet activity and e-commerce. During the pandemic, higher-income consumers from the region also shifted their behaviour to shop more online. However, their online consumption habits were limited by a lack of availability in e-commerce supply options. Domestic supply in the region is constrained by limited hard infrastructure and digital infrastructure, low levels of internet usage, constraints relating to access to finance, and a lack of enabling and coherent legislation conducive to promoting e-commerce.

In the Middle Eastern region, e-commerce activity tended to be higher in middle- to high-income countries, such as the countries in the Gulf Cooperation Council region, as well as in the countries with larger markets, such as Egypt. Though these countries were regarded as some of the strongest in the region, e-commerce activity was still relatively limited, with less than 5% of retail sales taking place through online channels. As in the other regions, the pandemic played a significant role in shifting shopping behaviour in the region, resulting in an acceleration of domestic e-commerce during that period. However, growth in e-commerce was limited by supply-side constraints, including unreliable and costly supply chains, limited or deficient hard infrastructure (roads, logistics infrastructure), a lack of online payment facilities, an inconsistent policy and legal framework, and a weakened capacity for digital entrepreneurship. Demand-side constraints included cultural preferences for face-to-face interactions as well as a higher reliance on cash.

The Latin American region is economically diverse, much like the Asia-Pacific region. It is comprised of large continental countries with significant market sizes, middle-income nations, small island states, lower-income nations, and one LDC. The region has invested significantly in digital infrastructure; as a result, half the population is online. The proportion of online shoppers in the region more than doubled between 2014 and 2017. But even though it had grown significantly, e-commerce was still significantly low in comparison to OECD countries. As with the other regions, the pandemic had a significant impact in further facilitating a shift toward online shopping patterns. Not only were more shoppers buying online, but businesses also increasingly transitioned to the use of digital sales platforms. Online sales, however, grew less dramatically in countries with weaker digital infrastructure. The region also faced significant challenges related to purchasing power. The pandemic caused significant contractions in GDP,

and given the lack of welfare safety net options, these countries also saw significant increases in unemployment and poverty levels, which had a detrimental impact on consumption habits via both offline and online channels.

On a regional basis going forward, the Asia-Pacific region, driven by China, is expected to continue to dominate in the coming years. This should remain unchanged despite the rapid growth numbers of other regions, notably that of Latin America and North America. The projected increase in the Asia-Pacific region will be driven by a rapidly growing middle class (85% of new middle-class members are expected to come from that region), increased urbanization, and increased ease in e-commerce due to technological advancements and conducive government initiatives in China (Shopifyplus Industry Insights and Trends, 2022).

### *1.3 E-commerce Trends by Country*

The top 20 economies that were driving overall e-commerce sales growth in 2019 were a mix of developing and developed countries, with the former representing roughly half of the list (UNCTAD, 2021b). The top three performing economies—which remained unchanged from 2018—were China, the United States, and the United Kingdom. China’s dominance is due to the country having the highest number of online shoppers in the world, with a share of 33.3% of the global total. It is also the first country which is set to have more than half of its retail sales take place via e-commerce. No countries from the Middle East and Africa regions appear on this list (see Table 1).

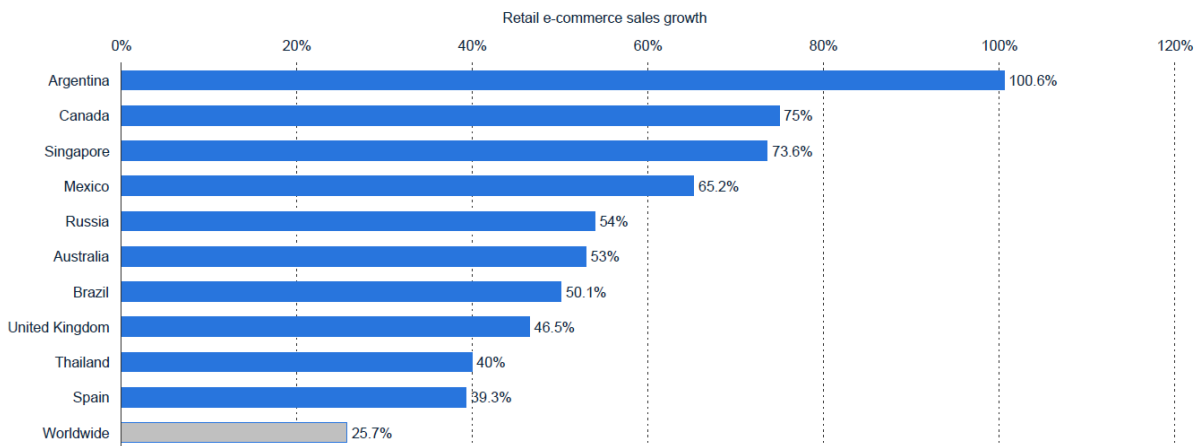
**Table 1: B2C e-commerce sales: Top 20 economies in 2019**

Rank	Economy	B2C e-commerce sales (\$ billion)	Share of B2C e-commerce sales in GDP (%)	Online shoppers (million)	Online shoppers (% of internet users)
1	China	1,539	10.7	639	75
2	United States	1,261	5.9	189	80
3	United Kingdom	251	8.9	42	88
4	Japan	178	3.5	55	54
5	France	116	4.3	38	77
6	Korea (Rep.)	115	7.0	27	66
7	Germany	111	2.9	56	84
8	Spain	64	4.6	23	64
9	India	61	2.1	70	20
10	Canada	53	3.0	24	84
11	Hong Kong (China)	38	10.4	2	38
12	Italy	35	1.8	19	49

13	Russian Confederation	31	1.9	34	35
14	Mexico	31	2.5	26	32
15	Netherlands	29	3.2	12	73
16	Thailand	27	5.3	5	14
17	Ireland	25	6.4	2	73
18	Australia	21	1.5	12	73
19	Malaysia	19	6.0	15	35
20	Brazil	16	0.9	48	39
	20 above	4,021	5.9	1,339	59

Source: UNCTAD (2021b)

According to Statista (2021a), several countries outpaced the average worldwide growth rate of B2C e-commerce sales in 2020. The top ten again included a mix of developing, transition, and developed economies (see Figure 5). Some Latin American countries had the most significant growth rates. Argentina’s retail e-commerce sales grew by more than 100% in 2020.

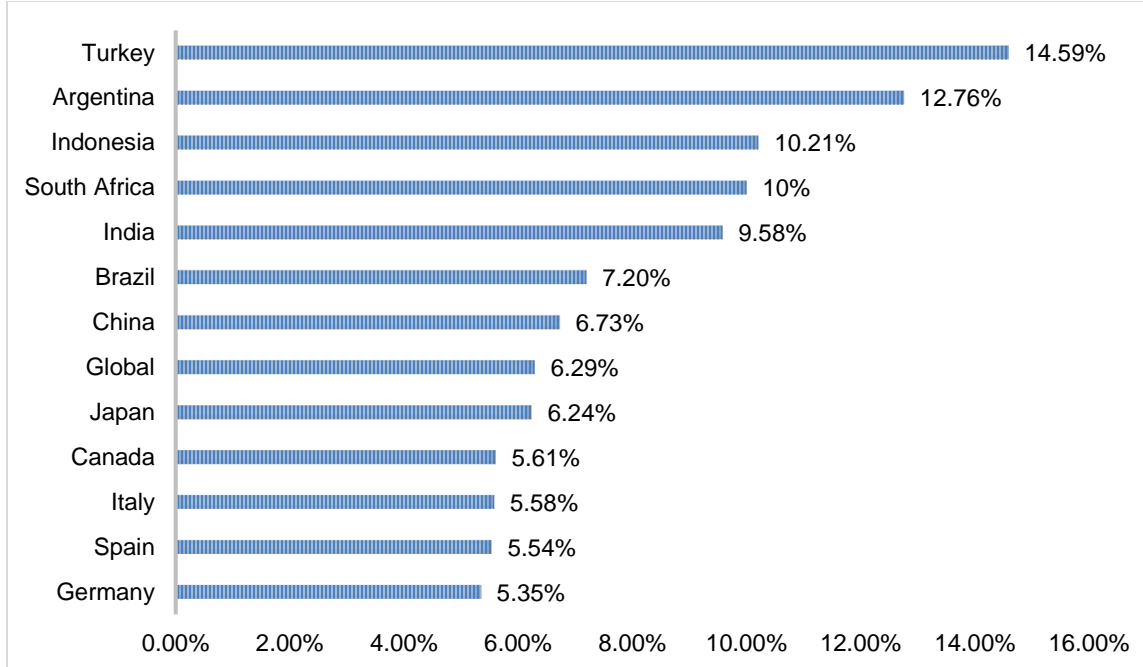


**Figure 5: Fastest-growing retail e-commerce countries in 2020**

Source: Statista (2021a)

High growth rates are expected to continue, with multiple countries across different regions set to increase their retail e-commerce sales. This includes a mix of developing and developed countries (see Figure 6).





**Figure 6: Retail e-commerce sales CAGR forecast in selected countries from 2021 to 2025**

Source: Statista (2021a)

**Key insight:** The evolution of the e-commerce market size and the expectation for significant growth across the various regions and country types shows how important e-commerce channels are and will continue to be for global economic activity. It is therefore critical to understand how best to leverage these channels so that they not only facilitate economic transactions, but also act as a conduit for maximizing sustainable development outcomes.

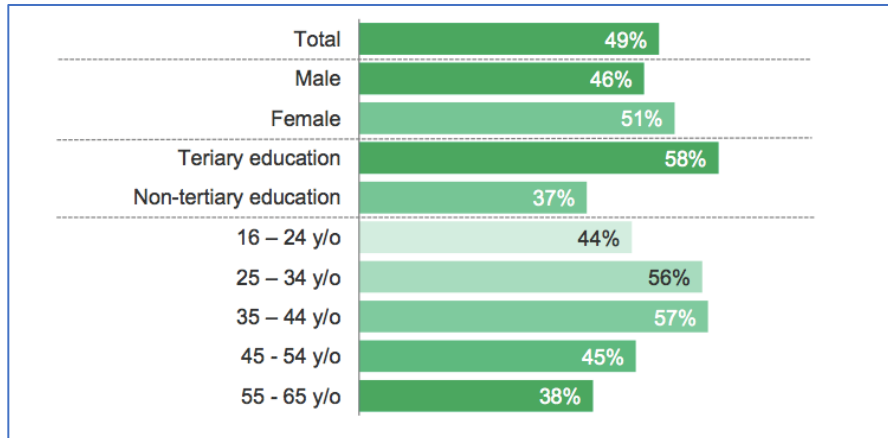
### 1.4 E-commerce Trends by Consumer Segment

From a consumer perspective, in pre-pandemic times, the use of e-commerce was already instilled in consumers of all ages, and in particular Generation Z and millennials, who drove the increase of global e-commerce sales through the use of social media platforms and smartphones (Edelson, 2021; 99 firms, n.d.).

During the pandemic, this existing preference for purchasing through online channels was enhanced. According to the UNCTAD and Netcomm Suisse (2020) consumer survey,<sup>7</sup> the shift to e-commerce as a result of the COVID-19 pandemic was **most prominent for women, highly educated consumers, and consumers aged between 25 and 45 years old**—more than 55% of this age group was shopping online more often than ever before. Significant gains also

<sup>7</sup> The survey examined the effects of COVID-19 on consumer behavior for the use of digital technologies and e-commerce in nine countries representing both emerging and developed economies. Sample sizes differed across countries. Respondents were internet users aged 16 years or above.

showed among other age groups. For instance, around 40 to 45% of surveyed consumers in the 16 to 24 age group and the 45 to 54 age group have been shopping online more often since the outbreak of the COVID-19 pandemic.

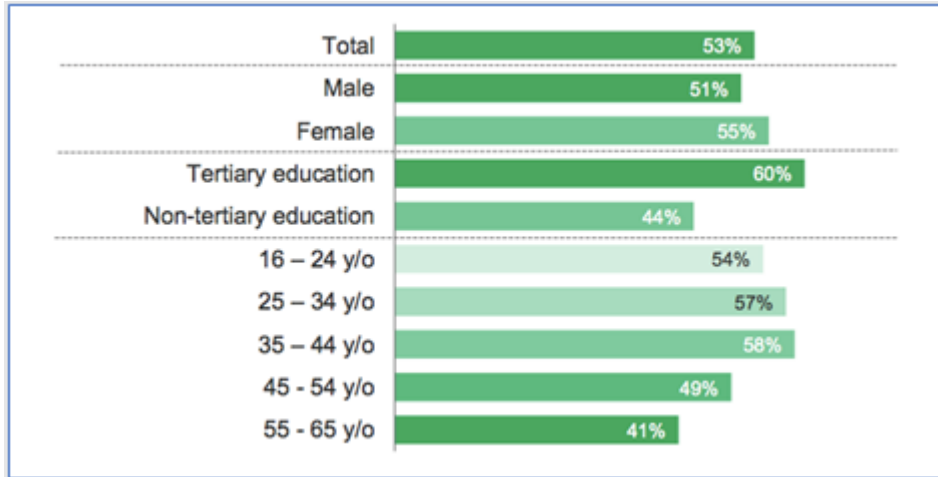


**Figure 7: Shift to e-commerce shopping since the outbreak of the COVID-19 pandemic by customer demographics**

*Source: UNCTAD and Netcomm Suisse (2020)*

In the same vein, Jílková and Králová (2021) found that consumers from all age groups reported digitally purchasing goods and services at a higher rate during the COVID-19 crisis. They found that 43% of all respondents had shopped online since the outbreak of the COVID-19 pandemic, in comparison with 12% before the outbreak. They also point out that the baby boomer generation were important drivers of e-commerce growth; they did not frequently purchase online before, but the pandemic changed their habits.

The rising trend in digital consumption habits resulting from the COVID-19 pandemic is expected to continue across all consumer demographics—including men and women, highly educated and non-tertiary-educated consumers, and across all age groups—according to the UNCTAD and Netcomm Suisse (2020) survey. Figure 7 illustrates the share of respondents that indicated that it is likely or very likely that they will continue to employ the same online consumption habits adopted during the COVID-19 pandemic after this period ends.



**Figure 8: Shift to e-commerce shopping since the outbreak of the COVID-19 pandemic by customer demographics**

Source: UNCTAD and Netcomm Suisse (2020)

More recent data suggests that this trend is already continuing. According to eMarketer (2020b), as of 2021, 71% of e-commerce consumers in the United States were under 55 years old, with 38.4% of that percentage under 35. In the European Union, most e-commerce consumers were also under 55 years old in 2021, with the 16 to 24 age group having the highest share of online shoppers among internet users that year (Eurostat, 2021).<sup>8</sup>

Another interesting fact from Price Waterhouse Coopers (PwC) of June 2021 in the *Global Consumer Insights Pulse* report<sup>9</sup> says that the shift to online shopping will continue, particularly among those who now work more often from home. Even as public health restrictions ease, PwC has noticed that the at-home cohort is significantly less likely to shop in physical stores than the cohort working away from home (PwC, 2021a).

### 1.5 The Impact of COVID-19 on E-commerce Consumer Behaviour<sup>10</sup>

Over the last couple of years, a variety of factors have fuelled this growth in e-commerce retail sales at the global level, with the most prominent driver being the impact of the COVID-19 pandemic.

<sup>8</sup> In the 2011 to 2021 period, consumers aged 25 to 54 had the highest share of online shoppers among internet users, except in 2019 and 2021, when the 16 to 24 age group took the lead, and in 2017, when the two age groups were tied (Eurostat, 2021).

<sup>9</sup> The PwC survey polled 8,681 consumers across 22 territories (across a wide breath of regions). Respondents were at least 18 years old and required to have shopped online at least once in the previous year.

<sup>10</sup> The trends discussed in this section are illustrative. The insights are based on various market research firm surveys, which used different sets of countries and interviewed different numbers of consumers.

In light of the restrictions that were imposed intermittently on brick-and-mortar retail and also on the population, consumers were forced to shift their shopping behaviour to increasingly purchase via online channels. According to UNCTAD (2021a), although e-commerce retail sales were already slowly increasing, the onset of the COVID-19 pandemic resulted in a **surge in online shopping** and instigated a change in behaviour that would have normally taken years. In the United States, for example, the share of e-commerce retail sales took two years to increase from 9.6% to 11.8% between the first quarters of 2018 to 2020. With the onset of lockdown restrictions, however, this share spiked to 16.1% within a single quarter (between the first and second quarter of 2020). There was a similar trend in the United Kingdom, which had also seen slower increases in e-commerce retail shares of 17.3% to 20.3% between 2018 and 2020, and a drastic increase to 31.3% between the first and second quarters of 2020 (UNCTAD 2021a).

Similar trends were observed in other regions. The drastic increases were especially prominent in emerging markets. Latin America's online marketplace, Mercado Libre, saw a doubling of their sales in the second quarter of 2020 compared to the same period the year before. Argentina saw the share of online sales increase dramatically from 18% to 49% during the first half of 2020. Africa's e-commerce platform, Jumia, saw a 50% increase in transactions in the first half of 2020. China's online retail sales increased from 19.4% to 24.6% between August 2019 and August 2020. In Thailand, the week before partial lockdown restrictions were imposed, downloads of shopping apps jumped by 60% (UNCTAD, 2021a).

Rapid increases also took place in countries where consumers were traditionally more wary of online shopping. According to a McKinsey (2021a) consumer survey report, countries such as Germany, Switzerland, and Romania had some of the lowest online penetration rates before the pandemic. These countries saw some of the highest growth surges, increasing by 25%, 18%, and 28% respectively (McKinsey, 2021a).

This shift in consumer behaviour toward **an increased use of online platforms is likely to continue beyond the pandemic**. According to the McKinsey (2021a) consumer survey, 65% of consumers who had recently tried online shopping in the 13 countries surveyed expected to continue after the pandemic. As illustrated above, the UNCTAD and Netcomm Suisse (2020) consumer survey found that over 50% of consumers expect to continue their new digital habits beyond the pandemic. This includes buying more essential goods online, as well as shopping more often online.

The **increase in online consumption happened across nearly all retail categories**, and even in the categories which were previously mainly only reserved for in-store shopping trips, notably household essentials and food products. As a consequence of the lockdown restrictions, consumers became more familiar with purchasing such items through online channels. The evolution of consumption habits across product categories is examined more closely in the next section.

**Online shopping is primarily facilitated through mobile phones and smartphones.** According to the PwC (2021b) December 2021 consumer report,<sup>11</sup> smartphone shopping is at a historic high, with 41% of those surveyed indicating that they shop either daily or weekly using their phones. Compare this to just five years ago, when only 12% of consumers were shopping using their phones (PwC, 2021b). This growth is expected to persist given that the number of mobile users continues to increase, now surpassing 5.22 billion users, and the time that they spend on their phones is also on the rise. For example, mobile users in the United States spent an average of 234 minutes a day on their phones in 2021 versus 188 minutes in 2016 (Oberlo, 2021). Companies are increasingly grasping the importance of mobile-led purchases and consequently have made additional investments to optimize the mobile consumer experience, for example by optimizing search and display options and reducing the number of clicks needed to finalize payments (Statista, 2020).

According to the PwC (2021a) consumer report, the impact of the pandemic has resulted in **consumers becoming more price-sensitive**. More than half the consumers surveyed indicated that they had become more focused on savings and more price-oriented compared to the year before, as a result of the economic uncertainty instigated by the pandemic. This price sensitivity is the main reason why consumers are expected to either maintain or increase their shopping online. Quality is often referred to as the next most important feature influencing why consumers buy online. For example, when making fashion purchases, 47% of consumers indicated that price was the primary factor, followed by quality at 32% and convenience at 30%. This type of ranking was similar across different product categories (PwC, 2021a).

The shift toward online platforms has also caused a **major disruption to how consumers approach brand loyalty**. Supply chain delays and shortages early in the pandemic forced many consumers to seek out alternative brands. According to a McKinsey (2021b) consumer survey in the United States, the pandemic prompted 36% of consumers to try a new product brand, and of those who experimented, close to 75% expect to continue to incorporate the newer brands into their purchases (McKinsey, 2021b). An eMarketer (2021a) report on consumer-packaged goods had even more drastic numbers. Within the second quarter of 2021, 80% of the consumers surveyed in the United States had tried a new brand, and nearly 50% of them expected to stick with the new brand rather than return to the old one (eMarketer, 2021a).

The **shock to brand loyalty is likely to persist** considering the increased use of online platforms. As consumers become more accustomed to shopping online, they become more comfortable searching across search engines, websites, and social media platforms. Companies are going to have a harder time retaining loyal customers and will therefore have to cater to higher consumer expectations if they want to retain loyalty (Forbes, 2021).

Consumers are **prioritizing purchasing products from independent local businesses** and retailers, according to the PwC June 2021 consumer survey. Fifty-one percent of surveyed

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<sup>11</sup> The PwC consumer report surveyed 9,370 people in 26 territories or countries.

respondents reported that they are shopping from local retailers, which represented an increase of 6% from the prior survey (PwC, 2021a).

In terms of expectations, consumers are **increasingly prioritizing convenience**. Consumers are expecting products purchased online to be delivered faster and cheaper and to be easier to return and pay for, among other things. They are also expecting an omni- and multichannel experience in which they can access the brand across multiple channels—from in-store to online marketplaces, direct brand websites, and social commerce.<sup>12</sup> They are expecting easy navigation, relevant research, and the ability to refine results. Consumers value the convenience of being able to purchase products and services twenty-four hours a day, seven days a week using smartphones or laptops (ADEO, 2020).

The rise of the omnichannel experience means that consumers no longer expect a demarcated experience between the physical and online shopping worlds. They are therefore **more at ease in undertaking a splintered shopping journey**, in which the place they learn about the product is not necessarily the same as where they buy the product. According to an IBM and NRF (2022) global consumer survey,<sup>13</sup> only 38% of the consumers relied on in-store experiences to learn about a product. The more popular means was to research online (42%). In comparison, 45% of those surveyed ended up buying the products in stores as opposed to 28% online (IBM and NRF, 2022).

**Consumers prefer to research online prior to buying the product**, and now they have various options to do so, including using search engines; searching on direct brand, manufacturer, or wholesale websites; and searching for the product through an online marketplace. According to a Bloomreach and Forrester (2021) survey,<sup>14</sup> 75% of consumers prefer researching via online marketplaces, as opposed to 55% via online resellers' direct websites, and 52% prefer to research via the brand's direct website. According to the same survey, for those consumers who purchased their products online, 80% did so through an online marketplace, 52% through online resellers' direct websites, and 46% through the brand's direct website (Bloomreach and Forrester, 2021). Should the consumer decide to buy the product in a store, online research still plays a critical role in influencing what they end up buying there. Twenty-four percent of consumers said they researched products through an online marketplace, 47% compared the store prices to online competitors, and 39% searched for similar and familiar products online (Bloomreach and Forrester, 2021).

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<sup>12</sup> "Omnichannel" refers to individual customer touch points over a variety of channels that seamlessly connect, allowing customers to continue the shopping experience on another channel from where they began it.

<sup>13</sup> Global survey of 19,100 respondents across 28 countries.

<sup>14</sup> This survey gathered data from 625 US, UK, and German consumers and B2B customers who make online purchases.



Consumers are also **increasingly prioritizing personalization**. According to a Bazaarvoice<sup>15</sup> (2021) report, more than 50% of its shoppers indicated that a personalized online experience is important. They expect targeted ads and discounts, clear pricing, product images, information, and availability. They often leverage value ratings and the advice of peer networks, most notably through social commerce and influencer-led platforms. These features are critical for driving purchases. Given that an increasing number of consumers own smart voice agents such as Siri and Alexa, there is also an expectation that voice commerce will play an increasingly important role in the future. Transactions expected to be not only easier and faster through voice processing, but also more targeted (Statista 2020, Bloomreach and Forrester, 2021).

Although consumers are prioritizing personalization, they have also **become more protective of their personal data**. According to the PwC December 2021 Consumer Report, 60% of consumers surveyed in the second half of 2021 indicated that data privacy is a critical factor that influences whether they trust the brand they purchase. This factor has a higher impact on trust than any other factor, including compliance with environmental, social, and governance (ESG) criteria. Therefore, while consumers expect benefits related to personalization, including discounts and targeted ads, they expect the brand to fulfil such needs while ensuring data privacy and protection (PwC, 2021b).

**Key insight:** More consumers are not only purchasing products online, they are also buying a greater diversity of products. The propensity to shop online is expected to be an enduring habit for many new digital consumers. As a consequence of the economic uncertainty brought on by the COVID-19 pandemic, consumers are expected to be more selective with how they spend their money. They will be spending more time researching options and shopping “smart.” They will also be expecting more from companies in terms of social values (see next section). Companies that are unable to meet the demand for convenience and personalization risk losing consumers, given the tendency toward lower brand loyalty in the online world.

### *1.6 E-commerce Main Product Categories*

Research carried out by Nielsen (2018) before the pandemic revealed that the product categories mostly sold through e-commerce retail worldwide were **fashion, electronics, travel, and fast-moving consumer goods (FMCG)**.<sup>16</sup> Between 2017 and 2018, FMCG, such as packaged grocery food, medicines, and fresh groceries, were experiencing increasing trends in online sales. Consumers (61% of survey respondents) also reported that they were buying entertainment more often online than in-store (Nielsen, 2018). The increase in e-commerce retail sales during the

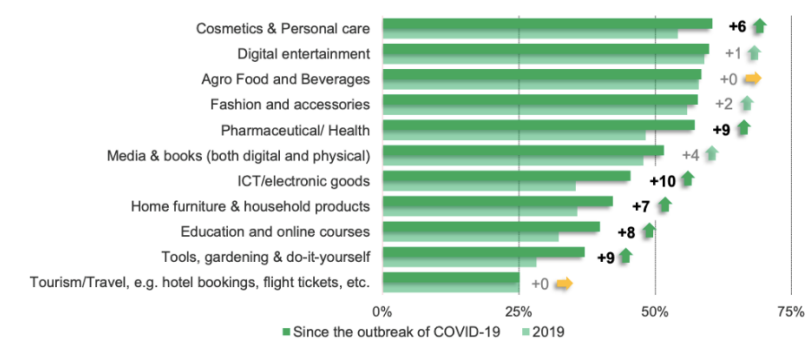
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<sup>15</sup> Bazaarvoice is a technology company focusing on consumer-related software and insights.

<sup>16</sup> FMCG are goods that are sold quickly and at a relatively small price—for example, packaged foods, beverages, toiletries, candies, cosmetics, over-the-counter drugs, dry goods, and other consumables (Corporate Finance Institute, n.d.). The Nielsen report examines the changing FMCG landscape in 34 markets.

COVID-19 pandemic was also observed in **nearly all retail categories** as illustrated by several studies.

For example, the UNCTAD and Netcomm Suisse (2020) study revealed that the number of online shoppers increased in the following categories: cosmetics and personal care (6%), digital entertainment (1%), fashion and accessories (2%), pharmaceutical/health (9%), media and books (4%), information and communications technology (ICT) and electronics (10%), home furniture and household products (7%), education and online courses (8%), and tools, gardening and do-it-yourself (DIY) products (9%). Only in the categories of agro-food and beverages and tourism and travel was there no increase (or a decrease) in the percentage of online shoppers compared to 2019 figures; however, they still appear among the product categories that are mainly sold via online channels.



**Figure 9. Increase of online shoppers' purchases due to COVID-19 by product category** (% of active online shoppers conducting at least one online purchase every 2 months)<sup>17</sup>

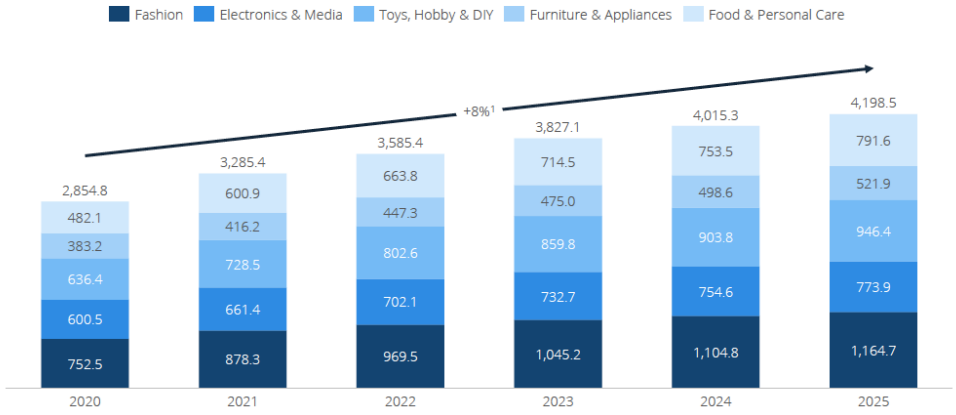
Source: UNCTAD and Netcomm Suisse (2020)

Along the same lines, Statista (2021b) indicates that e-commerce sales increased by 19% due to COVID-19 in 2020 in a number of product categories, with food and personal care experiencing the highest growth, followed by toys, hobby, and DIY, and electronics and media. The category with the smallest growth was fashion (14% increase), which could be attributed to the fact that fashion was already the most popular product category even before the pandemic. Figure 10 shows Statista (2021b) growth forecasts in global e-commerce revenues for 2020-2025 for different product categories. Fashion is expected to be the category with the highest volume in e-commerce sales followed by toys, hobby, and DIY, and electronics and media.

<sup>17</sup> This figure shows aggregated data from respondents from China, Germany, Italy, the Republic of Korea, the Russian Federation, South Africa, Switzerland, and Turkey.



Global eCommerce revenue forecast in billion US\$



**Figure 10. Global e-commerce revenue forecast in billion \$US**

Source: Statista (2021b)

Turning to regional differences, in the European Union, the most popular purchases online—by proportion of respondents who bought goods or services during the three months prior to the survey—were clothes (including sport clothing), with more than 70% of respondents buying these products, followed by shoes and accessories (68%), deliveries from restaurants, fast-food chains, and catering services (31%), furniture, home accessories, and gardening products (29%), and cosmetics, beauty, and wellness products (27%) (Eurostat, 2021).

In the United States, the product categories that generated larger retail sales in 2021 were computers and consumer electronics; apparel and accessories; furniture and home furnishings; health and personal care products; toys and baby products; vehicles; books, music and videos; food and beverages; and office equipment and supplies (see Table 2). The product categories that had a higher percentage of increase in sales via e-commerce channels were apparel and accessories, health and personal care products, and food and beverage (eMarketer, 2021b).

**US Retail Ecommerce Sales, by Product Category, 2021**  
billions, % change, % of total retail ecommerce sales and % of total retail sales

	Retail ecommerce sales	% change	% of total retail ecommerce sales	% of total retail sales
Computer and consumer electronics	\$194.94	9.1%	21.5%	53.2%
Apparel and accessories	\$183.52	18.9%	20.2%	37.9%
Furniture and home furnishings	\$105.93	12.3%	11.7%	31.3%
Health and personal care and beauty	\$85.67	16.1%	9.4%	14.9%
—Pet products	\$16.28	7.1%	1.8%	30.1%
—Cosmetics and beauty	\$12.98	9.7%	1.4%	17.8%
Toys and hobby	\$64.74	13.1%	7.1%	45.4%
Auto and parts	\$62.73	13.5%	6.9%	4.8%
Books/music/video	\$53.85	12.5%	5.9%	69.1%
Food and beverage	\$53.42	18.1%	5.9%	4.8%
Office equipment and supplies	\$18.53	8.5%	2.0%	39.9%
Other	\$85.42	13.4%	9.4%	6.1%
<b>Total</b>	<b>\$908.73</b>	<b>13.7%</b>	<b>100.0%</b>	<b>15.5%</b>

Note: includes products or services ordered using the internet via any device, regardless of the method of payment or fulfillment; excludes travel and event tickets, payments (such as bill pay, taxes, or money transfers), food services and drinking place sales, gambling and other vice goods sales  
Source: eMarketer, Feb 2021

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**Table 2. U.S. retail e-commerce sales by product category (2021)**

Source: eMarketer (2021b)

The UNCTAD and Netcomm Suisse (2020) study examined consumer behaviour in Brazil, in particular the percentage increase of active online shoppers who conducted at least one completed purchase since the beginning of the COVID-19 pandemic. The study found that the most prominent product categories were food and beverages (with a 54% increase), fashion and accessories (50%), home furniture and household products (49%), cosmetics and personal care (44%), consumer electronics and ICT products (39%), pharmaceutical and healthcare products (31%), and travel and tourism (6%).

In China, the world's largest e-commerce market, where more than 70% of consumers shop both online and offline, most online consumers buy clothes (36.5%) followed by cosmetics (36%) and food (36%). Cosmetics is of particular interest because it is also one of the most lucrative industries in the country (GMA E-commerce Agency, 2021). Moreover, a product category that has recently experienced exponential growth (between 20% and 70% over the last five years) is that of video games and media (McKinsey, 2021c).

In Japan, the most popular e-commerce categories are fashion (particularly athleisure), cosmetics (which is the fastest-growing Japanese e-commerce market), supplements (such as probiotics, vitamin C, functional foods, and sports nutrition), sports and outdoors, and electronics (Rakuten, 2021).

While online consumption is expected to increase overall, growth is expected to be inconsistent across product categories and countries. For instance, the US, the UK, and France experienced some growth in all product categories listed in Figure 11, while countries such as Germany, Japan, and China experienced negative growth in some products purchased online (McKinsey, 2020).



**Figure 11. Expected growth of e-commerce sales by product category and by country**  
Source: McKinsey (2020)

**Key insight:** It is important to consider regional differences when examining the main product categories sold through e-commerce. However, some product categories repeatedly appear as the most sold across regions (before and during the pandemic). These are: fashion products and accessories; food and beverages; electronics and media; home furniture and household appliances; cosmetics and personal care; toys, hobby, and DIY; and pharmaceutical and healthcare.

### 1.7 E-commerce Main Players

In order to sell their products online, sellers have various options to reach consumers. The most popular is the use of **online marketplaces**. These marketplaces are usually managed by third-party companies whose main model is to connect buyers and sellers for a fee. As in the brick-and-mortar world, some retailers sell third-party brands while also increasingly selling similar products under their own brands. Examples of well-known online marketplaces include Amazon (which is an example of a retailer that sells its own branded products), Etsy, and eBay.

Another option is to use an **e-commerce platform**. These platforms essentially function as a website developer for brands, enabling them to establish customized shops in the virtual world and directly reach their consumers. Unlike online marketplaces, it is the full responsibility of the

seller to drive consumer traffic. Examples include BigCommerce, Shopify, and Wix. Large retailers and well-established brands usually do not require the services of e-commerce platforms.

To optimize their online consumer outreach, sellers will often utilize multiple channels. For example, they can target online marketplaces while setting up their own websites.

According to Statista (2020), 57% of online sales were facilitated through online marketplaces in 2019. Given their importance, this section focuses on presenting data on online marketplaces. It does not cover direct seller websites or e-commerce platforms. In addition, the analysis only focuses on marketplaces that facilitate B2C transactions, primarily physical products rather than digital downloads or services.

The world’s most popular online marketplaces as measured by visits per month, according to Webretailer (2021), are listed in Table 3.<sup>18</sup>

**Table 3: Top 20 online marketplaces in terms of visits per month (Webretailer, 2021)**

#	Type*	Name	Region or country	Product category	Visits per month
1	Marketplace and vendor	Amazon	Global	General	5.2 B
2	Marketplace	eBay	Global	General	1.7 B
3	Marketplace	Mercado Libre	Latin America	General	683.9 M
4	Marketplace	Rakuten	Japan	General	575.8 M
5	Marketplace	AliExpress	Global	General	534.4 M
6	Marketplace	Shopee	Southeast Asia	General	457.9 M
7	Marketplace and vendor	Walmart.com	United States	General	410.3 M
8	Marketplace	Etsy	Global	Arts, crafts and gifts	391.8 M
9	Marketplace	Taobao	China	General	329.4 M
10	Marketplace	Pinduoduo	China	General	241.5 M
11	Marketplace	Trendyol	Turkey	General	206.2 M
12	Marketplace	Allegro	Poland	General	190.2 M
13	Marketplace and vendor	Target.com	United States	General	182.2 M
14	Marketplace and vendor	Wayfair	North America, Europe	Homewares	179.1 M
15	Marketplace and vendor	JD.com	China	General	178.8 M

<sup>18</sup> The information collated does not include companies specializing in B2B transactions, services, and used-product transactions from C2B.

16	Marketplace	Flipkart	India	General	176.9 M
17	Marketplace and vendor	Wildberries	Russia	General	154.5 M
18	Marketplace	Tokopedia	Indonesia	General	140.1 M
19	Marketplace and vendor	Lazada	Southeast Asia	General	137.6 M
20	Marketplace and vendor	Zalando	Europe	Fashion	134.8 M

\*“Vendor” indicates that a company not only functions as an online marketplace but also sells products under its own brand.

Table 3 shows that 60% of the companies mainly operate as online marketplaces, with the remaining functioning as both online marketplaces and vendors. Most of the marketplaces are general-purpose in that they sell a wide range of products, with only three of the top twenty specializing in specific product categories. Four of the companies in the top twenty list are global brands (i.e., companies that sell worldwide or that target five or more countries across three or more geographic regions), while the remaining marketplaces are prominent on a regional or national basis. While the two most popular marketplaces, Amazon and eBay, are global brands, the third most popular is MercadoLibre, an online marketplace that is prominent in the Latin American region. Even though a wide range of regions are represented (with the exception of Africa) in the top twenty list, a substantial number of marketplaces are focused on the Asian region (Webretailer, 2021).

Examining trends across regions (see Table 4) shows some key differences. Europe and North America tend to have the highest number of online marketplaces (>50), as well as the highest number of visits on a monthly basis. The other two regions with marketplaces generating more than a billion monthly visits are East Asia (notably China) and Latin America. These regions generate substantial user traffic with fewer marketplaces, in comparison to the North American and European regions. Africa, meanwhile, only generated a little more than 50 million unique visits per month to the six online marketplaces that had reached the threshold of one million visits (Webretailer, 2021). For information on the most popular marketplaces in select countries and regions, please see Annex 1.

**Table 4: Top online marketplaces for user traffic by region (Webretailer, 2021)**

#	Region	Number of marketplaces*	Visits per month
1	North America	55	4.4 B
2	Europe	68	3.7 B
3	East Asia	17	2.3 B
4	Latin America	19	1.3 B
5	Southeast Asia	13	710.0 M
6	Southern Asia	10	530.5 M

7	Middle East	7	438.1 M
8	Australasia	8	137.0 M
9	Africa	6	52.3 M
10	Central Asia	4	14.5 M

\*Only the marketplaces that generate more than a million monthly visits are taken into account.

Another way to identify the world's most popular online marketplaces is to look at their gross merchandise value (GMV), which refers to the value of sales of an online marketplace over a period of time, typically measured quarterly or yearly. According to Statista (2021a), in 2020 the Chinese e-retailer Taobao was the most popular online marketplace with approximately 609 billion U.S. dollars GMV, followed by Tmall with 593 billion dollars GMV. The U.S.-based Amazon ranked third, with 475 billion dollars GMV (Statista, 2021a). Table 4 illustrates the market share of leading e-retailers worldwide based on GMV in 2020.

**Table 5: E-commerce market share of leading e-retailers worldwide in 2020 based on GMV (source Statista, 2021a)**

#	E-retailer	Market share
1	Taobao, Alibaba, and Tmall (Alibaba Group)	25%
2	Amazon	13%
3	JD.com	9%
4	Pinduoduo	6%
5	eBay	2%
6	Combined share of Suning.com, Rakuten, Apple, Walmart, Vip.com, and Shopee 6%	6%
7	Others	39%

**Key insight:** The top performing online marketplaces differ across regions and often comprise of a mix of global, regional, and national-based brands. When developing sustainability-focused features and policies, it may be useful to take advantage of the global reach of certain companies and to focus on coordination and adaptation policy efforts in order to foster the engagement of regional- and national-based brands.

## Chapter 2. The Linkages Between E-Commerce and Sustainability

### *2.1 E-Commerce and its Impacts on Sustainability*

#### *2.1.1 Sustainability Impact of E-Commerce Operations*

After three decades of e-commerce contributing to the world economy, its overall impact on sustainability is the subject of discussion and ongoing research. The common understanding among development institutions, economists, and scholars is that e-commerce has the potential to help advance sustainable development outcomes (UNCTAD, 2021c).

In its report *COVID-19 and E-Commerce: A Global Review*, UNCTAD considers that e-commerce contributes positively to the global economy and societies. It states that e-commerce “is increasingly understood by governments and development partners to provide new ways of facilitating the Sustainable Development Goals (SDGs), since innovations in technology and the modalities of commerce are creating opportunities for companies of all sizes to engage in domestic and international trade through the adaptation of supply chains, lower trade costs and extended market reach” (UNCTAD, 2021a). Nevertheless, in its latest B2C E-commerce Index report (2020a), UNCTAD also acknowledges the need to address the persistent gaps in e-commerce readiness between developed and transition economies and developing countries, particularly in Africa and LDCs, to ensure that the sustainable development gains derived from e-commerce are equitable and benefit all societies (UNCTAD, 2020a).

A variety of scholars have studied the sustainable development benefits of e-commerce and have found mixed results. From an **economic perspective**, e-commerce can enable companies of all sizes to engage or expand their domestic and international trade at lower costs. It can open up markets, new clients, and the possibility to develop new products and services to meet consumer needs and preferences. E-commerce can also facilitate direct relationships between small and medium-sized enterprises and consumers, thus reducing the number of intermediaries and increasing value retention for the enterprise.

Through e-commerce, companies can also explore ways to offer more accessible, affordable, and sustainable retail practices and target a larger market (Ecommerce Europe, 2021, p. 3). Nevertheless, the literature also points out that e-commerce may facilitate anticompetitive behaviour that undermines the development and growth of other online businesses.

From a **social perspective**, e-commerce appears to be contributing to job creation and has improved access to goods and services, since the widespread use of mobile phones enables consumers to have access to a broad variety of suppliers. However, the job creation benefits are not completely clear. For instance, some resources in the literature indicate that e-commerce has impacted traditional retail employment and that the jobs generated by e-commerce businesses are not absorbing all the jobs lost.



Americo and Veronico (2018) analyzed traditional retail employment in 35 countries in Europe and found that e-commerce platforms' turnover had a negative effect on employment in the retail industry. This could be because online retailers can sell more products with fewer workers than traditional retail (*New York Times*, 2017). Nevertheless, another study by Wyman (2021), also conducted in Europe, suggests that overall retail is gaining jobs in net terms and that e-commerce is contributing to this trend. Despite fewer retail outlets, the total store surface area remained stable, helping to maintain employment levels (Wyman, 2021). This study also found that online and offline retail have both created a similar number of jobs in the last decade at a comparable average cost per full-time employee. It also indicates that at the city level, “the numbers of offline retail jobs and of outlets are primarily influenced by demographics and wealth, and not e-commerce penetration” (Wyman, 2021).

From an **environmental perspective**, e-commerce has both positive and negative effects, and it is not possible to clearly define whether the positive effects outweigh the negative effects, or vice versa.<sup>19</sup> Research suggests that e-commerce can have positive effects on the environment in a number of ways. E-commerce can **reduce energy consumption** since retailers selling online do not need physical locations, thereby reducing the energy consumed in the construction and maintenance of the physical store or building considerably, and thus lowering the **CO<sub>2</sub> emissions** associated with it (Tiwari and Singh, 2011, p.203; Wyman, 2021).

There are also energy savings and lower carbon emissions resulting from reduced customer **transportation** to a physical store. According to Weber and Matthews (2008), customer transportation accounts for 65% of total emissions when a product is purchased at a retail store, which is significantly greater than transportation emissions in online shopping due to their optimized delivery methods. Jusoh and Ling (2012) also report that transportation-related emissions of offline shopping alone are significantly higher than the emissions of online shopping's entire supply chain. E-commerce may further reduce the carbon footprint related to transportation and energy consumption by allowing employees to work from home, which reduces the number of commuters on the road (Tiwari and Singh, 2011, p. 204). Overall, there seems to be an understanding that e-commerce retail may consume less energy than the traditional retail shopping model, with studies suggesting that it can be about 35% less energy-intensive (Carnegie Mellon University, n.d.).

In addition to decreased energy consumption and related reductions in carbon emissions, studies suggest that e-commerce can also have positive environmental impacts through a reduced use of

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<sup>19</sup> Studies have also classified the environmental effects of e-commerce in three levels. According to Tiwari and Singh (2011), e-commerce has primary secondary, and tertiary effects. Primary effects are those “mainly caused by various infrastructures as communication infrastructures, computer infrastructures and Internet infrastructures.” Secondary effects “come from diversified actions as shown in warehousing, inventories, transportation, packaging.” Tertiary effects refer to “the adjustment of the consumption pattern, new habits in people, and so on” (Tiwari and Singh, 2011, p. 203).

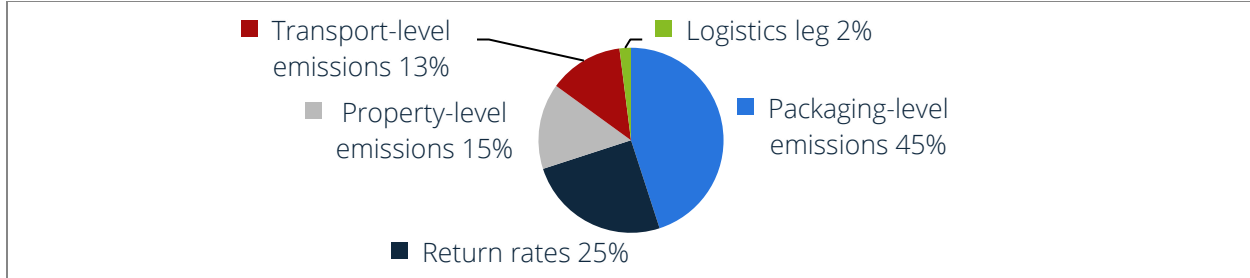


paper-based documents, including printed brochures, bills, and receipts, which are common in an offline environment. This reduces **paper waste** and provides cross-cutting financial and logistical services to consumers and suppliers alike. According to Sustainable Earth (2012) and Tiwari and Singh (2011), paperless transactions in e-commerce, coupled with electronic marketing material, can reduce the environmental impacts caused by deforestation when compared to offline shopping, which is much more paper-intensive.

Nevertheless, a wide range of studies have also documented the negative environmental impacts of e-commerce. Despite contributing to reduced energy consumption and lower carbon emissions associated with customer and employee transportation and the absence of a physical store, e-commerce operations require more **energy-intensive** computers (Tiwari and Singh, 2011, p. 204) to process data that needs to be stored, processed, and retrieved.

In addition, faster delivery requirements tend to create a situation in which trucks are moving half-empty, reducing energy efficiency. E-commerce also tends to favour faster transportation modes, which can increase fuel consumption exponentially and lead to more **transportation-related emissions**. When delivery logistics favour trucks instead of boats or rail, energy consumption increases considerably. Moving the same package by air again increases the energy use dramatically (Tiwari and Singh, 2011, p. 204). According to the World Economic Forum (2020), the demand for urban last-mile delivery of online shopping is expected to grow by 78% by 2030, leading to 36% more delivery vehicles in 100 cities around the world, which will cause environmental-related emissions to rise by nearly one-third. Furthermore, transportation emissions also increase when products sold online come from different centres around the world (Kavilanz, 2020) and when customers return items. For instance, it is estimated that customers return around 17 billion items every year, accounting for approximately 4.7 million metric tons of CO<sub>2</sub> (Forbes, 2019). Statista (2021c) estimates that 25% of total emissions associated with e-commerce in 2020 are related to the return of goods by customers.

**Packaging** is also a major cause of environmental concern for e-commerce. E-commerce generates more solid waste, since the packaging for goods shipped to customers (or returned by customers) typically consists of an extra layer of cardboard or plastic wrap to protect the product during shipment. All this can generate large amounts of packing waste. For instance, it is estimated that in 2020, pollution derived from Amazon shipments increased by 29% and generated 271 million kilograms of waste from plastic boxes and bags (Baillargeon, 2021). According to Statista (2021c), in 2020 packaging was the main source of carbon emissions associated with e-commerce, accounting for 45% of total emissions, followed by emissions derived from customer returns.



**Figure. 12. E-commerce emissions breakdown in 2020, by source**

Source: Statista (2021c)

Finally, e-commerce and web-based marketing may encourage **over- and hyper-consumption**, multiplying the negative environmental effects associated with e-commerce illustrated above. Indeed, the internet has already dramatically increased the mass production of various products on a global scale. The ease of online shopping causes people to buy more (Tiwari and Singh, 2011, p. 204) and in many cases these are not regular purchases. Fook and McNeil (2020) define “impulse buying” as a purchase considered as “a departure from regular shopping practice,” whereby “a consumer experiences a sudden, often powerful and persistent urge to buy,” which may lead to “unintended, immediate or spontaneous and unreflective purchases.” They further estimate that “impulse buying” accounts for 40% of all online expenditures, which can represent up to \$5,400 per year of expenses in Western households.

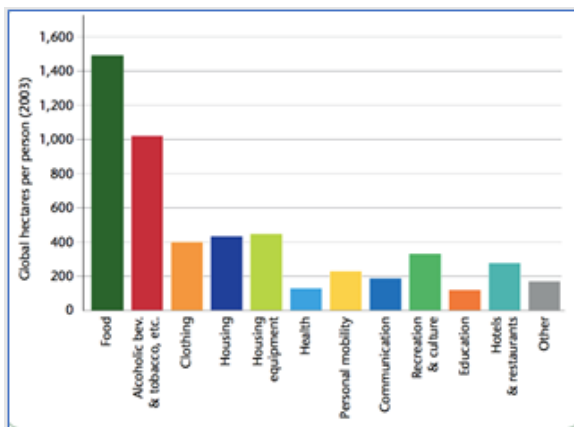
The overall economic, social, and environmental impact of e-commerce requires further research and analysis grounded in primary data collection with control samples to properly examine its impacts and trade-offs compared to an offline environment. Research suggests that the impacts of e-commerce are mixed, and it is not yet clear whether the positive effects outweigh the negative effects or vice versa. There are indications, however, that of the three dimensions of sustainability, e-commerce’s impact on the environmental dimension may be associated with more concerns.

**Key insight:** The most prominent arguments for the positive environmental impacts of e-commerce are the following. First, it reduces the release of large amounts of greenhouse gases globally due to reduced energy consumption related to the absence of constructing and maintaining buildings, warehouses, and physical stores. Second, e-commerce considerably reduces customer transportation emissions, with research suggesting that overall transportation emissions are lower with delivery vans than with millions of consumers driving to brick-and-mortar stores. Third, e-commerce is paperless, thus reducing paper waste. Conversely, the major negative environmental impacts of e-commerce revolve around the need to manufacture more energy-intensive computers and data centres, increased transportation emissions due to urban last-mile delivery services, products coming from different distribution centres in the world, and products being returned by customers. Finally, e-commerce generates increased amounts of packaging waste and can encourage overconsumption, multiplying the negative effects associated with e-commerce.

### 2.1.2 Sustainability Impact of Products Sold Through E-Commerce

The environmental impact of e-commerce goes beyond its operations. According to a recent handbook developed by the Environmental Defense Fund (2020) entitled *The Roadmap to Sustainable E-commerce*, concerns around the environmental impact of products sold through e-commerce channels tend to be narrowly focused on the environmental management related to e-commerce operations, including packaging waste and transportation emissions. However, the report argues that these factors are insufficient for fully understanding the environmental impact of products sold through e-commerce, and stresses that e-commerce companies should focus on reducing the environmental impact of the products they sell so that they are more eco-friendly (EDF, 2020). In other words, when evaluating and managing the social, environmental, and economic impacts of e-commerce, attention should be paid not only to sustainably managing the e-commerce operations per se, but also to addressing the life cycle impacts that are generated by the products sold online.

A report from the World Wildlife Fund (2006) estimated that food products have the most ecological footprint (i.e., impacts on forests, cropland, pasture, and oceans) per \$1 million spent, when considering environmental impacts throughout the life cycle of products (i.e., from land use to waste). Food products were followed by housing equipment, housing construction and maintenance, and clothing (WWF, 2006) (See Figure 13).



**Figure 13. Ecological footprint per \$1 million spent by consumers**

Source: World Wildlife Fund (2006). *One Planet Global Business Evidence Base*.

A more recent study conducted on consumer footprints in the EU found similar results, with food as the product category that has the greater environmental impact followed by housing and mobility. The study also found that overall, household goods and appliances had less environmental impact, but some products stand out for their higher footprint due to the intensity of their consumption. These include paper products, detergents, furniture, clothes, dishwashers, washing machines, refrigerators, lighting, and TV screens (Sala and Castellani, 2019).

Similarly, an EU Environmental Impact of Products (EIPRO) study by Tukker et al. (2006) found that the “food and drink, tobacco, and narcotics” product category is responsible for 20 to 30% of the various environmental impacts investigated (e.g., abiotic depletion, global warming, photochemical oxidation, acidification, eutrophication, human toxicity potential, and ecotoxicity). Meat and meat products had the greatest environmental impact overall within the food product category, followed by dairy products. This study also showed that the product categories of food, private transportation, and housing together account for 70 to 80% of total household consumption impact and represent around 60% of total household expenditure. More recent data confirms that these three categories are the most significant expending items for households in Europe as well as for OECD’s countries (OECD, 2021a). Within the private transportation category, the use of private cars had the greatest environmental impact. Within the housing category, energy use for household heating, construction, and structural repairs, and the use of electric appliances (e.g., fridges, washing machines, stoves) had the greatest impact. This study suggested that clothing ranked fourth, accounting between 2 and 10% of total environmental impact.

When analyzing specific environmental impact categories, Tukker and Jansen (2006) found that private vehicles, the consumption of meat and dairy products, and the use of electric appliances are the product categories with the highest level of greenhouse gas (GHG) emissions. Likewise, Hertwich and Peters (2009) find that food contributes to just over a quarter of household GHG emissions (27%) (excluding land use impacts), followed by housing (26%) (which includes the combustion of fuel for heating and cooking), mobility (20%), manufactured goods (7%), services (9%), and clothing (4%).

Regarding the environmental impact on water consumption, food and beverages represent the most impactful product category, as agricultural products have a very significant water footprint compared to other categories (Hoekstra and Chapagain, 2008; UNEP, 2010). With regards to eutrophication, which is a leading cause of impairment of many freshwater and coastal marine ecosystems worldwide, food products account for over 50%, as reported in the EIPRO study (Tukker et al., 2006).

The next section elaborates on the features of product sustainability and the importance of communicating product sustainability information to reduce the overall environmental impact of e-commerce.

**Key insight:** When assessing the sustainability impacts of e-commerce, attention should be paid not only to e-commerce operations per se, but also to addressing the life cycle impacts that are generated by products sold online. Some product categories stand out for having greater negative environmental impact. These include **food and beverage products, housing, mobility-related products, household appliances, clothes, electronics, and personal care and hygiene products**. However, this list can vary depending on specific environmental categories. For example, private vehicles contribute considerably to GHG emissions, while food products and beverages have an important impact on water depletion. As discussed in section 1.5, most of these

product categories with the highest environmental impact are among those most sold through e-commerce channels, including food and beverages, fashion, household equipment and furniture, household appliances, and electronics. Thus, there is untapped potential for reducing the impact of products sold through e-commerce by offering more eco-friendly choices and incentivizing consumers who might be willing to select these options in e-commerce channels.

## *2.2 Product Sustainability Information*

### *2.2.1 The Concept of Product Sustainability Information*

Every product that we consume has a number of tangible and intangible features that distinguish it from other products. From a traditional marketing perspective, these can include core product characteristics, qualities, benefits, and utilities. Other features also accompany the product, including price, branding, packaging, labelling, and accompanying services (e.g., guarantees, repair, and delivery) (Jaidee, n.d.). From a sustainability perspective, product-related features also include attributes concerning the social, economic, and environmental characteristics of the product, which are called “product sustainability attributes.” These can refer to intrinsic features of the product—e.g., the presence of genetically modified organisms, product longevity, who has produced it—but also to the economic, social, and environmental impacts generated by the product throughout its life cycle. This can include the amount of GHG emissions resulting from the product’s manufacture, the amount of waste its production has generated, the price paid to producers in the country of origin, and the labour rights of workers involved in processing the product. The most important environmental impacts of a product throughout its life cycle are called “hotspots,” and these can be identified through a hotspots analysis approach.

A hotspots analysis approach is defined by (UNEP, 2017), as “identifying the most impactful or relevant stages, activities, material and energy flows and impacts within a product’s life cycle. The identification of these ‘hotspots’ requires quantitative or qualitative information.” UNEP (2017) stresses that it is of importance to identify first the hotspots of a certain product, and then focus on data collection, measurement, and communication of product sustainability information in those hotspots. For food product categories, for example, the hotspots are often related to land use change and production methods (e.g., deforestation practices that liberate GHG emissions, or the use of fertilizers that can cause eutrophication and acidity).

Every product sold, whether online or offline, carries a “sustainability mark” that can be communicated through the product’s sustainability information. According to Luchs et al. (2010), sustainable products are defined as those “with positive social and/or environmental attributes.”

Our research suggests that there is no common, globally accepted definition of product sustainability information. The Guidelines for Providing Product Sustainability Information: Global guidance on making effective environmental, social and economic claims, to empower and enable consumer choice (2017) by UNEP defines **product sustainability information** as follows:

Claims that cover one or multiple sustainability dimensions of a product (economic, environmental, social). [...] Information can be provided directly on the package or point of sale signs or posters, online, via social media, TV or radio adverts, on receipts, or in instruction manuals. The information may have a single-issue (e.g., carbon footprint) or multi-issue approach (e.g., environmental footprint), and can provide a holistic perspective considering the impacts of every stage of the product's life cycle, from raw material extraction and product manufacturing, through its use and disposal ("a life cycle approach"). (p. 14)

Product sustainability information should enable consumers to distinguish between product sustainability and brand (or organizational) sustainability, and to not transfer brand-related claims to the product (unless this is substantiated) or vice versa. (p.16)

The German Environmental Agency (2020) provides another interesting definition, solely focused on the environmental dimension of product sustainability information. It says that **product environmental information**

sheds light on the environmentally relevant characteristics of products (both goods and services) across individual or multiple phases of the product life cycle. It describes the environmental impacts of production, distribution, use, disposal and component parts, enabling product comparison based on environmental qualities. This kind of information can influence consumer choices, product portfolios and product development, thereby having an environmental impact. It also supports product transparency and sensitizes consumers to environmental aspects. Product information is therefore an important prerequisite for more sustainable consumption. (p. 7)

Analysis of these two definitions suggests that several elements are embedded in the concept of product sustainability information. These include the attributes and characteristics of a product with regards to the economic, social, and environmental dimensions of sustainability as well as the impact generated throughout its life cycle. Both definitions highlight that consumers can use product sustainability information to inform their choices, which can in turn influence product design and development and thus contribute to advancing sustainability. The definition provided by the German Environmental Agency also emphasizes that product sustainability information helps to enhance transparency concerning the product and contributes toward educating consumers.

For the purpose of this report, we have produced a short definition that communicates the essence of product sustainability information:

Product sustainability information is substantiated information related to the attributes (i.e., origin, production methods, characteristics), or main impacts of a



product throughout its life cycle<sup>20</sup>—or “hotspots”—concerning the economic, social, and environmental dimensions of sustainability. Product sustainability information can be provided to consumers through different channels, such as directly on the packaging of the product, at a point of sale, online, via social media, TV, or radio adverts, in instruction manuals, and through other forms of marketing.

E-commerce platforms are increasingly engaged in communicating product sustainability information to enhance transparency for consumers, support more environmentally conscious purchases, and push businesses that sell through their platforms to adopt more sustainable practices (UNEP, 2022a). The next subsection elaborates on the different methods that are available to measure, assess, and communicate product sustainability information.

### *2.2.2 Existing Methods and Tools to Communicate Product Sustainability Information*

According to UNEP (2017), there are a large variety of methods and tools that provide product sustainability information. These methods are used widely for different purposes and by different actors such as consumers, consumer organizations, non-governmental organizations, labelling organizations, companies, retailers, governments, and academia. UNEP classifies these methods and tools into three groups: those that quantify information related to product sustainability attributes or impact; those that assess this information; and those that communicate it to end users. A list and short definitions of the most important methods are presented below (UNEP, 2015).

1. **Methods and tools used to quantify product sustainability information:** Various databases and directories collect and provide mainly secondary data related to the environmental impact of several activities. For instance, databases that illustrate an industry’s average emissions data from producing steel, transporting a kilogram of a material or product, or producing heat and electricity. An example is the ecoinvent Database (ecoinvent Association, n.d.), which contains a number of datasets across sectors and geographies to enable users to understand the environmental impact of goods and services.
2. **Methods and tools used to assess product sustainability information:** A range of assessments, calculators, and costing analyses use data to provide an evaluation of the environmental impact of a product. Examples include:
  - Environmentally-extended input/output assessments: Methods that estimate the economic value of the materials and resources used for producing goods and services throughout their life cycle, and the resulting environmental impact (e.g.,

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<sup>20</sup> The life cycle refers to how and by whom the product has been produced, including the extraction of its raw materials, and how the product is processed, manufactured, packaged, distributed, used, consumed, or disposed of (modified from OECD (2011)).

Economy Map, Open-IO). The application of this type of assessment can help communicate the environmental impact of a product per dollar of economic output (Kitzes, 2013).

- **Life cycle assessments (LCA):** Methods that calculate the sustainability impact of a product using quantitative information measured across the product's life cycle. These methods may use ISO 14040 and ISO 14044 norms that support standardized LCA.
- **Footprinting assessments:**<sup>21</sup> Methods that calculate the impact of one single environmental aspect throughout the life cycle of the product. For instance, the Water Footprint (ISO 14046) that measures the volume of water consumed throughout the product life cycle, or the Carbon Footprint (ISO 14067), which measures the total amount of GHG generated throughout the product life cycle.
- **Toxicity assessments:** Methods that determine and rate the toxicity of materials or products (e.g., ECOTOX).

### 3. **Methods and tools used to communicate product sustainability information:**

Various tools are used to communicate the sustainability attributes or impacts of a product to end users, which can be consumers, businesses, or governments. Examples include:

- **Eco-label:** An official symbol placed on product packaging or in e-catalogues that help identify products that meet specific environmental criteria based on third-party verification (e.g., European Ecolabel, Nordic Swan).
- **Claims and self-declarations:** Statements that assign sustainability attributes or impacts to products and services based on self-declarations (e.g., content label claims).
- **Environmental product declarations (EPD):** An independently verified report that quantifies information about the environmental impact of a product or service throughout its life cycle in a standardized format to enable comparison (e.g., Environmental EPD System, Eco-Leaf Japan).
- **Rating system:** A mechanism used to benchmark and classify products based on a number of sustainability aspects (e.g., apps such as GoodGuide).

These methods and tools are used to comply with a variety of policies, guides, regulations, due diligence requirements, mandatory or voluntary standards,<sup>22</sup> and corporate sustainability codes,

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<sup>21</sup> The EU Joint Research Centre has also made an important contribution to the determination of effective practice in impact assessment, which has resulted in the adoption of 14 default impact categories for the EU footprinting initiative (Product Environmental Footprint (PEF) / Organisational Environmental Footprint (OEF); European Commission, 2013). However, despite the name "Product Environmental Footprint," this initiative does not focus solely on a single environmental impact category (e.g., like water footprint or carbon footprint methodologies), but rather considers multiple environmental impact categories of a product throughout its life cycle.

<sup>22</sup> Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions, to ensure that materials, products, processes, and



among others. The landscape of these tools is large, diverse, and fragmented and there is no common agreement on which tool is best for communicating product sustainability information to consumers in a standard way. According to UNEP (2017), eco-labels and unverified claims as well as sustainability ratings are the two most widely used methods. Most of the other methods, however, do not have consumer-facing elements (for example, life cycle or footprint assessments), which limits their use in a B2C environment.

As an example, the European Commission (2014), in its study titled *Consumer Market Study on Environmental Claims for Non-food Products*, detailed the product categories sold in Europe where the presence of eco-labels or green claims<sup>23</sup> for promotional purposes were most common.<sup>24</sup> The European Commission (2013) also dedicated a full study to analyzing voluntary labelling schemes in food products.<sup>25</sup> The study found that fresh and packaged foods widely utilize green claims for marketing and promotional purposes.

A DEFRA (2019) assessment of green claims on products showed complementary results. It found that 95% of items in the personal care sector had a green claim compared to 19% in tourism and banking. However, green claims in the personal care sector drop to 9% when advisory claims (e.g., claims that explain to consumers how to dispose of packaging) are excluded from the analysis. According to this study, the sector with the second highest percentage of green claims is clothing, with 28% (including advisory claims).<sup>26</sup>

Another example is found in the literature review developed by the Competition and Markets Authority (CMA, 2021) titled *Making Environmental Claims: A Literature Review*. The review finds that green claims in the body and personal care market in the United Kingdom is rising (46% in 2019 compared to 27% in 2015) (CMA, 2021) and that 63% of new product launches in the household care category had green or ethical claims in 2018 (CMA, 2021).

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services are fit for their purpose. These can include product standards (specifications and criteria for the characteristics of products), process standards (criteria for the way products are made), or performance-based standards (criteria related to the results or outcomes throughout a product's life cycle) (Krishnan and Maxwell, 2020, in UNCTAD, 2020b).

<sup>23</sup> Environmental claims, also termed “green claims,” are assertions made by firms about the environmentally beneficial qualities or characteristics of their goods and services. They can refer to the manner in which products are produced, packaged, distributed, used, consumed or disposed of (OECD, 2011).

<sup>24</sup> These product categories are consumer electronics, household appliances, textiles (clothing, footwear, carpets), household cleaning and storing products, personal care (personal hygiene and beauty products), baby products, miscellaneous household products (paints, windows, showerheads), transport (private cars, tires), tourism (hotels), utilities (household electricity services), and investment services (banks).

<sup>25</sup> The European Commission assessed, in an in-depth study in 2013, the performance of voluntary food labelling schemes and analyzed consumers' awareness of, trust in, and willingness to pay for food products affiliated with voluntary labelling schemes ([https://ec.europa.eu/info/publications/voluntary-food-labelling-schemes-study\\_en](https://ec.europa.eu/info/publications/voluntary-food-labelling-schemes-study_en)).

<sup>26</sup> Specific product items with a high presence of green claims, according to DEFRA (2019), are cars, household surface cleaners, bottled water, baby food, paint, shampoo, milk, body lotion, nappies (diapers), washing machines, fabric washing products, and windows.

Given the fragmented landscape of methods used to communicate product sustainability information, noteworthy efforts have been made to standardize these methods and reduce the confusion. For instance, the International Organization for Standardization (ISO) has developed a series of environmental standards under the 14000 family of standards, and specifically ISO 14020, to differentiate each type of eco-label. For example, ISO 14024 describes the eco-label Type I standard as developed by a third party, either a governmental (e.g. European Flower, Nordic Swan) or private organization (e.g. Forest Stewardship Council); ISO 14021 refers to eco-labels developed by a producer or a self-declared environmental (or green) claim (Type II); and ISO 14025 describes the procedures for a Type III environmental declaration (i.e., declarations based on quantified life cycle product information that respond to reporting parameters established by a third party, where the data collected is also verified by an independent body).

Research suggests that consumers seem to have more confidence in third-party verified eco-labels (Compare Ethics, 2020). However, they often do not distinguish between third-party verified eco-labels and self-declared claims (OECD, 2011). The capacity of products with eco-labels to effectively achieve their environmental impact reduction goals relative to similar products without eco-labels has also been questioned (Iraldo et al., 2020). The OECD (2009) found that systems to ensure or verify reliability were insufficiently developed across all eco-labels. More recent evidence suggests the need to reinforce the reliability of eco-labels' underlying verification and assurance systems (Elder, S., et al., 2021). Despite efforts to clarify, harmonize, and standardize these methods and tools, confusion appears to persist over the different types of environmental eco-labels, as well as the meaning and veracity of self-declared environmental claims. In this context, several governments have established policies and frameworks to guide and regulate eco-labels and green claims. These efforts are discussed in chapter 5.

### *2.3 Consumer Attitudes Toward Sustainability*

A growing number of consumers are increasingly concerned about environmental issues. According to the GlobeScan (2021) Healthy & Sustainable Living Global Consumer Insights survey,<sup>27</sup> close to 65% of consumers surveyed worldwide indicated that issues such as **climate change, depletion of natural resources, air pollution, loss of biodiversity, and water pollution** are “very serious issues to worry about.” In 2014, roughly 45% of consumers surveyed indicated that climate change was a very serious issue. By 2021, that proportion had risen by 18 points. A Pew Research Center (2021) survey covering 17 developed countries found an even higher share of consumers concerned about the environmental crisis.<sup>28</sup> Seventy-two percent of those surveyed indicated concern that climate change would harm them in some way at some point in their lives.

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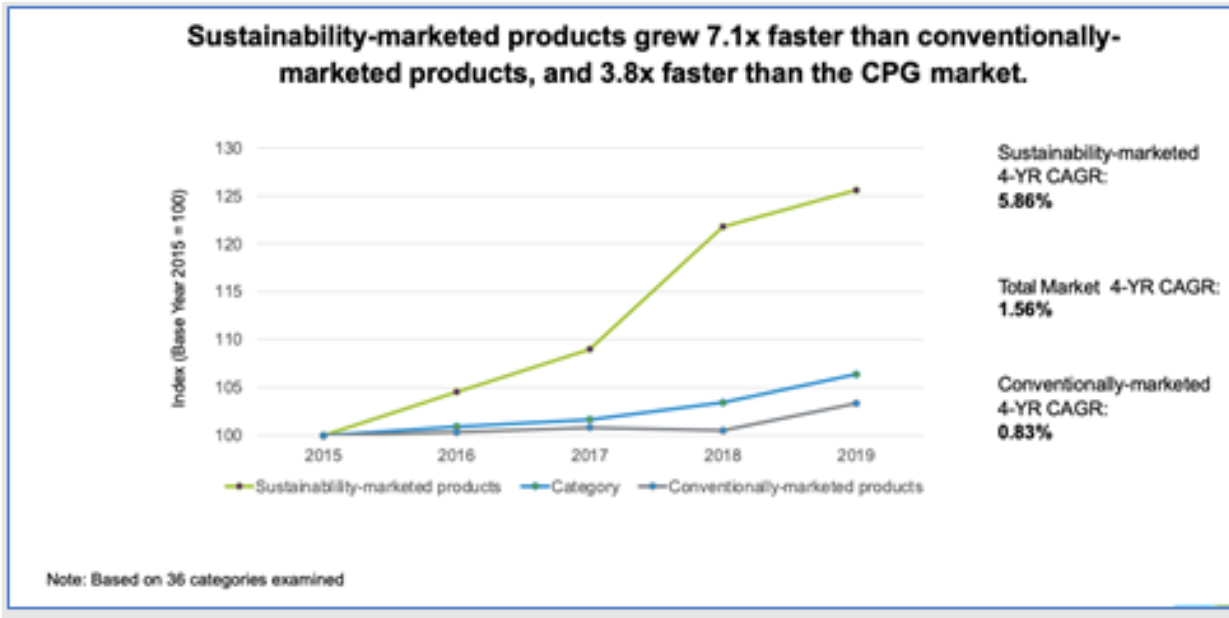
<sup>27</sup> This large-scale consumer study included over 30,000 interviews across 31 markets; representative samples of 1,000 adults were surveyed in each of the markets. The markets are representative of a wide range of regions.

<sup>28</sup> Sample sizes varied by country.

Heightened environmental awareness is not expected to subside once the pandemic ends. According to the GlobeScan (2021) survey, when imagining a post-pandemic future, many consumers indicated that they hope to live a more healthy and sustainable life. This includes expectations such as paying more attention to health, acting more sustainably, enjoying a home-focused lifestyle, and possibly reducing consumption (Globescan, 2021).

Consumers across different regions and demographic groups are expressing their willingness to shift toward more environmentally sustainable behaviours. According to the GlobeScan (2021) survey, 47% of those surveyed stated that they are willing to change their lifestyle “a great deal” to act more environmentally friendly. The IBM and NRF (2022) consumer survey presented even higher responses, with 62% of consumers indicating that they are willing to change their shopping habits to reduce environmental impacts. This was up by five points compared to the same survey two years earlier in 2020. Furthermore, 77% indicated that sustainability is important for them and just over 70% are willing to pay a premium for products that provide greater health and wellness benefits, use organic ingredients, support recycling, or are sustainable or environmentally responsible (IBM and NRF, 2020). Similarly, in the PwC (2021a) June 2021 consumer survey report, 50% of global consumers surveyed stated that they consider sustainability-related features when making consumer decisions. In the same survey undertaken the year before, only 35% of consumers indicated a preference toward sustainable products.

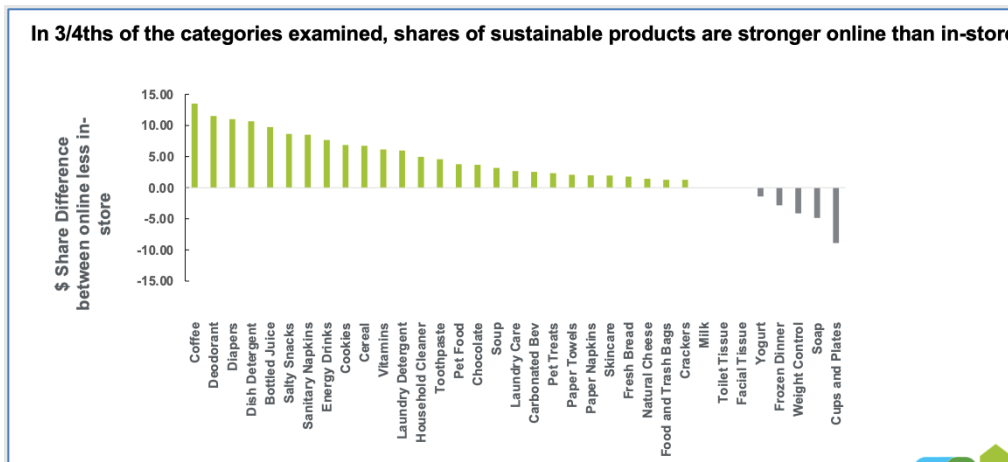
These consumer trends are also captured by a number of recent statistics. For example, the Sustainable Market Share Index 2021 developed by Kronthal-Sacco and Whelan (2021) found that sustainability-marketed products outperformed conventionally marketed products (Figure 14).



**Figure 14. Sustainable Market Share Index: Growth Rate**

Source: Kronthal-Sacco and Whelan (2021)

Sustainability-marketed products have also performed better online versus in store (Figure 15). This could be a promising trend, as it would indicate that e-commerce has the potential to reach and influence the behaviour of millions of consumers worldwide.



**Figure 15. Sustainable Market Share Index: Share Differences Online vs. In Store**

Source: Kronthal-Sacco and Whelan (2021)

Despite these positive developments, consumers do not always choose more sustainable products. For instance, the PwC (2021a) June 2021 survey found that a significant number of consumers do not prioritize sustainable shopping habits. Forty-four percent of those surveyed indicated that they had less interest in shopping sustainably because they either disagreed with sustainability statements or had no opinion on the matter.

### 2.4 The Aspiration-to-Action Gap

Despite increased awareness and a stated willingness to change their lifestyle among a majority of consumers surveyed, many have not made the shift in practice to more sustainable behaviour. According to the GlobeScan (2021) survey, while 47% of the consumers surveyed indicated that they were willing to undertake major lifestyle changes, only 23% were able to execute this aspiration. This means that close to 25% of consumers did not change their behaviour despite intentions. Similar results were found in the IBM and NRF (2022) survey, in which half of the consumers surveyed had indicated a willingness to pay a premium for sustainable brands, but only 31% acted on this intention.

When examining the aspiration-to-action gap by region, the GlobeScan (2021) survey found that consumers from Africa and the Middle East rated highest in terms of their desire to change, yet only 28% acted in terms of major changes. As shown in Table 6, those regions had the highest aspiration-to-action gap (34%) followed by Latin America (28%). North America had the lowest

share of consumers expressing a desire to make significant change and the lowest aspiration-to-action gap (18%).

**Table 6: The aspiration-to-action gap by region**

Region	Desire to change (“a great deal”)	Changes made in practice (“major changes”)	Aspiration-to-action gap
Africa and the Middle East	62%	28%	34%
Latin America	60%	32%	28%
Asia-Pacific	44%	23%	21%
Europe	39%	17%	22%
North America	36%	18%	18%

Source: GlobeScan (2021)

Table 7 shows results from the GlobeScan (2021) survey regarding the aspiration-to-action gap by demographic. While slightly more women than men consumers aspired to change, the aspiration-to-action gap was moderately higher. Minority groups and non-minority groups had similar aspiration-to-action gaps, though the former had greater aspirations for change. Looking at age groups, generation Z had the highest share who wanted to change, but also the highest aspiration-to-action gap. Baby boomers and older generations had a lower percentage of consumers aspiring to change, but a higher percentage that followed through.

**Table 7: The aspiration-to-action gap by demographic**

Region	Desire to change (“a great deal”)	Changes made in practice (“major changes”)	Aspiration-to-action gap
Total	47%	23%	24%
Generation Z	56%	27%	29%
Millennial	52%	28%	24%
Generation X	45%	21%	24%
Baby boomer+	37%	16%	21%
Female	49%	23%	26%
Male	45%	22%	23%
Minority group*	55%	32%	23%
Non-minority group	44%	20%	24%

Source: GlobeScan (2021)

\*Minority groups include minority ethnic and racial groups, religious minorities, LGBTQI+ people and “another minority group.”

**Key insight:** While consumers across different regions and demographics are becoming more eco-sensitive, for many, the desire to shop sustainably remains aspirational. The aspiration-to-

action gap is highest in emerging markets and in the lowest age group. The large aspiration-to-action gap makes the case for additional policy intervention and active private sector initiatives to support consumers in transforming their aspirations into actions.

## *2.5 Challenges that Prevent Narrowing the Aspiration-to-Action Gap*

Various types of challenges affect the ability of consumers to follow through on their aspirations toward more sustainable consumption patterns.<sup>29</sup>

One set of challenges relates to **decision-making**. Consumers are often influenced by more than one factor, with trade-offs that need to be assessed against multiple considerations. Beyond sustainability, consumers make decisions based on varied product evaluation criteria (e.g., price, brand image, product quality and performance, and more). These criteria can moderate the influence of sustainability attributes and at times potentially even negate them (Luchs et al, 2012; Grunert, 2011). Olsen (2013) found that while consumers show a high preference for sustainability-focused products in isolation, this preference is eroded significantly when trade-offs such as price and quality are considered.

Various consumer surveys (McKinsey, 2021; Accenture, 2019) note that price, quality, performance, and convenience are often the critical competing factors which prevent consumers from shopping more sustainably. As noted in chapter 1, consumers are more price-sensitive than ever before as a result of the economic uncertainties brought forth by the pandemic. IBM and NRF (2022) indicate that an additional 35% of consumers would buy more sustainable products if they were more affordable, 32% were looking for higher quality products, and 20% would shop more sustainably if there were a greater selection of products and they were more widely available. The GlobeScan (2021) survey also highlights affordability as a significant constraint, noting that 46% of those surveyed perceived sustainable products as too expensive.

Another important factor that affects decision-making is consumer inclinations toward brand loyalties (O'Rourke and Ringer, 2015, referring to Seyfang, 2009). The OECD (2021b) points out that risk aversion is a factor that counts in consumers' decision-making processes, as consumers might not be inclined to select new products with more sustainable attributes over the goods they habitually purchase. However, as mentioned in chapter 1, the shift to online platforms is having an impact on how consumers approach brand loyalties by injecting more flexibility into their shopping habits.

The manner in which consumers weigh the trade-offs among these different product evaluation criteria changes according to product categories. According to the IBM and NRF (2020) survey,<sup>30</sup> 44% of consumers tend to be more purpose-driven when shopping for groceries, which can

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<sup>29</sup> Schmitt (2021) provides an excellent overview of the challenges causing the green gap. Many of these challenge categories are referred to in this section.

<sup>30</sup> This survey included 18,980 consumer respondents from 28 countries.



include a greater focus on sustainability criteria. When shopping for apparel or footwear, the share of purpose-driven consumers drops to 35% compared to 46% who are value-driven (i.e., who place more importance on price and convenience).

Furthermore, e-commerce has made it easier for consumers to act on various product evaluation criteria beyond sustainability. PwC (2021a) highlights that across the different product categories, the most important reasons why consumers shop online are often price, quality, and convenience. Given the increased number of product offerings, as well as the technological advancements that result in, for example, increased personalization and faster delivery, e-commerce retailers undertake significant efforts to appeal to consumers through these criteria of price, quality, and convenience. Such efforts are, to a degree, fuelling hyper-consumption, which in turn may partly counter consumers' propensity to live up to their ideals.

**Situational factors** are another type of constraint that prevents consumers from focusing on sustainability attributes during their decision-making. Situational factors are temporary conditions that influence how consumers behave and may result in them purchasing a product that is not necessarily aligned with their longer-term values. For example, consumers might feel time-related pressure or peer pressure to buy a certain product, resulting in them temporarily forgoing or forgetting about sustainability considerations. They might also choose products that provide more immediate benefits (e.g., cheaper price) over more sustainable options (e.g., a more expensive but efficient household appliance which consumes less energy in the long run).

Situational factors demonstrate that the process of gauging different product evaluation criteria doesn't necessarily take place in a purely rational manner. People often face challenges relating to lack of time, attention, and resources, which means that decisions don't always benefit from a slow and deliberative thought process. Rather, most people rely on mental shortcuts (heuristics) and cognitive biases, meaning that their decisions are prone to being influenced by psychological factors beyond rational calculations (Kahneman, 2011). This makes consumer decision-making prone to impulses that can appear complicated, conflicted, and irrational. Examples include the propensity to make "automatic" and habitual decisions (Duhigg 2012) and to make decisions based on social context, approval, and status (Jackson, 2005b (in O'Rourke and Ringer, 2015)).

The IBM and NRF (2020) research reveals that rather than being a planned activity, shopping can now happen wherever and whenever and for different purposes (e.g., to replenish groceries, purchase a gift, or shop for a party) while consumers are doing something else (e.g., exercising, eating on lunch break). It is striking that "seven in 10 consumers surveyed say they shop in these so-called 'micro-moments,' and 35% do so at least weekly" (IBM and NRF, 2020). Given that consumers are increasingly shopping during these micro-moments, more situational constraints may potentially discourage them from shopping sustainably.

Situational challenges can be exacerbated by excessive, complex, and poorly structured information. Behavioural studies have found that when consumers are faced with more information than they can process, they tend to disengage by ignoring certain types of



information, relying on heuristics, or deferring a decision (OECD, 2018). The potential for information overload is especially problematic in online channels as consumers can gather information from a variety of sources (e.g., search engines, peer networks, reviews) (OECD, 2018).

Another set of challenges relate to **consumer conviction**. Even when consumers are highly concerned about environmental issues, some can be skeptical about the effectiveness of their individual action in solving the environmental crises (Grunert, 2011). They can be concerned, for example, that their actions are negligible in comparison to those of business actors. Indeed, the GlobeScan (2021) survey confirms that consumers expect more from governments, businesses, and civil society as drivers for systemic change. Forty-seven percent of those surveyed believe that there is not enough government support, 34% believe that businesses are not doing enough, and 25% believe that there is not enough support from non-governmental organizations and charities.

Another consumer conviction issue revolves around greenwashing skepticism. After decades of allegations of greenwashing, some consumers have lost trust in companies' sustainability claims, which consequently has an impact on their spending choices. According to the Ernst & Young (2021) Future Consumer Index, 60% of the consumers surveyed had lost trust due to deceptive marketing and greenwashing claims. A survey by Compare Ethics<sup>31</sup> found that a majority of its respondents are sustainability skeptics with 33% doubting claims and another 33% doing additional research to determine the validity of claims. The findings also revealed that of this 66%, three out of four consumers would seek third-party verifications for assurance (Compare Ethics, 2020).

A final set of challenges relate to **consumer knowledge**. Lack of knowledge can be driven by various factors, including insufficient information, lack of understanding, and lack of awareness.

Insufficient information is a problem that occurs when consumers seek out certain types of information and are unable to find it in an accessible manner. A Deloitte (2021) survey highlighted that lack of information is a critical reason why consumers do not engage in more sustainable lifestyles. Roughly half of the consumers surveyed indicated that they would lead a more sustainable lifestyle if businesses provided more clarity and information in certain areas, notably on how to dispose of or recycle old products, the origins and sourcing of products, and how to make products last longer through services to renew or repair broken and damaged items. The IBM and NRF (2022) study also confirmed that lack of information functions as a constraint on sustainable consumption practices. The study found that just over 20% of consumers would shop most sustainably if they had additional information on how to re-use, return, or recycle products, and on where they are sourced, produced, and manufactured.

Even when information is available, however, consumers may not necessarily understand what the information means, or may not understand it correctly. Some research indicates that

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<sup>31</sup> This study surveyed 1,250 UK-based participants.

challenges of consumer understanding are problematic in the areas of environmental claims and labels.

Environmental labels are one of the more concise ways of conveying a lot of information on the environmental credentials of a product. However, labels often risk being misinterpreted. An example detailed in the CMA (2021) literature review is the European Commission (EC) market study undertaken in 2014, which evaluated the extent to which consumers understood various environmental and ethical labels, notably the EU eco-label, the Green Dot label, and the Mobius loop label.<sup>32</sup> In a high number of instances, consumers misinterpreted what these logos stood for. For example, in the case of the Green Dot label, only a quarter of respondents correctly interpreted what the label stood for. The EC study also found that 86% of respondents lacked knowledge and understanding of the EU eco-label.

In this same EC study, the research found that consumers' understanding of environmental claims is also problematic. The study concludes that environmental claims tend to be too general or vague, with the scientific information used to justify the claims difficult to assess. In addition to the EC study, the CMA (2021) report highlights other studies by Grunert et al. (2013), the UK Department of Energy and Climate Change, and Mintel to showcase how consumers typically lack a full understanding of what certain claims and labels mean.

Beyond challenges relating to insufficient information and lack of understanding, in certain instances, consumers may not even be aware that they should be seeking out certain types of information that could enable them to make more sustainable consumption choices. These awareness challenges tend to occur because supply chain operations are often complex and opaque, thereby leaving consumers with a lack of awareness on the various sustainability-oriented supply chain challenges and impacts that may arise from these operations.

Finally, certain types of products tend to be more resistant to the influence of sustainability information. Dhar and Wertenbroch (2000) indicate that consumers consider “hedonic” products (i.e., products that are meant to be used for fun or are enjoyable) very differently than “utilitarian” products (i.e., products that are meant to be effective, practical, and functional). Products that need to work, such as deodorant or hair dye, are very resistant to influence by sustainability information. Products that are more discretionary, or where it is difficult for consumers to determine differences in quality, may be more influenced by improved informational disclosures, for instance regarding sustainability attributes. Products that are closely tied to status, consumed publicly, or displayed more evidently (for example dish soap over the kitchen counter) may be more open to influence from information campaigns. Finally, products that have clear personal health impacts on the consumer are better targets for information influence (O'Rourke and Ringer, 2015).

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<sup>32</sup> The EU Ecolabel is a “label of environmental excellence that is awarded to products and services meeting high environmental standards throughout their life-cycle”; the Green Dot label means that the manufacturer has made a financial contribution for the recovery and recycling of packaging in Europe; and the Mobius loop label is used to indicate that a product is recyclable.

It is important to further examine how information should be designed and delivered to influence consumers who are not necessarily seeking or are averse to product sustainability information. O'Rourke and Ringer (2015) show that simply providing more (or better) scientific information on sustainability and health measures appears to have limited impact on changing consumer behaviour. The authors suggest that policymakers might consider a two-pronged strategy, with efforts initially directed at raising consumer awareness, and then presenting these same consumers with more and better product-level sustainability information backed by science.

**Key insights:** The above analysis highlights how consumer decision-making processes are highly complex and influenced by many competing factors. Challenges relating to situational factors, consumer conviction and trust, and consumer knowledge all play important roles in closing the aspiration-to-action gap.

E-commerce consumers often purchase in “micro-moments” that do not allow much time to thoroughly research and weigh up their purchase against different trade-offs. There is also some evidence that consumers are willing to choose more sustainable products if they can access more reliable information on the product’s origin, its environmental impact, and how they can re-use, return, or recycle the product. However, it is important to communicate this information in a way that consumers correctly understand, and also to enhance overall consumer awareness.

## Chapter 3: Opportunities to Facilitate Sustainable Consumption in E-Commerce

Beyond the web interface, e-commerce offers multiple ways to engage the environmentally conscious consumer, whether through e-mail, social networks, or other online promotional channels. The e-commerce players introduced in chapter 1 can therefore use a wide range of tools to empower and guide consumers in a way that a brick-and-mortar experience cannot (EDF, 2020). Ecommerce Europe (2021) emphasizes that digital tools widely used in e-commerce create new ways to access information. These digital tools enable consumers to obtain “the right information in a layered approach, offering them the possibility to understand easily and quickly what they are reading, provided the information is transparent and reliable” (Ecommerce Europe, 2021).

This section highlights select opportunities for ways to better guide consumers toward purchasing sustainable products online.

### *3.1 Digital Green Nudges*

One such opportunity is the use of digital green nudges. The concept of nudging was first introduced by Richard Thaler and Cass Sunstein, who defined the term as a change in the choice architecture (i.e., the context within which the consumer makes a decision) that alters people’s behaviour in a predictable way. This change in behaviour takes place without having to limit any of the consumer’s choices or take advantage of financial incentives (Thaler and Sunstein, 2008). As mentioned in chapter 2, people’s decisions are often not a result of purely rational thought processes and calculated trade-offs, but rather, are influenced by mental shortcuts and behavioural biases. Nudging aims to leverage these psychological aspects through subtle changes in the choice architecture to influence people toward predictable and positive choices.

Digital nudging narrows the definition even further and is characterized as a “subtle form of using design, information and interaction elements to guide user behavior in digital environments, without restricting the individual’s freedom of choice” (Meske and Potthoff, 2017). Using nudges to promote pro-environmental behaviour can be referred to as “green nudges” (Schubert, 2016). In essence, digital green nudging entails making subtle changes to the user interface (e.g., the online marketplace webpage) that toggles certain psychological biases (i.e., goes beyond rational thought) for the purpose of guiding the consumer toward more sustainability-oriented decisions without limiting their freedom of choice.

Although digital green nudging is a relatively new concept, it is an area in which good practice examples are increasingly emerging. This paper highlights a select few for illustrative purposes. One example of a digital green nudge is the use of default options. The consumer is encouraged to pursue a predefined action by having that choice already selected as the default. An experiment undertaken by Arana and Leon (2013) found that consumers are more likely to pay for CO<sub>2</sub>

compensation measures if that payment option was already ticked in as the default option. This nudge primarily takes advantage of the psychological bias of inertia (also known as the status quo bias), in which people often follow the path of least resistance that often doesn't require additional steps to change (Silva, 2022).

Another example of a digital green nudge is to experiment with positioning and rankings. Techniques include making the sustainable products more visible and higher in the rankings, or hiding or lowering the ranking of the undesirable options. A study undertaken by Lee et al. (2011) analyzed the effects of placing unhealthy snack options lower on a webpage and found that, as a consequence, 53% of the participants opted for the healthier snacks. This nudge once again takes advantage of the inertia bias. It also makes use of the suggestion bias, in which products that are ranked or positioned higher are viewed as having an implicit endorsement (Caraban et al., 2019).

A third example of a digital green nudge is taking advantage of people's inclination toward following herd-like behaviour. A study developed by Salazar, Oerlemans, and van Stroe-Biezen (2013) found that consumers who had received information about a peer's pro-environmental choice were three times more likely to choose sustainable products than those who did not get such information. Peer-related information is especially effective when the messages come from the recipient's social group or those the recipient admires (e.g., influencers).

The potential of digital green nudges is vast. As a policy tool, it is relatively inexpensive in comparison to monetary interventions for the purpose of promoting positive behaviours. Furthermore, choice architecture can be experimented with in a plethora of ways: making subtle changes to design elements, simplifying how information is structured and presented, and experimenting with the timing of when these relevant aspects are presented. However, additional research is needed to not only assess the efficacy of such interventions, but also to better understand how these strategies can be taken advantage of as a coherent policy tool.<sup>33</sup>

The ethical dimensions of using green digital nudging must also be clarified. Given that nudging takes advantage of people's unconscious biases, it risks veering into being manipulative and paternalistic, with a detrimental impact on people's autonomy. Consequently, there is a need to clarify how nudging efforts can be presented in a transparent manner, in which the consumer becomes aware of the nudging techniques used. Issues around nudging and transparency are complex, however, given that research suggests that nudges conducted in the dark (i.e., without the participant's knowledge) tend to be more effective (Silva, 2022).

The effectiveness of nudging will likely depend on the use of personal data, which raises concerns relating to privacy that in turn need to be clarified. Ethical dimensions relating to the role of

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<sup>33</sup> Governments are increasingly recognizing the value of behavioural insights as a valuable policy tool. Since 2014, close to 15 countries, including both developed and developing countries, have set up government agencies focused on national behavioural insights.

artificial intelligence (AI) algorithms will also need to be clarified. These algorithms enable personal data to be collected and analyzed in a more effective manner. If the effective use of data and nudging results in manipulations for maintaining and expanding market power positions, this may raise issues relating to competition policy that will also need to be clarified.

### *3.2 Information to Encourage Sustainable Consumption*

#### *3.2.1 Promoting Consumer Knowledge on Product Sustainability Information*

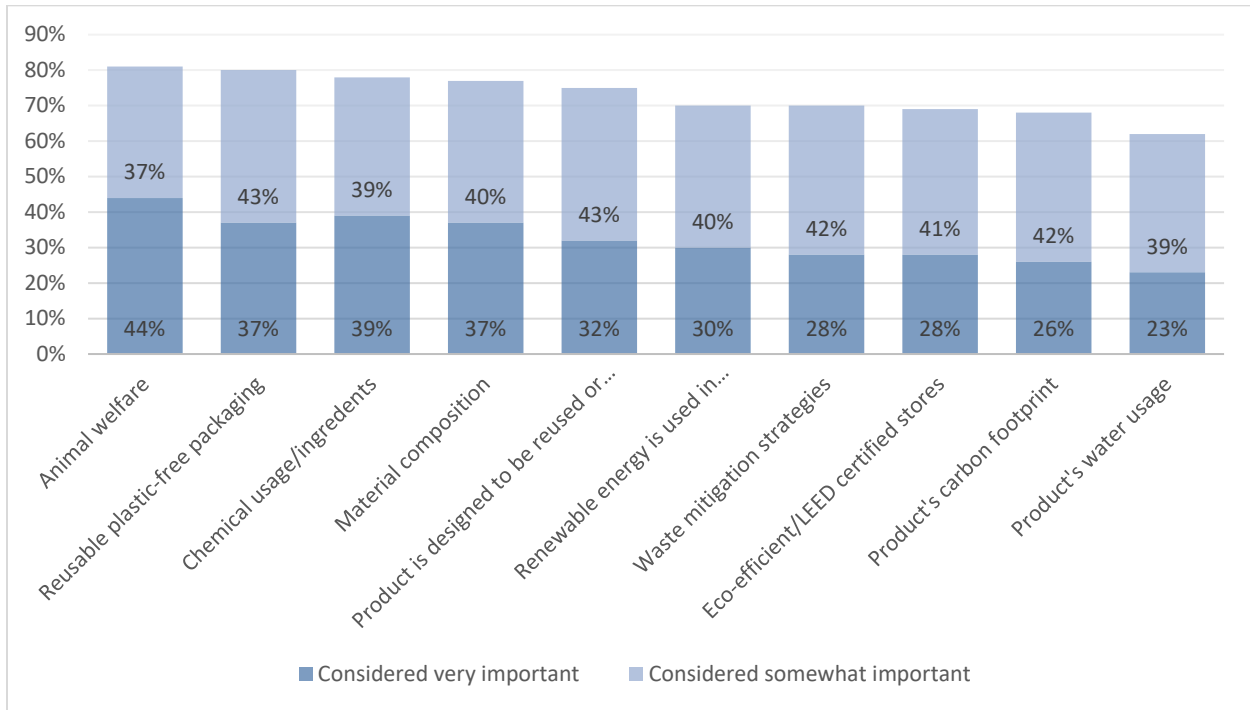
As highlighted in chapter 2, an important reason for the aspiration-to-action gap is issues around consumer knowledge. Consumers may face problems of insufficient information, lack of understanding, and a lack of awareness on the types of attributes and impacts they should be concerned about. The information that therefore gets provided in e-commerce settings will need to satisfy consumers' thirst for information on specific issues as well as educate consumers on certain aspects they aren't aware they should be knowledgeable about. This information must not be provided in an excessive manner that may result in challenges relating to information overload.

When it comes to insufficient product sustainability information, certain consumer studies (IBM and NRF, 2021; Deloitte, 2020) indicate that consumers would like information on product durability, reparability, and recyclability, and guidance on disposing of or re-using products, which can also influence their purchase decisions (as mentioned in chapter 2). For example, an EC study (2018) confirmed that providing additional information on durability and reparability is useful for encouraging online consumers to purchase products that are more durable and repairable. While providing durability information was more effective than providing reparability information, when provided with both sets of information together, consumers were willing to pay higher for products that scored well on both features. The findings were prevalent across all the European countries surveyed and all demographic groups. This meant that the effectiveness of information provision was not restricted to consumers belonging to certain socio-demographic groups or to those with pro-environmental preferences.

While certain types of information that consumers seek may be consistent across product categories, often the information sought varies depending on the product category. In the remainder of this section, we highlight selected consumer studies detailing the product attributes that consumers most often seek in certain consumer product categories. The results are not generalizable, given the limitations of the data, but they do provide some useful illustrative insights. The studies also indicate the type of sector-based research that could be of value to invest in for the future.

An Accenture (2021) study on the retail fashion sector analyzed the environmental attributes that matter most to consumers when purchasing apparel. It found that three of the top four concerns are regarding the product's components (see Figure 16). Efforts to reduce the industry's footprints tended to be ranked lower in comparison. The study found that additional education may be needed on why certain environmental considerations matter (Accenture, 2021).





**Figure 16: Consideration of environmental factors when purchasing apparel**

Source: Accenture, 2021

A McKinsey study on European grocery retail (2021d) found that consumers considered both product component and footprint attributes when purchasing grocery products. The most important attributes included the absence of environmentally hazardous ingredients or materials (product component attribute), low greenhouse gas emissions (footprint activity attribute), and conservation of natural raw materials (footprint activity attribute). The attributes that ranked slightly lower were packaging material or plastic, use of recycled packaging material or plastic, local sourcing, and low air pollution. The study also found that sustainability attributes were more highly valued in fresh food products such as vegetables, fruits, meat, and fish. Sustainability in home care products (such as detergents and cleaning supplies) and personal care products (such as skin care products and cosmetics) were more highly valued among women, Gen Z and the higher-income demographics.

A Mintel (2020) consumer study on beauty and personal care products found that the environmental attributes that were most important to the green consumer were eco-friendly packaging (59%), eco-friendly ingredients (52%), low carbon emissions (32%), a traceable supply chain (31%), and low water usage (19%).

These studies show the value of targeted research at a more detailed product category level, as it helps to identify the attributes for which consumers need more information as well as the attributes for which consumers may need more education, since they are not currently perceived



as important. More efforts need to be undertaken to carry out these studies across different countries and across different demographic groups.

As mentioned in chapter 2, another major challenge for consumer knowledge is issues relating to consumer understanding. Claims and labels, especially those certified by third-party actors, are often deemed useful ways for conveying concise sustainability information to consumers. A large-scale study developed by Kronthal-Sacco and Whelan (2021) found that products which had sustainable claims on their package outperformed conventional products in their respective categories. Furthermore, the research showed that most third-party-certified sustainability products significantly outgrew sustainable products that had sustainability messaging but no third-party certification.

However, a major problem with claims and labels is the risk of misinterpretation or lack of awareness on what the labels or the terms mean. Consumers also have concerns with the assurance practices behind eco-labels, wanting to ensure and verify the claim is certain. It is therefore important that additional information be provided on the eco-label (for example via pop-up box) to educate and increase the consumer's understanding of that label. Several studies confirm that additional efforts to increase the understanding of labels can result in the increased purchasing of sustainable products (Pomarici and Vecchio, 2014, in Bangsa and Schlegelmilch, 2019).

Finally, beyond addressing challenges relating to insufficient information and understanding, it is also important to educate on broader hotspot features which consumers may not even be aware of. These informational aspects often differ across product categories, but may also differ even within product categories due to the variable nature of products' hotspots.

### *3.2.2 Promoting Consumer Knowledge on E-Commerce Operations*

As mentioned in chapter 2, it is important to distinguish between the sustainability impacts generated by the products themselves and those generated by the e-commerce operations that facilitate the sale of those products.

Online platforms may consider providing information on the e-commerce operations' specific impacts, notably in the areas of packaging, delivery, and returns. Different types of information can be provided, from clarifying the environmental impacts of standard options to providing recommendations for alternative sustainable options, as well as information on how these different options compare.

For instance, in the case of packaging, platforms can provide information on the environmental impacts of standard packaging options and on how these options compare to more sustainable packaging alternatives (e.g., a package that better fits the product size, a plastic-free package, or a reusable package). In the case of delivery, platforms can inform consumers about the environmental impacts of standard delivery options and provide recommendations for eco-

friendly alternatives. Examples of alternatives include grouping products together for shipment, which may require consumers to plan purchases over time, wait longer for the package, or share an order with other customers; or choosing efficient transportation options that cut emissions (IBM and NRF, 2022; Statista, 2021c).

Some studies suggest that while some consumers are ready to choose more sustainable packaging or delivery options, others are reluctant due to the amount of the surcharge or a preference for free and fast shipping (Statista, 2021c). More effort is therefore required from platforms to educate consumers on the value of sustainable alternatives in comparison to standard options.

### *3.3 Principles for Providing Product Sustainability Information*

To take advantage of the above opportunities—from designing digital green nudges to determining how sustainability information should be conveyed—certain principles can be taken into consideration. The UNEP, in 2017, created an important report with guidelines on how to make effective and trustworthy claims to consumers on product sustainability. The report outlines 10 principles. Five of the principles are fundamental, in that they are the minimum requirements to be met when providing product sustainability information. The other five are aspirational, in that they aim to foster ambitious efforts and improvements over time (UNEP, 2017). The guidelines were updated in 2021 to showcase how to apply the principles specifically in an online setting. Table 8 summarizes the principles, as well as the dos and don'ts of applying the principles in an e-commerce setting.

**Table 8: Guidelines for providing product sustainability information in e-commerce**

Principle	E-commerce dos	E-commerce don'ts
<b>Fundamental principles</b>		
<p><b>1. Reliability</b></p> <p>Build your claims on a reliable basis.</p>	<ul style="list-style-type: none"> <li>• Accurate and scientifically true</li> <li>• Robust and consistent</li> <li>• Substantiated data and assumptions</li> </ul>	<ul style="list-style-type: none"> <li>• Apply fundamental principles of these Guidelines as the minimum standard for sustainability information and provide them as guidance to suppliers and sellers.</li> <li>• Verify eco-labeled products by comparing your product database with those of the certifying organizations.</li> <li>• Approach eco -label license holders to submit common or standard product identification codes (e.g., GTIN) to you as well as to the certifying organizations.</li> <li>• Demand license numbers (if they exist) of database entries of the labeling body for displayed eco-labels.</li> <li>• Go beyond labeling and provide substantiated descriptive information.</li> </ul>
<p><b>2. Relevance</b></p> <p>Talk about major improvements in areas that matter.</p>	<ul style="list-style-type: none"> <li>• Significant aspects (“hotspots”) covered</li> <li>• Not masking poor product performance, no burden-shifting</li> <li>• Genuine benefit which goes beyond legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Check whether highlighted claims address the product’s hotspots.</li> <li>• Develop a scorecard system that classifies different levels of sustainability.</li> <li>• Consider the use phase and end-of-life as important parts of the product life cycle and address their relevance to consumers. Consider that relevance can be a question of local context (e.g., lack of recycling facilities).</li> <li>• Develop and apply strong criteria for sustainability filters and product descriptions.</li> </ul>
<ul style="list-style-type: none"> <li>• Do not display eco-labels without verifying that the product has a valid certification.</li> <li>• Do not let sellers decide what they want to publish without checking the evidence of their claims.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not allow claims that do not provide genuine benefit or that describe benefits that cannot be verified.</li> <li>• Do not use claims that are just matching legal compliance and do not go beyond it.</li> </ul>	

Principle		E-commerce dos	E-commerce don'ts
<p><b>3. Clarity</b></p> <p>Make the information useful for the consumer.</p>	<ul style="list-style-type: none"> <li>• Exclusive and direct link between claim and product</li> <li>• Easy to understand and use</li> <li>• Limits of claim clearly stated</li> </ul>	<ul style="list-style-type: none"> <li>• Be explicit and concise with information and clearly state each claim's limitations.</li> <li>• Display information where and when it is needed, i.e., close to the product and at several steps of the customer journey including the point of sale.</li> <li>• Highlight relevant sustainability claims as opposed to "inspiring" phrases and pictures.</li> <li>• Use graphical tools to guide consumers and let them explore their own role in achieving sustainability.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not overwhelm consumers with too much information since this may cause confusion and ambiguity.</li> <li>• Avoid using general phrases and claims (e.g., "eco-friendly" without further substantiation).</li> </ul>
<p><b>4. Transparency</b></p> <p>Satisfy the consumer's appetite for information, and do not hide.</p>	<ul style="list-style-type: none"> <li>• Developer of the claim and provider of evidence published</li> <li>• Traceability and generation of claim (methods, sources, etc.) published</li> <li>• Confidential information open to competent bodies</li> </ul>	<ul style="list-style-type: none"> <li>• Require transparent information from suppliers and sellers before the product is sold.</li> <li>• Check national regulations regarding sustainability claims and publishing information</li> <li>• Publish details of evidence and methods in various depths and at several levels.</li> <li>• Require transparency from eco-labeling bodies and make databases of relevant eco-labels directly accessible.</li> <li>• Include all relevant information pertaining to a product (e.g., including expiry dates for perishable goods).</li> </ul>	<ul style="list-style-type: none"> <li>• Do not refer to any claim without sufficient and available documentation.</li> <li>• Do not provide transparency only on part of the supply chain or product life cycle.</li> </ul>
<p><b>5. Accessibility</b></p> <p>Help the information get to the consumer, not the other way around.</p>	<ul style="list-style-type: none"> <li>• Clearly visible: claims easily found</li> <li>• Readily accessible: claim close to the product, and at required time and location</li> </ul>	<ul style="list-style-type: none"> <li>• Provide relevant information by simple click.</li> <li>• Guide customers by using dedicated sustainable product collections.</li> <li>• Have a designated landing page for sustainability information and use segmented entry points.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not make consumers search the whole website to find sustainability information.</li> <li>• Do not let sustainability information be the last thing to be presented (appearing as least important).</li> <li>• Do not only provide sustainability information in one local language.</li> </ul>

Principle		E-commerce dos	E-commerce don'ts
		<ul style="list-style-type: none"> <li>• Use the same structure to provide sustainability information for all products to ensure consumers can easily compare products.</li> <li>• Push sustainable options higher in rankings and search results.</li> <li>• Analyze user experience by checking customer movements on websites and asking for feedback to further improve accessibility.</li> <li>• Avoid barriers for people with disabilities.</li> </ul>	
<b>Aspirational principles</b>			
<p><b>6. Three dimensions of sustainability</b></p> <p>Show the complete picture of product sustainability.</p>	<ul style="list-style-type: none"> <li>• Environmental, social, and economic dimension considered</li> <li>• Burden-shifting between the dimensions avoided</li> <li>• Complementary certification schemes combined</li> </ul>	<ul style="list-style-type: none"> <li>• Apply methodology that shows how products perform on all sustainability dimensions.</li> <li>• Aim to make use of labels that use a life cycle approach and cover all stages of the supply chain, or combine different labels to achieve this coverage.</li> <li>• Explain linkages and trade-offs between different sustainability dimensions.</li> <li>• Ask sellers to provide feedback on why the product is sustainable and not only show the label.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not focus on only one sustainability dimension when telling stories in e-commerce.</li> <li>• Do not use “sustainability” as a claim without detailing the underlying dimensions.</li> </ul>
<p><b>7. Behaviour change and longer-term impact</b></p> <p>Help consumers move from information to action.</p>	<ul style="list-style-type: none"> <li>• Insights from behavioural science applied</li> <li>• Consumers actively encouraged to play a role, where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• Allow customers to break free from recommendations solely based on search history.</li> <li>• Provide links to explanations of how to use products and extend their lifetime.</li> <li>• Make customers aware of their own (un)sustainable shopping behaviour and let them compare with others, e.g., by using gamification.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not lock customers into their former (unsustainable) purchase behaviour.</li> <li>• Avoid negative phrasing regarding consumer behaviour; moralizing is not an effective way of communication.</li> </ul>

Principle	E-commerce dos	E-commerce don'ts
	<ul style="list-style-type: none"> <li>• Longer-term relationship built with consumer</li> </ul>	<ul style="list-style-type: none"> <li>• Make use of customer reward systems to incentivize sustainable shopping behaviour.</li> <li>• Provide tips or user stories and customer product reviews to inspire sustainable behaviour.</li> <li>• Include sustainability aspects in regular marketing communication.</li> </ul>
<b>8. Multi-channel and innovative approach</b>  Engage with consumers in diverse ways.	<ul style="list-style-type: none"> <li>• Various complementary communication channels used</li> <li>• Different user groups addressed with different channels</li> <li>• Information complementary and not overloading the consumer</li> </ul>	<ul style="list-style-type: none"> <li>• Be present on trending channels in line with your target customers' preferences.</li> <li>• Collect consumer data to identify preferred communication channels.</li> <li>• Always enable sharing settings and utilize crosslinks to related sources (e.g., reports, studies, news, etc.).</li> <li>• Connect offline interaction to online sustainability campaigns (e.g., through QR codes).</li> <li>• Make use of search engine optimization to promote sustainable products.</li> </ul>
<b>9. Collaboration</b>  Work with others to increase acceptance and credibility.	<ul style="list-style-type: none"> <li>• Broad range of stakeholders included in claim development and communication</li> <li>• Joint communication channels employed</li> <li>• Inclusive language used to make consumers feel part of a movement</li> </ul>	<ul style="list-style-type: none"> <li>• Regularly map possible collaboration options and types on the market.</li> <li>• Stay authentic in partnerships.</li> <li>• Communicate about collaboration efforts.</li> <li>• Use tools that are both trending and sustainable in collaborations.</li> <li>• Continuously grow collaborations with partners and engage in networks that benefit all their stakeholders.</li> </ul>
<b>10. Comparability</b>	<ul style="list-style-type: none"> <li>• Product comparisons substantiated and</li> </ul>	<ul style="list-style-type: none"> <li>• Allow users to set their own preferences for rankings or comparison of products.</li> <li>• Do not confuse consumers with too many settings.</li> </ul>

Principle		E-commerce dos	E-commerce don'ts
Help consumers choose between similar products.	<p>helpful for consumers</p> <ul style="list-style-type: none"> <li>• Approaches initiated by government or third parties followed</li> <li>• Specific guidance followed</li> </ul>	<ul style="list-style-type: none"> <li>• Display avoided emissions comparing new and used or refurbished products.</li> <li>• Explain your methodology for comparison.</li> <li>• Always add a sustainable choice when proposing alternative products.</li> <li>• Allow customers to compare their individual consumption profile to others.</li> <li>• Standardize information to make it comparable.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not compare apples and oranges (e.g., non-equivalent information).</li> <li>• Do not use arbitrary rules for comparisons.</li> </ul>

Source: Based on UNEP (2017) and UNEP (2021) e-commerce two-pagers.



**Key insights:** Various opportunities exist for closing the aspiration-to-action gap. They include exploring solutions relating to digital green nudges and addressing consumer knowledge challenges. When designing solutions, it would be valuable to take into consideration the key principles set out by UNEP (2017) that provide guidance on how to create effective and trustworthy claims to consumers about product sustainability.

## Chapter 4: Public Policy Framework on Consumer Sustainability Information in Electronic Commerce

### *4.1 Literature Review on Consumer Information*

This literature review is based on legal and policy articles. The term “literature” is used here in a broad sense, including non-academic views such as from relevant stakeholders (e.g., consumer organizations). This section starts with a brief description of the rationale behind the right to information (4.1.1). It then lays down the basic characteristics and elements of such a right (4.1.2). The section then introduces some specific considerations regarding e-commerce and sustainability (4.1.3) and concludes with an overview of the advantages and limitations of consumer information (4.1.4).

#### *4.1.1 Rationale of the Right to Information*

In legal theory, there is the traditional principle of contractual freedom and the assumption that contracting parties are in an equal bargaining position. However, these concepts do not apply to the relationship between a consumer and a seller. The development of mass-produced goods and standardized contracts has led to the recognition that a structural asymmetry exists between these two parties since the seller, by definition, has access to information not available to the consumer. Consequently, consumer law has been built and developed to remedy this elemental discrepancy.

As such, in modern consumer law worldwide, consumers have a variety of consumer rights and sub-rights (e.g., the right to choose, the right to safety, the right to be heard, the right to redress, and so on). One of these is the right to be informed, also known as the right to information, which translates into a requirement for disclosure and transparency.

Information requirements (and warnings) are traditional tools used in consumer protection and have been identified as a credible solution to restore, at least partially, the information asymmetry between consumers and sellers, and thereby protect consumers.

#### *4.1.2 Basic Characteristics and Elements of the Right to Information*

The information given to consumers regarding goods and services must have certain characteristics. It needs to be “complete, accurate and not misleading” (United Nations Guidelines for Consumer Protection (UNGCP), 2016). Various elements of legislation, regulations, soft law instruments, and literature contain a wide range of adjectives describing the information to be provided to consumers.<sup>34</sup>

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<sup>34</sup> Some of the adjectives are the following: accessible, clear, comparable, comprehensible, conspicuous, correct, effective, fit for personal needs, intelligible, legible, non-misleading, readable, relevant, reliable,

The obligation to provide information applies to different elements. Some information requirements are related to the intrinsic properties of the product, while others are related to the wider context of the execution of the contract. Examples include:

- Information regarding the main features of the product
- The identity of the seller
- The total price of the good inclusive of taxes (or, where this is not possible, the methodology to be followed for the calculation of taxes)
- All additional freight, delivery, or postal charges (or, where this is not possible, an indication that such additional charges may be due) where applicable
- The arrangements for payment, delivery, and performance under the contract
- A reminder of the existence of a legal guarantee of conformity for goods
- The existence and the conditions for after-sales services and commercial guarantees
- The right of withdrawal.

This information has to be provided before the potential conclusion of the contract, through various means: “directly on the package or point of sale signs or posters, online, via social media, TV or radio adverts, on receipts, or in instruction manuals” (UNEP, 2017). Weblinks, barcodes, and QR codes are considered appropriate means for extending consumer information beyond the package or the point of sale, overcoming constraints such as limited space.

#### *4.1.3 Specific Considerations on E-commerce and Sustainability Information*

Within the e-commerce context, when selling online, traders are required to inform consumers about additional rights—such as the right of withdrawal—to compensate for the fact that the consumer cannot feel, see, or touch the product.<sup>35</sup>

More generally, in an online environment, consumers have access to more shopping opportunities than they would have in an offline context, but, at the same time, they are much more vulnerable (BEUC, 2020). Commentators are welcoming enhanced protection for online consumers, such as the right of withdrawal for online purchases, but are also calling for an even higher threshold of protection. This is directly related to the global debate on how governments should regulate big platforms and further protect consumers in a world where technology is constantly evolving and consumers are increasingly being manipulated (BEUC, 2020).

Regarding sustainability information, in many jurisdictions across the globe there is no horizontal legislation requiring a trader to provide mandatory product information specifically on sustainability. Nonetheless, as noted, there is often a general requirement to provide basic or generic information to the consumer on the main characteristics of the product. One could

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targeted, transparent, trustworthy, unambiguous, understandable, unequivocal, useful, user-friendly, verifiable, visible, and more. This list is not exhaustive.

<sup>35</sup> See recital 37 of the Consumers Rights Directive 2011/83/EU.

therefore easily argue that sustainability information can be provided as part of the main features of the product. Going further, in the context of global discussions on sustainable production and consumption as well as on the circular economy, many commentators are calling for legislators to introduce an obligation for traders to include the sustainability characteristics of products.

The meaning of “consumer sustainability information” and its various components gives rise to several questions. Is this concept limited to environmental sustainability? Is it linked to a product’s production, use, or end of life? Does it include information on the extraction of raw material, the production of a product, or the product’s storage, packaging, delivery, use, performance, durability, reparability, recyclability? Another key question is whether the concept should take into consideration information on the economic and social characteristics of the product (for example, providing information on labour conditions, indicating that a product was not made with forced or child labour, guaranteeing that the workers receive fair pay, ensuring that a good is not made of minerals financing armed conflicts, ensuring that products are not tested on animals, and so on).<sup>36</sup> In addition to the type of information that should be given to consumers, other questions pertain to the appropriate methodology to be followed as well as the appropriate level of information to be provided.

In contrast to horizontal legislation, sectoral legislation has been adopted in many areas across the globe on rules to improve the environmental performance of some products (e.g., household appliances such as washing machines) by setting out minimum mandatory requirements on energy efficiency. Those rules aim to progressively prohibit the least efficient products from the market. They have been complemented by other legislation establishing rules on mandatory labeling requirements.

In addition to those binding rules, governments around the world have also put in place eco-labeling schemes, which are voluntary schemes that allow consumers to select products according to specific environmental and social criteria.<sup>37</sup>

Finally, nowadays many jurisdictions are not only considering introducing new product sustainability information requirements, broadening the scope of energy efficiency legislation, and strengthening the conditions for obtaining a label, but also regulating green claims to address concerns regarding the reliability of these claims. In this regard, even though some rules are in place to address false, inaccurate, and misleading allegations on products as well as harmful omissions, there are no strong rules banning false, misleading or exaggerated green claims in a systematic manner by requiring companies to substantiate environmental claims about their products with a solid methodology (see section 2.2. of this policy review).

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<sup>36</sup> This is known as the “holistic approach” or the “three dimensions approach” of sustainability.

<sup>37</sup> There are many different eco-labels—positive, negative, neutral, third-party certified verified, and more. See, for example, Tranchard’s (2018) announcement of a new ISO standard on eco-labeling.

#### *4.1.4 Advantages and Disadvantages of Consumer Information Requirements*

Imposing mandatory information disclosures on businesses in order to “combat market inefficiencies resulting from the information asymmetry that exists between [traders] and consumers” (Straetmans, 2019)—and thus restore some balance—is generally seen as beneficial. Under normal circumstances, it should not have a negative impact on consumers’ purchasing decisions (Straetmans, 2019). This opinion is widely shared by academics (Howells, Twigg-Flesner and Wilhelmsson, 2018; Terryn and Van Gool, 2021).

Consumer information not only balances the asymmetry between consumers and sellers, but also influences consumer behaviour and decisions, as posited by the information paradigm.<sup>38</sup> According to this paradigm, “increasing the amount of information and establishing full transparency help consumers with their decisions” (Oehler and Wendt, 2016). This implies that with good and adequate information, consumers will behave rationally and take informed decisions. Digital information can empower consumers to check the reliability of information, make comparisons between products, and learn in a more holistic way about the sustainability of a given product.

Applied to sustainability, this means that the obligation to provide sustainability information would, in principle, incentivize consumers to make more sustainable and greener choices. The virtuous circle functions as follows: product sustainability information will lead to sustainable consumption and sustainable consumption will lead to sustainable development. This is one of the strategies followed by the European Commission, which has recently proposed policies designed to reform EU consumer law and that are strongly focused on consumer empowerment through the provision of information (European Commission, 2020h).

However, models based on mandatory disclosures have gradually been challenged over the years. Some authors argue that a mere increase in the amount of information does not necessarily benefit consumers’ decision-making (Oehler and Wendt, 2016; Howells, 2005; Goyens, 2020; Advisory Council for Consumer Affairs at the German Federal Ministry of Justice and Consumer Protection, 2020). Indeed, the information paradigm has its limitations. Various reasons explain why fulfilling information requirements is not sufficient, on its own, to achieve a high level of consumer protection. Some of these reasons are general, while others are specific to e-commerce or sustainability.

In general terms, products are becoming more complicated and sophisticated, and information requirements on such products do not necessarily guide consumers towards informed decisions.

In addition, many authors point to the significant problem of information overload. In some situations, consumers are bombarded with so much information that they cannot respond to

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<sup>38</sup> This is linked to the adoption, in many jurisdictions, of the information-based protection model.

information as rationally as one would assume (Straetmans, 2019).<sup>39</sup> In those cases, consumers may either be unable or unwilling to process large volumes of information. This information is therefore sometimes ignored. To illustrate this point, Geraint Howells (2018) refers to psychologist George Miller’s (1956) Magical Number Seven theory, according to which “the human mind handles data by breaking it down into manageable chunks” and “roughly seven chunks of information is the most the human mind can handle at any one time.” This is the reason why, in some cases, less is more.

Moreover, a lack of education and time can also give rise to problems. Most countries usually base their consumer protection legislation on the average consumer standard, also known as the benchmark of the rational consumer, under the assumption that consumers have a certain level of knowledge and awareness—meaning they are reasonably well-informed and observant. Given today’s context, one can question whether legislators should continue to base their policies on this standard or whether they should reconsider this approach to also consider consumers below this threshold. This would imply shifting away from analysis centred on the well-educated middle-class consumer model. Furthermore, repeated and legitimate concerns have been raised about the reliability and comparability of information provided to consumers; examples include lack of standardization and taxonomy.<sup>40</sup>

In e-commerce, there are limits to how much consumers can be empowered by information. The online shopping experience differs significantly from shopping in brick-and-mortar stores. When shopping online, consumers are unable “to visually inspect a product with their eyes, hold it in their hands and fully familiarize themselves with it” (Micklitz et al., 2020). No amount of information obligation can replace the physical shopping experience. At the same time, in the digital world, consumers potentially have access to far more information. Yet this does not necessarily mean that the digital consumer will either look at or consider this information.

Several issues must be considered in this regard. The internet has an unlimited space, which can potentially lead to unlimited information. As well, compared to an offline environment, the boundary between product information and advertisement can be blurred. Rankings and reviews can be confusing and unhelpful. Furthermore, in digital transactions, the allocation of responsibilities is not always clear, including those concerning the provision of mandatory product information—especially for goods sold on marketplaces, since multiple parties are involved.

In addition, artificial intelligence and algorithms can radically change the dynamics of consumer protection. Indeed, it would not be useful to have new and sophisticated consumer laws providing strengthened product information obligations if algorithms can change the order of appearance or ranking of products according to factors like personal or consumer preferences. Furthermore,

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<sup>39</sup> See also section 2.5 of this policy review for a discussion of some of the challenges related to information overload and rational choice.

<sup>40</sup> See section 3 of this policy review, where the fundamental principles of product sustainability information are discussed.

it is not always easy to impose provisions on the display of consumer information in an online context, given that consumers can use mobile phones, tablets, computers and other devices. In summary, online shopping brings both new opportunities and new challenges and can also put consumers at a disadvantage. This has been confirmed by a recent European Commission study on online shopping and information policy, which notes that “two-thirds of the screened websites do not comply with basic EU consumer rights” (European Commission, 2020i).

#### *4.2 Policy Review*

At the international level, the United Nations (UN)—especially the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Environment Programme (UNEP)—works on consumer protection, product sustainability information, and e-commerce. In 2017, together with other actors, UNEP published its Guidelines for Providing Product Sustainability Information (UNEP, 2017). As previously discussed, the UNEP guidelines contain five fundamental principles: reliability, relevance, clarity, transparency, and accessibility. They also contain five aspirational principles: three dimensions of sustainability, behaviour change and longer-term impacts, multichannel and innovative approach, collaboration, and comparability. In 2021, UNEP, with Adelphi, adapted the 2017 guidelines to online shopping and launched a new document, Guidelines for Providing Product Sustainability Information in E-commerce (UNEP, 2021). In parallel, the Organisation for Economic Co-operation and Development (OECD) has developed different work streams on the same topic. In 2016, it produced a recommendation on consumer protection in e-commerce (OECD, 2016).

In terms of regulations at the international level, 86 members of the World Trade Organization (WTO)<sup>41</sup> are involved in plurilateral negotiations on e-commerce that include provisions on online consumer protection (including on complete and accurate information on goods), unsolicited commercial electronic messages, electronic contracts, and transparency.<sup>42</sup> The draft text is not publicly available. According to a WTO news item, negotiators have reached a “clean text” on online consumer protection, which would require members “to adopt or maintain measures that proscribe misleading, fraudulent and deceptive commercial activities that cause harm, or potential harm, to consumers engaged in electronic commerce” (WTO, 2021a).

The text also includes a “best endeavour” provision requiring members to endeavour to adopt or maintain measures that aim to ensure suppliers deal fairly and honestly with consumers and provide complete and accurate information on goods and services and to ensure the safety of goods and, where applicable, services during normal or reasonably foreseeable use. (WTO, 2021a)

The text further requires members “to promote consumer redress or recourse mechanisms”

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<sup>41</sup> Chile, China, the Republic of Korea, and the European Union, which are studied in this policy review, participate in these discussions. See WTO (2021b) for the full list.

<sup>42</sup> See WTO (2021c) for the statement made by Ministers of Australia, Japan, and Singapore in December 2021. For the wider context, see WTO (n.d.a.)



(WTO, 2021a). Even though not all WTO members participate in these negotiations, and significant differences persist among participating members on data-related issues, their outcome—if successful—could have an impact on consumers as it would define a new international framework for online transactions.<sup>43</sup>

Recent initiatives have also been taken by different groups of WTO members to intensify discussions on trade and the environment. For example, on March 18, 2022, the participants in the Informal Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (IDP) launched discussions in three new workstreams to advance work on reducing plastics waste. The three workstreams are (1) crosscutting issues, (2) promoting trade to tackle plastic pollution, and (3) circularity and reduction to tackle plastic pollution (WTO, 2022). In the context of the Fifth United Nations Environment Assembly (UNEA), a historic resolution to end plastic pollution was endorsed (UNEP, 2022c). The resolution sets up an intergovernmental negotiating committee (INC) with a mandate to negotiate a legally binding global agreement by 2024 which would reflect diverse alternatives to address the full lifecycle of plastics, the design of reusable and recyclable products and materials, and the need for enhanced international collaboration to facilitate access to technology, capacity building and scientific and technical cooperation. (UNEP, 2022b).

Against this background, one of the objectives of this review is to identify and analyze the vast array of public policy areas and approaches involved in the regulation of product information, with a particular focus on product sustainability information in e-commerce. To achieve this objective, the study maps selected legislation on a wide range of policy areas, notably consumer protection, digital policies, competition, sustainability, and environmental protection. This analysis provides an overview and is not intended to be exhaustive.

In terms of geographical coverage, this research looks primarily at the European Union (EU), with a particular reference to France in view of the country’s recent adoption of climate and anti-waste laws with provisions on product sustainability information. It also looks at relevant developments in Chile, China, India, Morocco, South Africa, and the Republic of Korea.

The EU framework is examined in depth for many reasons. First, the EU has a very well-developed body of rules related to the topic under examination. Second, it is currently reforming its rules in a direction that is directly relevant to product sustainability information in e-commerce. Third, it serves as a model for many countries, regions, and international organizations.<sup>44</sup>

On this third point, in her book *The Brussels Effect: How the European Union Rules the World*, Professor Anu Bradford (2020) argues that the EU—a pioneer in much legislation and policy—is an influential superpower and has a de facto unilateral ability to transform global markets in diverse areas relevant to this research, such as digital rules, consumer and environmental protection, competition regulation, and data protection. In support of this view, the law firm

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<sup>43</sup> For more information on the negotiations on electronic commerce, see WTO (n.d.b).

<sup>44</sup> One of the most striking examples is data protection; see *Financial Times* (2019).

Hogan Lovells (2019) conducted a global review of legislative proposals in the field of technology and identified the EU as a “global trendsetter” on tech regulation.

With the exception of the EU (for the reasons explained above), the analysis that follows of selected countries covers laws that are in force, excluding legislation under preparation, under discussion or not yet adopted.

#### *4.2.1 European Union*

This subsection analyzes the EU’s normative framework in relation to product sustainability information in e-commerce. It undertakes an in-depth analysis of existing rules on consumer protection, digital policies, and sustainability (4.2.1.1) and of ongoing reforms (4.2.1.2). The analysis also includes a section on the positions adopted by ANEC (the European Association for the Co-ordination of Consumer Representation in Standardisation) and BEUC (the European Consumer Organisation) regarding these possible reforms (4.2.1.3).<sup>45</sup> It concludes with a reference to France (4.2.1.4) due to the recent adoption of measures relevant to this report.

##### *4.2.1.1. Existing Framework*

The consumer has a range of rights under EU consumer law, including the right to information.<sup>46</sup> This right entails a positive obligation for the trader to provide information to the consumer, which is a rather old requirement. Initially, this rule was meant to protect consumer health and safety. Today, this requirement is understood in a wider sense and encompasses many elements. The right to product information can be found in both sector-specific (e.g., for food, chemicals, cosmetics, toys, dangerous products, etc.) and horizontal legislation (e.g., encompassing other policy areas). As products have become increasingly complex, information obligations have become increasingly detailed.

In terms of horizontal legislation, the Consumer Rights Directive 2011/83/EU (CRD) contains pre-contractual information requirements, already found in previous legislation, that must be provided to the consumer for both offline and online sales. This pre-transactional information includes, among many other elements, the main characteristics of the good, the price, and the right of withdrawal. The requirement to provide information on the main elements of the products raises two fundamental questions: first, what is the precise meaning of the term “the main characteristics of the product”? And second, does this phrase also include sustainability-related elements of the product?

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<sup>45</sup> ANEC is the European consumer voice in standardization. BEUC is an umbrella group that represents in the EU institutions 46 independent consumer organizations from 32 countries.

<sup>46</sup> This is covered under Art. 38 of the Charter of Fundamental Rights of the European Union and Art. 169 of the Treaty on the functioning of the European Union.

In the context of the increasing use of platforms, and as part of efforts to reinforce consumer protection, the amending Directive (EU) 2019/2161 has modified the CRD to add specific information requirements for contracts concluded on online marketplaces. Online marketplaces have to let consumers know whether a third-party supplier is a trader or not. If the third-party supplier happens not to be a trader, they must inform consumers about the non-applicability of EU consumer rules and explain who is responsible for the performance of the contract. This is a significant improvement of the CRD, aimed at clarifying roles and responsibilities between traders and marketplaces. Additional changes include information obligations on personalized prices based on automated decision-making.

In addition, the CRD provides a right of withdrawal and an obligation for traders to inform consumers about that right's existence, conditions, and time limit, and procedures for exercising it. This right has been strengthened over time. Initially, the period under which consumers could withdraw from a sales contract was seven days. This period has been extended to 14 days. Moreover, the CRD provides extra protection to consumers when they are not obviously informed about the existence and the modalities of this right. In this case, they have up to a year to change their mind.

Beyond this key legislation, EU consumer law is composed of a myriad of different texts, some of which are very relevant to this study. Box 1 lists these existing frameworks—such as legislation on protecting against unfair commercial practices, unfair contract terms, and misleading and comparative advertising. The Unfair Commercial Practices Directive (UCPD) regulates misleading actions and omissions as well as aggressive commercial practices. The guidance on the UCPD from December 2021 (2021/C 526/01) provides additional legal interpretation on a range of questions, including the relationship with other EU legislation; environmental claims and planned obsolescence; the obligations of online platforms and marketplaces to act with a degree of professional diligence and not mislead consumers either through action or inaction; and enforcement and penalties, among others. Because of the broad range of policies that it brings together, this guidance is a very important policy development.

In the field of digital policies, the e-commerce directive 2000/31/EC—the foundational legal framework for online services in the EU—establishes basic requirements on mandatory consumer information. Another fundamental legislation to mention is the General Data Protection Regulation (GDPR) (EU) 2016/679, which protects the processing of personal data. In relation to the topic of this study, the GDPR contains an interesting provision according to which data subjects have a right to object to the processing of their data for direct marketing. Furthermore, another provision stipulates that “the data subject shall have the right not to be subject to a decision based solely on automated processing” (GDPR, 2016).

Additionally, the EU environmental framework contains rules on energy efficiency labeling and voluntary eco-labels.

Box 1 summarizes the existing framework governing consumer information in the EU.

## Box 1: Consumer rights frameworks in the EU

### CONSUMER PROTECTION

#### **Consumer Rights Directive (CRD) (2011/83/EU) (text currently in force [here](#))**

This directive is a key horizontal piece of legislation in EU consumer law harmonizing national consumer rules. It notably sets rules on the information consumers need to be given before they purchase a good and lays down the right of withdrawal, a period of 14 days during which a consumer can cancel the purchase of a good bought at a distance or off-premises. This directive was amended in 2019. The most relevant provisions are:

- Art. 5 on information requirements for contracts other than distance or off-premises contracts (eight different items of information)
- Art. 6 on information requirements for distance and off-premises contracts (20 different items of information)
- Art. 7 and 8 on formal requirements for off-premises contracts and distance contracts
- Art. 9 to 16 on the right of withdrawal

Pre-contractual information to be given includes:

- the main characteristics of the goods
- the total price of the goods inclusive of taxes and all additional freight, delivery or postal charges
- the arrangement for delivery, and
- the duration of the contract.

This list is not exhaustive.

Art. 3(4) provides that Member States may decide not to apply this directive if the value of the good is 50 euros or below.

For an exhaustive description, see Annex II of the DG Justice Guidance Document [here](#).

#### **Unfair Commercial Practices Directive (UCP or UCPD) (2005/29/EC) (text currently in force [here](#))**

The aim of this directive is to regulate business-to-consumer commercial practices and therefore increase consumer confidence. The text applies “before [through advertising and marketing], during and after a transaction in relation to a product.” It prohibits unfair commercial practices. The most relevant provisions are:

- Art. 6 on misleading actions
- Art. 7 on misleading omissions
- Art. 8 on aggressive commercial practices

Guidance on the implementation and application of directive 2005/29/EC on unfair commercial practices specifies:

Online marketplaces must take steps to make sure that the consumer is duly informed about the identity of the trader on the basis of the information provided by the trader itself. In fact, if the failure by the marketplace to inform about the identity of the actual trader creates the impression that the marketplace is the actual trader, this may result in it being liable for the obligations of the trader. ([here](#))

With the **New Deal for Consumers**, new transparency obligations are strengthening consumer rights online with regard to:

- **online marketplaces** are required to “inform consumers whether the third-party supplier is a trader or non-trader (a consumer), warn the consumer about the non-applicability of EU consumer-protection rules to contracts concluded with non-traders and explain who is responsible for the performance of the contract: the third-party trader or the online marketplace itself” (EUR-Lex, 2022).
- **ranking and search results**, meaning “general information [...] on the main parameters determining ranking [...] of offers presented to the consumer as a result of the search query.” (Article 7, UCP)
- **fake reviews and endorsements**
- **personalized prices based on automated decision-making**

**Unfair Terms in Consumer Contracts Directive** (93/13/EC) ([here](#))

The objective of this directive is to protect consumers against unfair standard contract terms imposed by traders. It requires that standard contract terms be drafted in plain intelligible language and that grey areas must always be interpreted in favour of consumers. Contract terms that are unfair are not binding on consumers.

**Misleading and Comparative Advertising Directive** (MCAD) (2006/114/EC) ([here](#))

The objective of this directive is to regulate misleading and unlawful comparative advertising.

**Directive on Certain Aspects Concerning Contracts for the Sale of Goods (SGD)** (EU) 2019/771 ([here](#))

This directive establishes the legal guarantee for consumer goods and regulates commercial guarantees.

**General Product Safety Directive** 2001/95/EC ([here](#))

**Directive on the Liability for Defective Products** 85/374/EEC ([here](#))

DIGITAL (INCLUDING PRIVACY AND DATA PROTECTION)

### **E-commerce Directive (2000/31/EC) ([here](#))**

This directive is a key piece of EU legislation adopted at the height of the e-commerce boom in the early 2000s. It regulates online services in the EU. It provides harmonized rules on transparency and information requirements for online providers on commercial communication, and electronic contracts. Relevant provisions include:

- Art. 5 on the general information to be given by the service provider to the service recipient
- Art. 6 on the information to be provided in commercial communications

### **General Data Protection Regulation (GDPR) (EU) 2016/679 ([here](#))**

This text is a key piece of EU legislation on protecting natural persons with regard to the processing of personal data and on the free movement of such data. The most relevant provisions are:

- Art. 21 on the right to object to targeted digital marketing
- Art. 22 on automated individual decision-making, including profiling

**E-privacy Directive (2002/58/EC) ([here](#))** and Communication from the European Commission from January 2004 on unsolicited commercial communications or “spam” (EUR-Lex, 2004)

The Directive notably regulates unsolicited commercial communication (spam) and cookies. The most relevant provisions are:

- Art. 13 on unsolicited commercial communications (spam) and the “opt-in” principle
- Art. 5(3) on cookies

### **Security and Information Systems Directive (NIS) (EU) 2016/1148 ([here](#))**

The objective of this directive is to provide a legal framework to boost the global level of cybersecurity in the Union.

### **EU Cybersecurity Regulation (EU) 2019/881 ([here](#))**

This text reinforces the EU Agency for Cybersecurity (ENISA) and establishes a cybersecurity certification framework for products and services.

## ENVIRONMENTAL PROTECTION

### **Directive on a Framework for the Setting of Eco-Design Requirements for Energy-Related Products 2009/125/EC ([here](#))**

This directive provides an overarching framework to set mandatory ecological requirements for energy-saving and energy-related products (e.g., lightbulbs).

**Regulation Setting a Framework for Energy Labelling (EU) 2017/1369 ([here](#))**

**Regulation on the EU Ecolabel EC 66/2010 ([here](#))**

The text establishes a voluntary eco-label award scheme intended to promote products with a reduced environmental impact during their entire life cycle and to provide consumers with accurate, non-deceptive, science-based information on the environmental impact of products.

**EU Green Consumption Pledge Initiative (voluntary) ([here](#))**

LEGO, L'Oréal, Decathlon, Colruyt, Philips, H&M, Engie, and others have signed this pledge. It calls upon businesses in various sectors of the economy

to undertake concrete, public and verifiable commitments to reduce their overall carbon footprint, to produce and market more sustainable products and to redouble their efforts towards raising the awareness of consumers about the impact of their consumption choices.

**OTHER LAWS, NOTABLY AROUND TRADE POLICY**

**Conflict Minerals Regulation (EU) 2017/821 ([here](#))**

This regulation lays down supply chain due diligence for union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas.

**Generalised Scheme of Preferences Plus (GSP+) ([here](#))**

The EU's GSP+ gives developing countries a special incentive to pursue sustainable development and good governance. Eligible countries have to implement 27 international conventions on human rights, labour rights, the environment and good governance. In return, the EU cuts its import duties to zero on more than two thirds of the tariff lines of their exports.

**Everything But Arms (EBA) ([here](#))**

This document is a reflection on the possible integration of consumer-relevant provisions in future trade negotiations.

The EBA scheme removes tariffs and quotas for all imports of goods (except arms and ammunition), coming into the EU from least developed countries (LDCs) (European Commission, n.d.e.).



#### *4.2.1.2 Possible Future Framework*

Current EU structural reforms pertain to the digital world, sustainability issues, and consumer protection. The EU current political agenda, articulated around the European Green Deal (2019) and the recent communications resulting from it (e.g., the New Circular Economy Action Plan, 2020, and the New Consumer Agenda, 2020) are of key importance to this analysis as they indicate the direction of travel of upcoming policy developments.

The European Green Deal is an overarching communication of the European Commission and presents the EU's new growth strategy and its commitment toward carbon neutrality in 2050. In relation to this study, the European Commission wants to empower the consumer in what is known as the “green and digital twin transition” and on March 30, 2022, proposed:

- (1) The Ecodesign for Sustainable Products Regulation (ESPR) that introduces overarching product sustainability rules to better inform consumers on the environmental sustainability characteristics of products, such as their durability, reparability, and more (European Commission, n.d.a);
- (2) A plan to combat greenwashing in the branding of products, including a series of amendments to the existing Unfair Commercial Practices Directive and the Consumer Rights Directive to combat early or premature obsolescence (European Commission, 2022a and 2022d).

In order to provide a broader policy background, it is also worth mentioning the wider policy context and the EU's willingness to take upstream measures. On February 23, 2022, the European Commission adopted its proposal on the Corporate Sustainability Due Diligence “to foster sustainable and responsible corporate behaviour and to anchor human rights and environmental considerations in companies' operations and corporate governance” (European Commission, n.d.b.). The aim is to regulate market behaviour more generally, rather than at an individual level. In the same spirit, on September 15, 2021, European Commission President Ursula von der Leyen announced that the Commission was planning to introduce a ban on products made with forced labour into the EU market. (European Commission, 2021i) Similarly, in December 2021, the European Commission published a proposal to improve the working conditions of people working through digital labour platforms. (European Commission, 2021g) Most recently, a European Citizens' initiative was submitted calling for a ban on fossil fuel advertising and sponsorships (European Commission, 2021d).

In the field of digital policies, the European Union is undertaking major reforms to regulate digital services in the EU. In December 2019, the European Commission published two key initiatives currently under intense discussion: the Digital Services Act (DSA) and the Digital Markets Act (DMA). These two initiatives “form a single set of new rules applicable across the whole EU to create a safer and more open digital space” (European Commission, n.d.c.). The DSA is a set of new rules aimed at better protecting consumers online and regulating the responsibilities and obligations of online intermediary services within the EU single market. These may include rules

on the traceability of traders on intermediary platforms, the transparency of online and targeted advertising, the transparency of recommender systems and user choice for access to information, and more. The DMA, in turn, is a list of dos and don'ts aimed at making sure that “gatekeepers”—large online platforms—behave in a fair way online. The DMA sets out a list of criteria for defining a large platform as a gatekeeper (European Commission, 2022e).

Box 2 presents a summary of possible frameworks presented by the European Commission and those to be adopted in the future.

### **Box 2: Proposal for a Regulation on a Digital Services Act**

**Proposal for a Regulation on a Digital Services Act (DSA)** and amending Directive 2000/31/EC

The proposal was published on December 15, 2020; it is under discussion starting in early January, 2022 (Bertuzzi, 2022). – see [here](#)

- Art. 22 on the **traceability of traders** imposes an obligation on platforms intermediating online contracts between traders and consumers to obtain identifying information from traders and to make “reasonable efforts” to verify the reliability of the information submitted.
- Art. 24 and 30 on rules on **online advertising transparency** require indication that an ad is an ad, information on who sponsored the ad, and information on how and why it targets a user.
- For very large platforms, the proposed regulation requires that ad repositories be accessible allowing researchers, civil society, and authorities to understand how ads were displayed and how they were targeted.
- The proposal requires transparency measures for online platforms, for example when using algorithms for recommendations.
- Art.29 proposes rules on recommender systems.

**Digital Markets Act** – see [here](#)

On March 25, 2022, the Council of the EU and the European Parliament reached a provisional political agreement on the Digital Markets Act (DMA), which is a regulation on contestable and fair markets in the digital sector. After final adoption, the regulation will be implemented within six months after its entry into force.

- It contains rules establishing obligations for gatekeepers (“companies that play a particularly important role in the internal market because of their size and their importance as gateways for business users to reach their customers”).
- More specifically, it contains provisions for gatekeepers to increase transparency by providing information about the **price of ads** and the **remuneration paid to the**

**publisher** as well as to provide access to their performance measuring tools and the information necessary for advertisers and publishers to carry out their own independent verification of the ad inventory.

**Proposal for a Regulation laying down harmonised rules on artificial intelligence (AI)** and amending certain Union legislative acts, published on March 30, 2022 – see [here](#)

This is a horizontal legal act laying down requirements for AI.

**Sustainable Products Initiative, including a revision of the Ecodesign Directive** proposed on March 30, 2022. – see [here](#)

- Establishment of overarching product sustainability principles
- Establishment of EU rules for setting requirements on mandatory sustainability labelling and disclosure of information (digital product passport)
- Setting of mandatory green public procurement criteria
- Creation of a framework to prevent unsold consumer products from being destroyed
- Setting the scope of the regulation (with a few exclusions)

The Commission also adopted the Ecodesign and Energy Labelling Working Plan 2022-2024, to “cover new energy-related products and update and increase the ambition for products that are already regulated” (European Commission, n.d.d.) Two sectoral initiatives were presented as part of the package: the EU Strategy for Sustainable and Circular Textiles and the revision of the Construction Products Regulation to address “two priority product groups that have a significant impact on the environment and climate” (European Commission, 2022c).

### **Digital Product Passport (DPP)**

The DPP collects and makes accessible data on a product as well as its value chains. The main objectives are to “to support sustainable production, to enable the transition to circular economy, to provide new business opportunities to economic actors, to support consumers in making sustainable choices and to allow authorities to verify compliance with legal obligations.”

The data summarize a product’s components, materials, chemical substances, and information on reparability, replacement parts, and proper disposal.

**Initiative on the substantiation of environmental claims using the Product/Organisation Environmental Footprint methods (green claims)**

The final publication, expected on March 30, 2022, has been delayed; it is expected to be part of the Circular Economy Package II in July 2022 – see [here](#)

- It contains rules requiring companies to substantiate claims they make about the environmental footprint of their products by using standard methods for quantifying them.
- The objective is to make the claims reliable, comparable, and verifiable across the EU, thus reducing greenwashing.

**Empowering consumers for the green transition** (proposed on March 30, 2022) – see [here](#)

- The objective is to strengthen the role of consumers in the green transition and empower them to make green choices.
- It includes measures to address greenwashing and early obsolescence.
- It sets minimum requirements for sustainability logos and labels.

**Review of the Food Information to Consumers Regulation** (publication expected in Q4 2022 and 2024) – see [here](#)

- It introduces standardized mandatory front-of-pack nutrition labelling.
- It extends the mandatory origin or provenance information for certain products.
- It provides a framework for sustainable food labeling.
- It offers a revision of the rules on date marking (“use by” and “best before” dates).

**Initiative on the right to repair** (publication expected on July 5, 2022) – see [here](#)

- It requires access to spare parts and repair manuals
- It asks for rules to facilitate repair for non-professionals.

*4.2.1.3 Positions of ANEC and BEUC on the Proposals on Sustainable Products and Substantiating Green Claims*

**Sustainable Products Initiative**

The consumer organizations ANEC and BEUC jointly responded to the European Commission’s public consultation and made recommendations on this proposal (ANEC and BEUC, 2021). In relation to product sustainability information and digitalization, the key recommendations from ANEC and BEUC on point-of-sale information are:

- “Alongside design-specific measures, the new horizontal sustainability aspects should also address the type of point-of-sale sustainability information available to

consumers regarding, inter alia, products’ lifetime linked to the guarantee, repairability, chemicals and recyclability” (ANEC and BEUC, 2021).

- “This type of product information must be easily accessible to consumers with the product,” such as on pack labels or paper leaflets, “and should not be solely provided through digital tools (e.g., the digital product passport)” (ANEC and BEUC, 2021).

They also indicate that “priority for digital tools should be given to products that would particularly benefit from increased transparency in the supply chain, such as textiles” (ANEC and BEUC, 2021). Furthermore, they advocate for the creation of a centralized repository of products’ sustainability information that may make circular economy practices easier.

### Initiative on Substantiating Green Claims

BEUC responded to the European Commission consultation on its upcoming initiative on substantiating green claims (BEUC, 2020a and 2020b), supporting the proposal to “give consumers clear, comparable and credible information about key product characteristics” on sustainability. It also points out the need to complement that with mandatory requirements (related, for example, to eco-design or due diligence in the supply chain criteria).

On green claims, BEUC recommends the introduction of a scheme requiring the pre-authorization of green claims and labels,<sup>47</sup> which could be inspired by the one already in place for food claims. On the premature obsolescence of consumer goods, BEUC recommends to (1) expand legal guarantees for longer-lasting products; (2) expand the reversal of the burden of proof to allow consumers to make effective use of their legal guarantee rights; (3) introduce direct producer liability; and (4) ban practices that deliberately cause the premature obsolescence of products.

ANEC has also responded to the European Commission consultation on its upcoming initiative on substantiating green claims (ANEC, 2020). Its main disagreement with the current approach taken by the European Commission is a methodological one. ANEC considers that the substantiation of claims should be done using the comprehensive life cycle assessment (LCA) method and not the limited Product Environmental Footprint (PEF) and Organisation Environmental Footprint (OEF) methods. ANEC criticizes the fact that many LCA indicators are used for advertising, but do not necessarily provide sound information to help consumers choose an environmentally friendly product.

#### *4.2.1.4 France*

France has recently enacted regulations that deal with sustainability information which merit attention. The French legislation is particularly interesting as it partially anticipates what the EU is planning to propose in the near future. Moreover, given that France is currently holding the

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<sup>47</sup> BEUC calls for the exclusion of Type 1 ecolabels and for the extension of eco-design to new product categories and to sustainability elements beyond energy efficiency.

Presidency of the Council of the European Union, the country could have a persuasive role in shaping the European Commission’s upcoming initiatives.

The most recent legislation adopted by France is the “Climate and Resilience Law” (Loi no 2021-1104 du 22 août 2021), which requires mandatory disclosures on the environmental impact of certain products. One of the main features of this law is that it includes requirements for the environmental and social labeling of certain goods sold on the French market. Such labeling will take into account the environmental impact—particularly in terms of greenhouse gas emissions, biodiversity harm, and consumption of water and other natural resources—over the entire life cycle of the product. The list of goods and services subject to environmental labeling will be detailed in an upcoming implementation decree and will include clothing items, food products, furniture, hotel services, and electronic products.<sup>48</sup>

In addition to labelling requirements, the law contains provisions on advertising. For example, there is a ban on advertising related to the marketing or promotion of fossil fuels and polluting cars. The law also includes provisions on green claim advertising, in particular prohibiting the use of any wording on a product, packaging, or advertisement indicating that the product is carbon-neutral or has no negative impact on the climate, unless strict conditions are met.<sup>49</sup>

Another important initiative regarding sustainability information can be found in the recent “Anti-waste Law” (Loi no 2020-105 du 10 février 2020). This law, as well as establishing some concrete goals on waste management and the reuse of resources, includes provisions aimed at better informing consumers on the environmental characteristics of products.

In this regard, traders need to inform consumers by means of marking, labelling, or any other appropriate way of declaring the environmental qualities and characteristics of the product. In particular, depending on the type of product, these include the incorporation of recycled material, the use of renewable resources, the product’s durability, its compostability, its reparability, the possibilities of reuse, its recyclability, and the presence of dangerous substances, precious metals, or rare earths. All these qualities and characteristics are established by favouring the analysis of the entire product life cycle. In addition to this requirement, it is prohibited to display terms such as “biodegradable” or “environmentally friendly,” or equivalent wording, on a product or packaging.

The law also encourages the repair and reuse of products, with strong measures to increase consumer information and measures to fight against planned obsolescence. Among these measures is the introduction of a mandatory display of a “reparability index,” which entered into force in January 2021. The index applies to five product categories—namely washing machines, smartphones, TVs, computers, and electric lawnmowers—and will be further extended to other

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<sup>48</sup> Pilot phases are carried out for each category of goods and services under the scope of the law in order to evaluate different methodologies for calculating environmental impacts and display methods.

<sup>49</sup> The law modifies Art. L.132-2 Consumer Code, which provided for a general fine of 50% of advertising expenses.



categories. The main objective is to avoid the premature disposal of products, to preserve the resources necessary for their production, and to encourage consumers to choose products that are more easily repairable.

Currently, the index assesses five criteria: documentation, disassembly, availability of spare parts, price of spare parts, and product-specific aspects. By 2024, the law provides for this reparability index to be replaced by a “durability index,” which will include new criteria such as the robustness or reliability of products. An implementing decree will be adopted later on to establish its calculation as well as determine the list of products that will be covered.

Lastly, the “Anti-waste Law” also provides for specific rules on spare parts availability and on better information regarding statutory conformity warranties. In France, according to the Extended Producer Responsibility (EPR), producers and distributors finance their waste management through contributions to a Producer’s Responsibility Organization (PRO) in charge of managing the waste on their behalf. The more polluting the product, the higher the end-of-life costs, following the “polluter pays” principle. The law puts forward new EPR streams covering categories such as tobacco products, toys, sports, and leisure goods, among others.

#### *4.2.2 Other Countries*

As previously mentioned, in addition to the EU framework and France, this policy section examines relevant legislation and developments in Chile, China, India, Morocco, South Africa, and the Republic of Korea. The information on these countries is based on publicly available material (legal texts and academic articles). The research was conducted in English, French, and Spanish.

##### *4.2.2.1. Chile*

Chile is one of the fastest-growing economies of Latin America, which has enabled a significant reduction in poverty (World Bank, n.d.a). The digital economy represented 3.7% of Chile’s GDP in 2020 and is expected to continue increasing. To give an example, online sales increased by 196% in the first quarter of 2021 alone (International Trade Administration, 2022). This e-commerce growth and the recent enactment of a regulation on the matter that justifies the inclusion of Chile as a case study in this review.

The main legislative framework governing consumer protection in Chile is Law 19496. This law is supplementary in nature, which means that its provisions apply only to those aspects of consumer protection that are not covered by sectoral laws. The law establishes the basic rights and duties of consumers, such as the right and the freedom of choice in goods and services, the right to information, the right not to be discriminated against by suppliers, and the right to access justice and the remedies provided by law. (UNCTAD, 2021d)



The country has recently enacted a regulation on e-commerce aimed at strengthening the transparency and quality of the information provided to consumers on e-commerce platforms in order to encourage informed decision-making and to reinforce consumer freedom of choice (Ministerio de Economía, Fomento y Turismo, 2021). The regulation entered into force in March 2022 and applies to sellers that offer goods or services on e-commerce platforms in exchange for a price or a fee, as well as to operators of e-commerce platforms through which products of third-party sellers are offered. E-commerce is defined in the regulation as any internet site or platform accessible through electronic means which allows sellers to offer products or services and consumers to acquire them. The new regulation stipulates that a consumer's contractual consent will not be understood as formed if the consumer has not previously had clear, understandable, and unequivocal access to the general conditions of the contract as well as the possibility of storing or printing those conditions.

All the data, instructions, background, and indications that the supplier must provide to the consumer under the regulation constitute basic commercial information. This includes, among others:

- Online information delivery, which must be complete, clear, precise, and easily accessible. Furthermore, the information must be provided in simple language that is easy to understand prior to the purchase of the product or the contracting of the service.
- Information on the essential features and benefits of the products or services. This information must refer to the particularities or qualities of the product or service so that the consumer can make an informed consumption decision. The minimum information includes the characteristics of the product or service offered according to its nature and destination; the origin or place of manufacture; the brand, model, and sub-model of the product; the associated guarantee indicating the terms and the conditions under which it operates; the product's identifiable qualities, such as dimensions, size, colour, weight, number of units that compose it, material, and content of the product; in the case of services, a description of their provision; and any other relevant condition, characteristic, or provision of the product or service offered.
- Information about the total cost including the price, taxes, additional transportation or dispatch costs, delivery or postal costs, commissions, and any other expense that may be incurred and charged to the consumer.
- Information on the right of withdrawal. The existence of this right must be indicated on the platform "in an unequivocal, prominent and easily accessible manner, prior to the conclusion of the contract and payment of the price of the product and/or service, and the way in which the consumer may exercise this right" (Ministerio de Economía, Fomento y Turismo, 2021, Article 14; quote translated by IISD).

In terms of environment-related legislation, there is a label initiative currently in place on the recyclability of hundreds of containers and packaging of mass consumption products adopted by

some companies (Ministerio del Medio Ambiente, n.d.). This gave rise to launch of a process for regulating product labeling in Chile.

In terms of eco-labeling, Resolution 42 starts the preparation of Supreme Decree 6 of 2021<sup>50</sup> that will regulate an instrument aimed at preventing the generation of waste, promoting its recovery, and in particular, the labelling of one or more products. According to the resolution, the labelling would preliminarily contain the information on the components, materiality, and instructions for the recycling of home containers of food or food products, personal hygiene products, and household cleaning products. Moreover, the resolution states that the supreme decree will establish sustainability criteria that must be met to obtain certification.

Box 3 summarizes the existing framework governing consumer information in Chile.

### Box 3: Existing framework governing consumer information in Chile

<p>CONSUMER PROTECTION</p> <p><b>Consumer Protection Act of 7 March 1997</b> (Law 19496)</p> <p>One of the objectives is to regulate the basic commercial information which “must be provided to the public by means that ensure clear, expeditious and timely access” (Ministerio de Economía, Fomento y Turismo, 1997; translated by IISD).</p> <p>The basic rights of consumers include:</p> <ul style="list-style-type: none"> <li>• Freedom of choice in goods and services</li> <li>• The right to truthful and timely information on goods and services offered, their price, conditions of contract, and other relevant characteristics</li> <li>• The right to safely consume goods and services, and to the protection of their health and the environment</li> <li>• The right to education on responsible consumption</li> </ul>
<p>DIGITAL (INCLUDING PRIVACY AND DATA PROTECTION)</p> <p><b>Electronic Commerce Regulation</b> (entered into force in March 2022)</p> <p>The objective is “to strengthen the transparency and quality of the information that is delivered to consumers on e-commerce platforms regarding the characteristics, essential benefits, price of the offered products and services, and all other relevant information to encourage informed decision-making, with a view to purchasing products or contracting</p>

<sup>50</sup> The executive power has the right to enact regulations (*reglamentos*), which are called supreme decrees (*decretos supremos*) and are issued by the President of the Republic. See Gómez, S. E. (2019).

services” (Ministerio de Economía, Fomento y Turismo, 2021; translation by IISD). According to Section II on the delivery of online information:

- Information must be complete, clear, accurate, and easily accessible in simple and easy-to-understand language, and available prior to the purchase of the product or contracting of the service.
- Information on the essential characteristics and features of the products or services necessary for the consumer to make an informed consumer decision.
- Information regarding the terms, conditions, and total cost associated with the acquisition of a product or contracting of a service.
- Information on delivery, dispatch, or pick-up.
- Information on the right of withdrawal.
- Information on contact support.

#### **Protection of Private Life (Law 19628)**

- This law sets out rules on the collection and use of personal data.
- It specifies that if a request for personal data is made through an electronic network, there must be a record of: (1) the identification of the requesting party; (2) the reason and purpose of the request; and (3) the type of data being transmitted.

#### ENVIRONMENTAL PROTECTION

#### **Clean Production Agreement for Eco-Labeling (APL)**

- Under the Clean Production Agreement for Eco-Labeling, Chile launched a certification procedure for a voluntary eco-label (#ElijoReciclar) on the recyclability of containers and packaging. The procedure is part of a two-year pilot project that seeks to collect experience and information to implement in the future a second phase of greater scope and with the necessary improvements.
- Applicant companies must first adhere to the Clean Production Agreement, and second, submit the container to the certification process which ensures that at least 80% of the container’s weight is made of technically recyclable materials, that these materials can be separated from the rest of the container for recycling, and that there is currently a demand from the recycling industry for these materials. The certification process is carried out by an independent organization that ensures compliance with the requirements.

**Resolution 42** ([here](#))

- This resolution initiates the process of elaboration of the supreme decree to regulate eco-labelling, as mentioned above.

#### *4.2.2.2 China*

With a population of 1.4 billion, China is included in this review because it is estimated to be the biggest e-commerce market in the world.

China has had a horizontal consumer protection law in place since 1993. This text was amended 20 years later, in 2013, to include rules related to e-commerce transactions, among other aspects. This law sets out the mandatory pre-contractual information that businesses have to provide to consumers.

At the same time, this law also stipulates a separate information right for consumers which has a broader scope than the information obligations of businesses and includes a “product’s specifications, grade, main ingredients, manufacturing date, shelf life, inspection certificate, user manual, after-sale services of goods or the contents, specifications and fees and charges of services.” Shaolan Yang (2019) notes that this “legislative inconsistency” creates uncertainty on whether certain product information should, or should not, be disclosed.

China has also adopted legislation on misleading commercial practices through the Anti-Unfair Competition Law and the Advertising Law. For instance, the Advertising Law bans deceiving and misleading allegations.

Concerning digital policies, the E-Commerce Law, adopted in 2018, provides detailed rules on information disclosure for e-commerce, notably on identification and operation, and makes a distinction between e-commerce platform business operators and in-platform business operators. Additionally, this law gives consumers a right to be informed in e-commerce transactions about personalized recommendations of products based on their preferences or consumption habits.

The Cyber Security Law of 2017 provides information requirements for personal data collection and data processing activities. Additional rules provide that advertisement on the internet should be identifiable and clearly marked as such. If products are ranked according to bids, the word “advertisement” has to be displayed prominently. Paid search results must be distinguished from organic search results and consumers need to be aware of their paid nature. China has both a China Energy Label (compulsory energy efficiency labeling regime) and a framework on environmental labeling.

Since 2020, China has been introducing very important legislative changes. A document published in January 2022 articulates 19 points that outline upcoming reforms aimed at addressing unfair practices by internet platforms, the protection of consumer rights, and

responsibilities regarding the quality of information provided by platforms, manufacturers, and traders. (NDRC, 2022)

In a similar vein, China has adopted new measures on cybersecurity and algorithms and is currently amending its Antimonopoly Law with the aim of regulating the illegal conduct of online platforms.

Box 4 summarizes the existing framework governing consumer information in China.

#### **Box 4: Existing framework governing consumer information in China**

##### CONSUMER PROTECTION

##### **Consumer Protection Law (1993 and amended in 2013)**

- Consumers have the right to knowledge of the true facts concerning commodities purchased and used.
- Consumers have the right to require relevant information from a business operator providing commodities about a commodity's price, place of origin, producer, usage, functions, specifications, grade, main ingredients, date of production, date of expiry, certificate of inspection, operation manual and after-sale service, or of contents, specifications, and fees of services in respect of commodities.
- Consumers have the right to obtain information relating to consumption and the protection of consumers' rights and interests.
- Business operators shall provide consumers with true information concerning commodities and shall not conduct false advertising.
- The law includes rules on e-commerce transactions.
- Consumers have the right of withdrawal for distance or online sales (seven days)
  - Product to be returned must be in good condition and the respective expenses are to be borne by the consumer
  - The law discusses the liability of platform providers.
  - The law covers data protection, meaning the lawfulness of the collection and use of personal information of consumers.
  - The law prohibits spam.

Also see Contract Law with relevant provisions (e.g., on standard clauses).

##### **Antimonopoly Law**

##### **Advertising Law**

- Businesses are prohibited from deceiving or misleading consumers by false or misleading information.

**Interim Measures for the Administration of Internet Advertising by State Administration for Industry and Commerce**, promulgated by Decree No. 87 of the State Administration for Industry and Commerce

- These specify that an internet advertisement should be identifiable and be conspicuously indicated as an advertisement.

### **Interim Measures for Internet Commerce**

Also **Product Quality Law** and **Food Safety Law**

DIGITAL (INCLUDING PRIVACY AND DATA PROTECTION)

### **E-commerce Law** of the People's Republic of China

- Requires all e-commerce business operators to publish their business operation certificates and all licenses held by them and to update any change of this information promptly (to distinguish their own business from in-platform businesses).
- Includes additional obligations to publish platform service agreements or transaction rules.
- Requires e-commerce business operators to provide consumers with options that do not target their personal characteristics.

**Personal Information Protection Law (PIPL)** (see Guo et al. 2021) (came into effect on November 1, 2021)

### **Cyber Security Law** of the People's Republic of China

- Sets out general information duties.
- Requires that if personal information is used for commercial and personalized recommendation, the data subject can choose to opt out.
- Requires that if personal information is used in auto decision-making which has significant influence on personal interests, the consumer has the right to submit claims.

### **Data Security Law**

**Administrative Regulations on Internet Information Search Services** by State Internet Office (2016)

- Art.11 provides that paid search services must be distinguished from the natural search results, and notably an identifying mark is needed for every piece of paid search information.

### **Internet Information Service Algorithmic Recommendation Management**

## Regulations

Art. 16 obliges states algorithmic recommendation service providers to “notify users in a clear manner about the algorithmic recommendation services they provide and to publicize the basic principles, purposes, and motives in a suitable manner.” (Law, 2022)

### ENVIRONMENTAL PROTECTION

China has made a commitment to reach net zero emissions by 2060.

Key texts notably include (see [here](#)) the **Circular Economy Promotion Law**.

#### **Energy Conservation Law**

- China Energy Label: compulsory energy efficiency labeling regime
- China Environmental Labeling Program

There are currently 96 types of environmental labeling products in China such as automobiles, electronic products, building materials, textiles, packaging supplies, daily chemicals, and light industry products. Moreover, over the past few years, the labeling has included services and some industrial products as subject to certification (CEC, n.d.).

### *4.2.2.3 India*

With a population of over 1.2 billion, India has witnessed important economic growth in recent years. The country is included in this review because it has one of the world’s biggest e-commerce markets and has also recently introduced some relevant reforms.

In 2019, India adopted new horizontal legislation on consumer protection through the new Consumer Protection Act. The right to be informed is defined as the right to have information “about the quality, quantity, potency, purity, standard and price of goods, [...], as the case may be, so as to protect the consumer against unfair trade practices.” (Ministry of Law and Justice, 2019) In 2020, new rules on consumer protection in e-commerce were enacted with provisions on information requirements, liabilities of marketplaces, and duties for sellers selling on marketplaces and “inventory e-commerce entities” (Department of Consumer Affairs, 2020).

Regarding advertising, it should be noted that India does not have a central statutory agency or uniform legislation in place. Instead, advertising is regulated and controlled by the Advertising Standards Council of India (ASCI), which is a non-statutory body. ASCI seeks to ensure the protection of consumer interests by requiring that advertisement conform to its Code for Self-Regulation. In this regard, advertisement should be “legal, decent, honest and truthful, and not hazardous or harmful while observing fairness in competition” (Narula and Bakhru, 2021).

Regarding green claims, in principle they would be covered under ASCI guidelines on false advertisement claims not supported by evidence. However, there are no clear guidelines on green



advertising or environmental claims.

In terms of personal data protection, it is the Information Technology Act, in force since 2000, and the rules notified thereunder that largely govern data protection. However, there is currently no data protection authority in India. The Information Technology Act, which sets the general framework for the legal recognition of transactions carried out by electronic means, commonly referred to as e-commerce, lacked provisions for data protection when enacted. As such, it was subsequently amended and in 2008 section 43A was inserted, which explicitly provides for a right to compensation for improper disclosure of personal information. Moreover, in 2011, the Information Technology Rules were introduced to further regulate data protection.

In 2017, a case decided by the Constitutional Bench of the Supreme Court of India held that privacy is a fundamental right entrenched in the constitution. This led to the formulation of the Personal Data Protection Bill, which was referred to a Joint Parliamentary Committee in 2019. The main developments are:

- The inclusion of data localization requirements
- Prohibition on cross-border transfers of critical personal data
- A broad definition of sensitive personal data
- Permission for cross-border transfers of personal data only in limited circumstances (following the approach of GDPR).

In December 2021, the Joint Parliamentary Committee submitted a report to the Indian Parliament after two years of deliberations on the Personal Data Protection Bill (see Atlantic Council, 2022).

Additionally, India has both an Energy Label and a framework on environmental labeling.

Box 5 summarizes the existing framework governing consumer information in India.

### **Box 5: Existing framework governing consumer information in India**

CONSUMER PROTECTION - [here](#)

#### **The Consumer Protection Act**

The Act covers:

- Consumers' general right to be informed about the quality of the product
- Provisions on unfair trade practices

**Consumer Protection (E-Commerce) Rules - [here](#)**

These rules cover:

- Duties of e-commerce entities, including on the obligation to provide business information or contact details
- Liabilities of marketplace e-commerce entities, including return, refund, and payment methods
- Obligation to provide “an explanation of the main parameters which, individually or collectively, are most significant in determining the ranking of goods or sellers on its platform” as well as “a description of any differentiated treatment which it gives or might give between goods and services or sellers of the same category”
- Duties of sellers on marketplaces (all relevant details about the goods)
- Duties and liabilities of inventory e-commerce entities

DIGITAL (INCLUDING PRIVACY AND DATA PROTECTION)

- **Information Technology Act**

ENVIRONMENTAL PROTECTION

**Energy Conservation Act**

- Mandatory or voluntary labeling schemes on energy efficiency
  - Eight categories of appliances must have an energy efficiency label
  - 13 categories of appliances can, on a voluntary basis, have an energy efficiency label

**Resolution of the Department of Environment, Forests and Wildlife of the Ministry of Environment and Forests on the Scheme on Labelling of Environment Friendly Products**

- Indian eco-label EcoMark

*4.2.2.4 Morocco*

Morocco is a growing economy with 35 million inhabitants (World Bank, 2019). The country is included in this review because even though traditional purchasing still dominates the market (UNCTAD, 2018), e-commerce is accelerating with an increase of 21% in 2021 (EcommerceDB, n.d.).

Law 31-08, Ordering Consumer Protection Measures (Ministère de la Justice et des Libertés, 2011), is a key horizontal regulation on consumer protection in Morocco. It contains 206 articles establishing fundamental consumer rights along with their scope and definition. Moreover, it legislates business obligations to provide information and provides for protection against unfair

contract terms. The regulation also covers e-commerce.

Regarding the right to information, the law states that any supplier or seller must, by any appropriate means, put the consumer in a position where they know the essential characteristics of the product or service, as well as the origin and the expiry date, if applicable. The information must be provided in a way that enables the consumer to make a rational choice according to their needs and means. For this purpose, the supplier or seller must—by means of marking, labelling, display, or other appropriate process—inform the consumer of the product’s price, the instructions for use, the duration of the warranty and its conditions as well as the special conditions of sale or performance of the service, and where applicable, any limitations of contractual liability.

In terms of environmental regulation, Morocco has adopted a National Strategy for Sustainable Development, to be implemented from 2017 to 2030, which promotes the development of certification instruments, organic labelling, and eco-labelling, among other things.

Box 6 summarizes the existing framework governing consumer information in Morocco.

### **Box 6: Existing framework governing consumer information in Morocco**

#### CONSUMER PROTECTION

#### **Ordering Consumer Protection Measures (Law 31-08) (Ministère de la Justice et des Libertés, 2011)**

Information must be provided in a way that enables a “rational choice” to be made by the consumer according to “needs and means.”

The law covers:

- Content and form of product labeling for trade and industry sectors
- Misleading advertising
- Distance contracts, including e-commerce
- Right of retraction

Some articles of the law require implementing texts:

**Decree 2.12.503 of 11 September 2013** Title II on information for consumers.

**Decree 2.12.503 of 11 September 2013** Title III and **MIICEN decision 2 January 2014** on compulsory disclosure, form, and modalities for the labeling of goods.

#### DATA PROTECTION AND PRIVACY

#### **Protection of Consumer Privacy (Law 09-08)**

The law covers:

- The right to express opposition to the collection and treatment of the data
- Prohibition of direct marketing

ENVIRONMENTAL PROTECTION

**National Charter for the Environment and Sustainable Development (Law 99-12)**

- States the objective to adopt a national strategy for sustainable development.
- Promotes the development of certification instruments, organic labeling, and eco-labeling.

**National Strategy for Sustainable Development (SNDD) (2017)**

- Lists the objectives to promote organic and reasonable production and develop Bio Maroc labeling.

*4.2.2.5 Republic of Korea*

According to the World Bank, “the Republic of Korea is one of the few countries that has successfully transformed itself from a low-income to a high-income economy and a global leader in [...] technology” (World Bank, n.d.b). The country has adopted modern and ambitious reforms and is seen as a development model both in the Asian region and for developing countries. For these reasons, the Republic of Korea is included in this review.

The Republic of Korea has a highly developed legislative framework on consumer protection. In relation to this study, Korean legislation contains the right for consumers to be informed, details the pre-contractual information that businesses must provide to consumers, and includes a right of withdrawal (seven days). Art. 13 (2) of the Framework Act on Consumers stipulates that “the State [...] shall formulate necessary policies so that enterprisers’ information relating to [...] environment-friendliness [...] can be provided for consumers to reasonably choose goods, etc.” The Republic of Korea has also adopted specific rules on the protection of consumers in e-commerce. The country has rules on deceptive and misleading claims and provisions on correct and useful information to consumers, which are accompanied by an important set of soft law instruments such as guidelines on green claims, labeling and advertising, comparative labeling and advertising, and internet advertisement.

The Republic of Korea has very recently adopted a revised text on data protection, known as the Personal Information Protection Act (PIPA). In December 2021, the European Commission adopted an adequacy decision for the Republic of Korea, meaning that the EU considers that the country’s new rules provide a high level of data protection, similar to that adopted in the EU.

Regarding sustainability and the environmental, the Republic of Korea has a comprehensive

policy package, including carbon footprint labeling and eco-labeling (and also green stores, green credit cards, and more). The Korea Environmental Industry and Technology Institute (KEITI) is a very active agency promoting sustainable production and consumption domestically. Beyond Korea, the KEITI also serves as co-secretariat of the Asia Carbon Footprint Network, a regional hub to reinforce international cooperation and promote knowledge-sharing among neighbouring countries (China, Thailand, and the Philippines).

Box 7 summarizes the existing framework governing consumer information in Republic of Korea.

### **Box 7: Existing framework governing consumer information in the Republic of Korea**

#### CONSUMER PROTECTION

#### **The Framework Act on Consumers**

This Act includes:

- The right to information as a fundamental right
- The provision of information to consumers:
  - Art. 13 (2): “The State and local governments shall formulate necessary policies so that enterprisers’ information relating to [...] environment-friendliness [...] can be provided for consumers to reasonably choose goods, etc.”
- A provision on protection of personal information
- A section on the duties of enterprisers, meaning those that manufacture, process, pack, import or sell goods or that provide services.
  - “Enterprisers shall sincerely provide consumers with accurate information on goods, etc.”
- A section on the establishment of consumer policy and the establishment of a basic plan
  - The basic plan should include matters on the facilitation of consumer education and information provision

#### **Act on Fair Labelling and Advertising**

The Act includes:

- Rules on deceptive or misleading claims
- Provisions on correct and useful information to consumers

#### **Act on Door-to-Door Sales, etc.**

- The door-to-door seller or telemarketer has the obligation to provide information to consumers.

- The consumer has the right to withdraw their subscription, among other things.

### **Standardized Contracts Act**

#### **Act on Consumer Protection in Electronic Commerce, etc.**

The Act includes:

- The duty of business entities to provide information to consumers, including product-specific information.
- Consumers' right to cancel an order.

#### **Guidelines for the Fair Trade Commission's examination of:**

- labeling and advertising of environmental facts
- internet advertisement
- comparative labeling and advertising
- deceptive labeling and advertising
- the labeling and advertising of recommendations, guarantees, and more.
- the labeling and advertising of receipt of awards, certification, and more.

### **Fair Trade Act**

#### **Fair Transaction in Large-Scale Distribution Act**

#### **DIGITAL (INCLUDING PRIVACY AND DATA PROTECTION)**

##### **Personal Information Protection Act (PIPA) (last updated in 2020)**

- The Act contains rules on the collection and use of personal data.
- It specifies that the online retailer must make certain disclosures to obtain consent from the customer when collecting, using, or transferring customers' personal data.

#### **ENVIRONMENTAL PROTECTION**

##### **Act and Enforcement Decree on Promotion of Purchase of Green Products**

##### **Energy Use Rationalization Act**

- This Act sets out a mandatory labeling scheme.

##### **Operational Rules of the Korea Eco-labelling**

##### **Regulations on the Operational Procedure of Carbon Footprint Labelling**

## **Support for Environmental Technology and Environmental Industry Act**

### **Guidelines for Carbon Footprint of Products**

#### **Rules on the Green Store Certification**

#### *4.2.2.6 South Africa*

South Africa has been included in this study given its political and economic importance in Africa and the fact that it is by far the dominant e-commerce market in sub-Saharan Africa (Oluwole, 2021).

The Consumer Protection Act is South Africa’s main horizontal legislation providing for consumer protection measures. It contains provisions on the consumer’s right to information, privacy, choice (including a right to return goods), fair and responsible marketing, fair and honest dealing, and fair, just, and reasonable terms and conditions.

The country has also adopted an Electronic Communications and Transactions Act with a dedicated section on consumer protection, which stipulates that businesses have to provide consumers with information, including “sufficient description of the main characteristics of the goods.” (Parliament of the Republic of South Africa, 2002)

On the environment, South Africa has a framework on energy efficiency labelling schemes and eco-labels that it is still evolving.

The table below summarizes the existing framework governing consumer information in South Africa.

#### **Box 8: Existing framework governing consumer information in South Africa**

##### CONSUMER PROTECTION

#### **Consumer Protection Act (CPA) - [here](#)**

One of the CPA’s objectives is to “improve access to, and the quality of, information that is necessary so that consumers are able to make informed choices according to their individual wishes and needs”.

- Chapter 2, Part D on the right to disclosure and information contains provisions on:
  - Right to information in plain and understandable language
  - Disclosure of price of goods
  - Product labelling and trade descriptions
  - Disclosure of reconditioned or grey market goods



- Sales records
- Disclosure by intermediaries
- Identification of deliverers, installers and others

Also, in Part C of Chapter 2 , the CPA sets out consumers’ rights to a cooling-off period after direct marketing, to fair and responsible marketing, to fair and honest dealings (including the right to be protected against false, misleading and deceptive representations), and to fair, just, and reasonable terms and conditions.

#### DIGITAL (INCLUDING PRIVACY AND DATA PROTECTION)

##### **Electronic Communications and Transactions Act (ECTA) - [here](#)**

The ECTA’s chapter on consumer protection specifies:

- Eighteen categories of information must be included on the webpages where these goods are offered, providing “a sufficient description of the main characteristics of the goods [...] offered by that supplier to enable a consumer to make an informed decision on the proposed electronic transaction”.
- Rules on the cooling-off period (five days)
- Rules on unsolicited goods, services and communications
- Rules on the collection of personal data.

##### **Protection of Personal Information (POPI Act or POPIA)**

The Act includes:

- Rules on direct marketing by means of unsolicited electronic communications
- Rules on automated decision-making.

#### ENVIRONMENTAL PROTECTION

##### **National Energy Act**

The Act sets out rules on:

- Energy efficiency labelling
- Ecolabel South Africa

### *4.3 Analysis and Interpretation of the Policy Review*

#### *4.3.1 Core Elements, Best Practices, and Lessons Learned*

As a general observation, with some exceptions such as the new legislation introduced by France, sustainability and the circular economy have not yet been fully considered from a consumer law perspective.

In the jurisdictions under analysis, we can identify proper consumer legislation which is distinct and separate from contract rules. Sometimes consumer protection rules are concentrated in one horizontal law, sometimes those rules are fragmented across different texts. In this regard, there is a vast range of sectoral legislation related to categories such as food, beverages, medicines, toys, dangerous goods, and others. The legislative framework on consumer protection is in constant evolution with recently adopted texts and ongoing reforms.

With different wording and degrees of detail, we noticed the existence of product information requirements in all jurisdictions, notably on the main characteristics, the consumption or the quality of the product. In some instances, there is also the introduction of specific requirements regarding product sustainability. For example, in the Republic of Korea, the Framework Act on Consumers stipulates that “the State [...] shall formulate necessary policies so that enterprisers’ information relating to [...] environment-friendliness [...] can be provided for consumers to reasonably choose goods, etc.” In addition, the EU introduced a legislative proposal that would proactively set an obligation for businesses to provide mandatory product sustainability information. In all jurisdictions analyzed, the legislator has introduced a right of withdrawal, though the exact contours of this right may vary, for instance on the exact length of the withdrawal period. In all geographies, we identified rules on unfair commercial practices and unfair terms and conditions.

As for digital policies, all seven jurisdictions have legislation regulating e-commerce transactions with different levels of sophistication and temporality, in the sense that some are more recent than others. This legislation includes information obligations. The main challenge, addressed or in the process of being addressed in each jurisdiction, is around the allocation of responsibilities between a platform and a trader. This is crucial in terms of information obligations and related questions. All jurisdictions analyzed have rules on privacy but there are major discrepancies between them with regard to the level of data protection.

Regarding rules on energy efficiency labelling and on the development of sustainability labels, the situation differs greatly between jurisdictions in terms of the products covered, the methodology followed in the assessment of energy efficiency, the criteria used, and the reliability of claims. While it is difficult to draw comparisons, the EU and the Republic of Korea seem to have more advanced policy frameworks than the other jurisdictions studied here.

In terms of good practices in developing product sustainability information in e-commerce, initiatives to train traders on consumer protection—such as the EU Consumer Law Ready Programme, an EU-funded program that trains SMEs on their rights and obligations toward consumers—and initiatives to strengthen international cooperation—such as the cooperation that is currently being rolled out between the EU and Canada (RAPEX-Radar)—are worth highlighting. In a similar vein, the Korea Environmental Industry and Technology Institute (KEITI) undertakes many activities to promote green consumption, including the Environmental Information Disclosure Programme that promotes environmentally friendly business

management and as serving co-secretariat of the UNESCAP Asia Carbon Footprint Network promoting cooperation in the region.

#### *4.3.2 Gaps and Issues*

Our preliminary observation is that more laws and policies have been formulated around the world to address sustainable production as compared to sustainable consumption.

First, the literature and policy review revealed that currently there is no horizontal legislation imposing requirements on mandatory sustainability information or labelling in a holistic way—i.e., integrating environmental, social, and economic dimensions. (As suggested, the most advanced legislation in this regard could be in France.) Additionally, existing legislation on eco-design, energy (efficiency) labelling, and eco-labels is generally insufficiently developed and needs to be improved, broadened, and better enforced.

Second, in today’s digitalized and globalized world, and in the context of climate change, “consumers are becoming increasingly aware of the environmental and social impacts of their purchasing choices and are willing to change their lifestyle to reduce their footprint” (ANEC & BEUC, n.d.). Consumers thus want (more) information on product sustainability. In response, corporate green claims have evolved and exploded (Watson, 2016). In January 2021, the European Commission and consumer authorities released the results of a study that screened websites for greenwashing. The study noted that half of the green claims lack evidence: “National consumer protection authorities had reason to believe that in 42% of cases the claims were exaggerated, false or deceptive” (European Commission, 2021h). The literature and policy review did not find comprehensive legislation requiring that green claims be substantiated by making them clear, specific, unambiguous, and accurate. Nevertheless, the recent legislative developments in France described in section 4.2.1.4 are a step in that direction.

Third, information policies have limits. For many decades, consumer protection law and policies favoured information provisions over interventionist approaches. Mandatory product sustainability information as such is not enough to prompt a transition toward sustainable consumption. As discussed in Chapter 3, green nudges drawn from behavioural economics can help steer consumers toward sustainable options. However, there is no comprehensive legislation that provides for green nudging, for example by introducing mandatory green default options for more sustainable ways of transporting and delivering goods.

Fourth, looking at digitalization and the steep rise of online shopping, one of the drawbacks of transactions that take place over the internet is that it is often very difficult for consumers to know who they are dealing with. Some legislation, both existing and in preparation, attempts to better allocate responsibilities and liabilities between traders and platforms, notably on information provision, but those developments are in the early stages and remain rudimentary. Also, in many jurisdictions there is no solid legal framework on data protection. Furthermore, current legislative frameworks fail to address online consumer issues (e.g., personalized advertising, appearance

order, recommendations, rankings) arising from the use of artificial intelligence and big data.

Fifth, policymakers around the world face challenges regulating private sector actors, who increasingly function across multiple jurisdictions, in order to protect consumer rights and meet global sustainability objectives. In the absence of harmonized rules at the international level, the main difficulty stems from the different and fragmented legal and policy frameworks and approaches—with the degree of consumer protection varying significantly from one country to another. Extraterritoriality also raises questions of private international law to determine which law governs a given situation and which court has jurisdiction among other issues. In addition to this, various jurisdictions present differences in terms of the type of information they require on product sustainability; consumers’ awareness, education, and empowerment; the involvement and lobbying capabilities of interested stakeholders; and the enforcement of consumer rights. The latter involves significant challenges “linked to lack of resources but also to lack of [political] prioritization of consumer law” (Goyens, 2020).

#### *4.3.3 Conflicts Between Competing Policies*

This review identifies and analyzes legislation in various jurisdictions across different policy areas—chiefly consumer, digital, and sustainability policies. Governments often need to deal with potentially competing policy objectives across these areas—for instance, balancing the protection of consumer rights with the pursuit of sustainability objectives. Some examples of competing policy objectives are summarized here.

##### Right of withdrawal

The right of withdrawal is a period during which a consumer can cancel an online purchase even when already paid, usually without giving a reason or incurring any costs. The purpose of this right is to protect consumers within the specific context of the online shopping experience. The use and possible abuse of this right may undermine the objectives of environmental sustainability. Commentators propose to amend this right in order to reconcile consumer protection and sustainability objectives (see Box 10).

##### Free delivery and return

In e-commerce, consumer legislation normally does not ban free delivery and return. As such, these policies might go against the objectives of sustainable development and “threaten the profitability of [small] e-commerce businesses” (Terryyn and Van Gool, 2021). However, there are current discussions on proposing banning free delivery and returns of online shopping due to its negative environmental impact (e.g., in France) (*The Local*, 2021).

##### Right to replace versus right to repair

Consumer law often stipulates that when a good is not in good condition, consumers must be

given a choice between repair or replacement. When possible, the right to repair should be favoured over the right to replacement as it is a greener option that better serves sustainability objectives.

### Geoblocking

Rules in the EU prohibit unjustified geoblocking, meaning the process of limiting user access to the internet based on their physical location (Techopedia, n.d.).<sup>51</sup> With the exception of some specific cases, these rules state that traders cannot apply “different general conditions of access to their goods or services, for reasons related to the nationality, place of residence or place of establishment of the customer” (European Union, 2018).

### Globalization and market integration

Globalization and the multilateral trading system are often perceived to be at odds with sustainability considerations. Nevertheless, many experts argue that market liberalization and sustainable development can be articulated in a coherent manner. They tend to emphasize that the principle of sustainable development is enshrined in the agreement establishing the World Trade Organization (WTO) and that multilateral trade rules and jurisprudence provide policy space for governments to pursue legitimate public policy objectives like the protection of the environment (Marceau and Morosini, 2011).

In the EU, there is a tension between consumer protection and the constant deepening of market integration. Some authors question whether the balance between these two objectives has shifted too much in favour of market integration (Howells, Twigg-Fleisner and Wilhelmsson, 2018). These overarching principles can and should be reconciled. The EU’s Green Deal and New Consumer Agenda indicate that important initiatives are being taken in that direction.

The examples discussed in this subsection highlight the existence of potentially competing policy objectives and how they can be reconciled. As in all public policy, trade-offs must often be considered, and protecting consumers and achieving sustainability are not intrinsically contradictory objectives.

#### *4.3.4 Possible Measures to Be Further Explored*

This review shows that many different tools can be designed and implemented to incentivize sustainable consumer behaviour. Some of these tools aim at improving product sustainability information. However, as explained before, when analyzing consumers’ intentions versus their choices, these information policies (including more intrusive policy instruments such as the use

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<sup>51</sup> Of course, those non-discrimination obligations only apply to shipments within the EU. The regulation refers to three specific situations: the sale of goods without physical delivery, the sale of electronically supplied services and the sale of services provided in a specific physical location. See European Commission (2021e) for more information.

of green nudging), taken in isolation, are not enough to guide the consumer towards sustainable choices (Howells, 2005; Terry and Van Gool, 2021).

Against this background, Box 9 provides a list of possible measures to steer consumers (predominantly online buyers) toward sustainable options. These measures are listed under three categories: product information, consumer rights, and digital policies. Some of these measures may already be in place in some jurisdictions through public or private actions. The table also includes measures that relate to the circular economy. Box 10 then provides more information on the possible measures listed in Box 9, indicating in brackets whether they are being considered by the jurisdictions under study or proposed by academics.

**Box 9. List of possible measures to be further explored by category**

Product information
<ul style="list-style-type: none"> <li>• Imposing eco-design requirements</li> <li>• Working with eco-labels</li> <li>• Requiring businesses to provide mandatory product sustainability information</li> <li>• Introducing green claims legislation</li> <li>• Prohibiting the advertisement of polluting products</li> <li>• Requiring businesses to provide excellent visualization of products via technologically advanced tools</li> <li>• Putting in place standardized sizes or sizing technology to allow consumers to easily compare sizes</li> <li>• Requiring the mandatory display of a reparability or durability index</li> <li>• Introducing rules on the recycled and recyclable content of products</li> <li>• Introducing green nudging</li> <li>• Introducing measures regarding modes of transportation</li> <li>• Introducing measures regarding delivery</li> <li>• Introducing requirements for packages and packaging</li> <li>• Requiring businesses to make spare parts and reparability information available</li> <li>• Requiring businesses to make goods easy to disassemble (and the components easy to remove)</li> </ul>
Consumer rights
<ul style="list-style-type: none"> <li>• Making modifications to the right of withdrawal</li> <li>• Making modifications to the right of return</li> <li>• Ensuring the effective enforcement of consumer rights</li> <li>• Allowing businesses to blacklist consumers who engage in excessive returns without valid reasons</li> <li>• Encouraging a right to repair over a right to replace</li> </ul>
Digital policies
<ul style="list-style-type: none"> <li>• Introducing accessibility requirements in e-commerce settings</li> </ul>

- Introducing transparency requirements in e-commerce settings
- Regulating platforms

#### Other

- Introducing a common charger for electronic devices
- Introducing measures to extend product life cycles
- Banning the destruction of unsold (including returned) durable products
- Promoting international cooperation

### Box 10. Inventory and brief overview of possible measures to be further explored

#### Imposing eco-design requirements

Eco-design requirements are minimum requirements related to energy efficiency that certain products must comply with. The aim is to reduce the negative environmental impact throughout the product's life cycle. Specific requirements relate to exact values and limits on, for instance, maximum energy consumption or minimum quantities of recycled material to be used in production. Generic requirements may require that the product be energy-efficient or recyclable, that information be provided on how to use and maintain the product to minimize environmental impact, or that life cycle analysis of the product be performed to identify alternative design options (Your Europe, 2021).

Options for consideration:

- Develop more eco-design requirements beyond strict energy efficiency on material efficiency aspects such as usability, resource efficiency, durability, and reparability
- Extend them to a wider range of product groups
- For example, digital and connected products, e-products used for micro-mobility
- Apply eco-design requirements to other consumer products, beyond energy related products
- For example, textile products, toys, sports, and leisure products

Sustainable Products Initiative proposed by the EU

#### Working with eco-labels

Eco-labels are tools to measure, assess, or communicate product sustainability information.

Options for consideration:

- Review the methodology and the main criteria to grant the right to use a given labelling system.

Directive on empowering the consumer for the green transition proposed by the EU

Green Consumption Pledge Initiative by the EU

#### Requiring businesses to provide mandatory product sustainability information

Options for consideration:



- Establish overarching product sustainability principles such as usability, resource efficiency, durability, and reparability.
- With regard to environmental sustainability, set communication requirements regarding product environmental attributes and “hot spots” or impacts throughout its life cycle.
  - A non-exhaustive list of environmental attributes and impacts could include information on the extraction of raw material, the production of the product, and its storage, packaging, delivery, use, performance, durability, reparability, recyclability, as well as the fact that the product is free from dangerous chemicals and hazards, and so on.
- Beyond environmental sustainability, set communication requirements based on the product’s economic and social attributes and impacts throughout its life cycle.
  - A non-exhaustive list of economic and social attributes and impacts could include information on human rights, labour conditions (indicating that a product was not made with forced or child labour), guaranteeing that the workers received fair pay, ensuring that a good has not been made of minerals that finance armed conflicts, making sure that products were not tested on animals, and so on.

Sustainable Products Initiative proposed by the EU  
Korea’s Framework Act on Consumers  
France’s Anti-waste Law

### **Introducing green claims legislation**

Options for consideration:

- Combat greenwashing and require that green claims be substantiated through a credible procedure and solid methodology.
- Create an ex-ante approval procedure (pre-approval procedure) with a time limit.
- Require that the approval procedure to be conducted by an independent agency.
- Establish a backlist of claims that are impossible to substantiate.
- The methodology to be followed should go beyond primary energy factor (PEF).
- Establish a product information database.
- Impose fines in case of green claims not substantiated by evidence.

Initiative on substantiating green claims to be proposed by the EU  
France’s Climate and Resilience Law

### **Prohibiting the advertisement of polluting products**

France’s Climate and Resilience Law

### **Requiring businesses to provide excellent visualization of products via technologically advanced tools**

Options for consideration:

- Require that sellers present their products as accurately as possible via clear photos and videos.

- Specifically for clothing and footwear, require that sellers use special technology (for example, a three-dimensional scanning app) taking consumer body measurements to determine which size would fit best.

Proposed by Evelyne Terryn and Elias Van Gool (2021)

**Putting in place standardized sizes or sizing technology to allow consumers to easily compare sizes**

This is an option to consider specifically for clothing and footwear.

Proposed by Evelyne Terryn and Elias Van Gool (2021)

**Requiring the mandatory display of a reparability or durability index**

Options for consideration:

- Introduce a reparability index consisting of a mandatory display of information on the reparability of electrical and electronic equipment.
- Broaden the category of products beyond electronics.
- Introduce a durability index expanding the reparability index to include product robustness and reliability as criteria.

France’s Anti-waste Law

**Introducing rules on recycled and recyclable content of the product**

Options for consideration:

- Impose binding targets such as a minimal percentage of recycled or recyclable content.
- Require sellers to indicate the percentage of recycled or recyclable content.
- Require sellers to provide recycling information.

Sustainable Products Initiative proposed by the EU

Chile’s APL initiative and upcoming decree initiated by Resolution 42

France’s Anti-waste Law

**Introducing green nudging**

Green nudging aims to promote environmentally friendly behaviour. Setting “green defaults” is an example of green nudging, given that the default is the option that prevails when consumers do not engage in an active choice.

Options for consideration:

- Oblige businesses to automatically display a green default option (right of withdrawal, transportation, delivery, and so on).

Proposed by Evelyne Terryn and Elias Van Gool (2021)

**Introducing measures regarding modes of transportation**

Options for consideration:

- Oblige businesses to introduce a choice and price differentiation between sustainable

and less sustainable transportation options (airplane, ferry, train, truck, van, bicycle, drone, and so on).

Proposed by Evelyne Terryn and Elias Van Gool (2021)

### **Introducing measures regarding delivery**

These measures, notably, would intend to reduce the negative impact of so-called “last mile” delivery.

Options for consideration:

- Oblige businesses to introduce a choice and price differentiation between sustainable and less sustainable delivery options:
  - Grouped parcels (a single delivery for multiple goods) versus basket splitting (products delivered one by one).
  - Individual delivery timeslot (collaborative, personalized, and shorter timeslots) versus traditional way (only estimated and large delivery timeframes) to avoid failed deliveries.
  - Pickup stations (sufficient in number and well located, flexible hours that work for people who have full-time jobs, combination of automated stations and stations in proximity stores) versus delivery at the door.

Proposed by Evelyne Terryn and Elias Van Gool (2021)

### **Making modifications to the right of return**

Options for consideration (bearing in mind that not returning a product is not necessarily the more sustainable option):

- Prohibit or limit free returns, making consumers pay return shipping fees.
- Introduce a consumer-friendly right of return (for instance with a mandatory mention that returns are not free of charge, that returns may not be sustainable, modification of the right of withdrawal, and so on).

Proposed by Evelyne Terryn and Elias Van Gool (2021)

### **Introducing requirements for packages and packaging**

Options for consideration:

- When possible, oblige businesses to provide an option to reuse the package of a product (refill).
- When possible, ban plastic packages.
- When possible, ban plastic packaging.
- Oblige businesses to use recycled and recyclable packages.
- Oblige businesses to use less packaging.
- Oblige businesses to use recycled and recyclable packaging.

Green Deal developed by the EU

### **Requiring businesses to make spare parts and reparability information available**

Sustainable Products Initiative proposed by the EU  
France's Anti-waste Law

**Requiring businesses to make goods easy to disassemble (and the components easy to remove)**

Sustainable Products Initiative proposed by the EU

**Making modifications to the right of withdrawal**

Options for consideration:

- Require consumers to state a reason or reasons for withdrawing from the contract.
- Require that consumers exercise their right of withdrawal in good faith.
- Introduce an exception to deny the right of withdrawal for all situations in which the exercise of such a right makes it impossible to resell goods.
- Introduce an exception to deny the right of withdrawal for all situations in which the use and test of the good makes it impossible to sell the good as new.
- Abolish the mandatory character of the right of withdrawal.
- Require businesses to offer the right of withdrawal as an option to consumers, with a mandatory price differentiation for a contract with and without the right of withdrawal.

Proposed by Evelyne Terryn and Elias Van Gool (2021)

**Ensuring the effective enforcement of consumer rights**

Consumer rights need to be tangible and actionable rights.

- Strengthen consumer education and encourage awareness-raising campaigns.
- Involve consumer organizations in the decision-making on sustainable consumption legislation.
- Provide consumers and businesses with opportunities for information-sharing and networking.
- Harden sanctions in case of infringement.
- Provide more funding for consumer organizations.
- Promote international standardization and cooperation.

Proposed by Monique Goyens (2020)

**Allowing businesses to blacklist consumers who engage in excessive returns without valid reasons**

Proposed by Evelyne Terryn and Elias Van Gool (2021)

**Encourage a right to repair over a right to replace**

Options for consideration:

- For all durable and repairable goods, introduce a binding requirement according to which a business must try to repair the goods first before replacing them.
- For all durable and repairable goods, introduce a publicly financed repair bonus (see the examples of Austria and the German state of Thuringia).

Initiative on the right to repair to be proposed by the EU

**Introducing accessibility requirements in e-commerce settings (also regulating artificial intelligence and algorithms)**

Options for consideration:

- Create a list of dos and don'ts, especially in terms of search results, rankings, and appearances.
- Push sustainable options higher in the rankings and search results.
- Provide relevant information by just a simple click.
- Guide customers by using dedicated sustainable product collections.
- Have a designated landing page for sustainability information and use segmented entry points (for example, CO2 emissions, low water footprint, climate-friendly, fair and ethical labour conditions, vegan, and so on).  
Use the same structure to provide sustainability information for all products to ensure consumers can easily compare between products.

Guidelines for Providing Product Sustainability Information in E-commerce, UNEP (2021)

**Introducing transparency requirements in e-commerce settings**

Options for consideration:

- Require transparent information from suppliers and sellers before a product is sold.
- Publish the details of evidence and methods used to substantiate the information in various depths and on several levels.
- Require transparency from eco-labeling bodies and make databases of relevant eco-labels directly accessible.
- Include all relevant information pertaining to a product (e.g., including expiry dates for perishable goods).

Guidelines for Providing Product Sustainability Information in E-commerce, UNEP (2021)

**Regulating platforms**

Options for consideration:

- In an online transaction on a marketplace, introduce a clear allocation of responsibilities between the platform, the seller, and the manufacturer.

EU's Digital Markets Act

Chile's Electronic Commerce Regulation

**Introducing a common charger for electronic devices**

- Develop a harmonized charging port for electronic devices.
- Require that the sale of a charger be unbundled from the sale of the electronic device.

Common charging solution proposed by the EU (European Commission, 2022g)

**Introducing measures to extend product life cycles**

Options for consideration:

- Promote second-hand products:
  - Extend the duration of legal guarantee.
  - Make a guarantee for products sold by non-traders.
- Promote refurbished or remanufactured goods.
  - Extend the duration of legal guarantee.

Sustainable consumption of goods – promoting repair and reuse proposal to be proposed by the EU – [here](#)

- Encourage the share use of products (sharing economy).
- Encourage the leasing of products.

Proposed by Evelyne Terryn and Elias Van Gool (2021)

- Introduce rules on premature obsolescence of products.

France’s Anti-waste Law

**Banning the destruction of unsold (including returned) durable products**

Sustainable Products Initiative proposed by the EU

**Promoting international cooperation**

Korea Environmental Industry and Technology Institute (KEITI)

## 5. Conclusions

Based on the preliminary findings of this review, we conclude that further efforts by private and public actors are needed in order to design and implement initiatives and measures that help address the challenges behind the “aspiration-to-action” gap and steer consumers toward decisions that involve better sustainability. Information has a critical role to play in these efforts. Consumer decision-making can be influenced by exploiting opportunities to drive more sustainable consumer behaviour through the level, type, and location of information provided in e-commerce and by observing the fundamental UNEP principles for providing product sustainability information: reliability, relevance, clarity, transparency, and accessibility.

### *Private initiatives*

This review considers a wide range of initiatives undertaken by private and public actors. On private sector initiatives, particularly e-commerce marketplaces, it highlights practices to support the good communication of product sustainability information and to incentivize consumers to choose sustainable options. The review also notes that many of these initiatives are at the incipient stage and that there is scope for evolution and progress, especially when they do not respond to consumer preferences or follow the UNEP principles.

### *Public policies*

The study also includes a review of a selected policies and legislation implemented or in discussion in seven jurisdictions. It notes that some jurisdictions have implemented or are moving towards implementing the fundamental principles for providing product sustainability information. Examples include the Republic of Korea’s Framework Act on Consumers and France’s Anti-waste Law and Climate and Resilience law.

The review also highlights EU guidance on the Unfair Commercial Practices Directive from December 2021 since it provides additional legal interpretation on a range of issues. These include, among others, the relationship with other EU legislation on topics such as environmental claims and planned obsolescence; the obligations of online platforms and marketplaces to act with a degree of professional diligence and not mislead consumers either through action or inaction; and enforcement and penalties.

Further, the review notes the value of government initiatives to train traders on consumer protection and to strengthen international cooperation, with examples from the EU and the Republic of Korea.

The findings of this review provide a broad and solid foundation for the next phase, which will involve stakeholder participation to share views on the policy frameworks that may be needed to steer consumers toward decision-making that places greater consideration on sustainability.



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- for examination on labeling and advertising of environmental facts
- for examination of internet advertisements
- For deceptive labeling and advertising
- for comparative labeling and advertising
- for examination of labeling and advertising of recommendations, guarantees, etc.
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## Annex 1: Top performing online marketplaces for select regions and countries<sup>52</sup>

### Europe

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace and vendor	Amazon	Global	General	1.4 B	38%
2	Marketplace	eBay	Global	General	664.8 M	18%
3	Marketplace	Allegro	Poland	General	185.5 M	5%
4	Marketplace	AliExpress	Global	General	180.9 M	5%
5	Marketplace and vendor	Wildberries	Russia	General	149.9 M	4%
6	Marketplace and vendor	Zalando	Europe	Fashion	131.2 M	4%
7	Marketplace and vendor	Ozon	Russia	General	86.2 M	2%
8	Marketplace and vendor	bol.com	Netherlands	General	79.0 M	2%
9	Marketplace	Etsy	Global	Arts, crafts, and gifts	59.1 M	2%
10	Marketplace and vendor	OTTO	Germany	General	55.0 M	1%

### Latin America

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace	Mercado Libre	Latin America	General	667.7 M	51%
2	Marketplace and vendor	Amazon	Global	General	169.0 M	13%
3	Marketplace and vendor	Americanas	Brazil	General	129.6 M	10%
4	Marketplace and vendor	Casas Bahia	Brazil	General	83.6 M	6%
5	Marketplace	Shopee	Southeast Asia	General	40.7 M	3%
6	Marketplace	AliExpress	Global	General	37.3 M	3%
7	Marketplace and vendor	Dafiti	Latin America	Fashion	28.5 M	2%

<sup>52</sup> Market share is based on the total list of marketplaces rather than as a share of the top performing ones. Source: Webretailer (2021).

8	Marketplace and vendor	Netshoes	Brazil	Fashion	27.0 M	2%
9	Marketplace and vendor	Extra	Brazil	General	24.6 M	2%
10	Marketplace and vendor	Falabella	Chile	General	24.2 M	2%

### Southeast Asia

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace	Shopee	Southeast Asia	General	342.8 M	48%
2	Marketplace	Tokopedia	Indonesia	General	137.3 M	19%
3	Marketplace	Lazada	Southeast Asia	General	128.4 M	18%
4	Marketplace	Bukalapak	Indonesia	General	30.4 M	4%
5	Marketplace and vendor	Blibli	Indonesia	General	20.6 M	3%
6	Marketplace and vendor	Tiki	Vietnam	General	15.6 M	2%
7	Marketplace	Sendo	Vietnam	General	7.4 M	1%
8	Marketplace and vendor	Zalora	Southeast Asia	Fashion	6.9 M	1%
9	Marketplace and vendor	JD.com	China	General	5.1 M	1%
10	Marketplace and vendor	Amazon	Global	General	3.8 M	1%

### Middle East

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace	Trendyol	Turkey	General	199.3 M	45%
2	Marketplace	Hepsiburada	Turkey	General	92.7 M	21%
3	Marketplace	n11	Turkey	General	48.2 M	11%
4	Marketplace and vendor	Amazon	Global	General	46.0 M	10%
5	Marketplace	GittiGidiyor	Turkey	General	33.3 M	8%
6	Marketplace and vendor	noon	Middle East	General	13.6 M	3%
7	Marketplace	Desert Cart	Middle East	General	1.1 M	0%

### Australasia

#	Type	Name	Region or country	Product category	Visits per month	Market share
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1	Marketplace	eBay	Latin America	General	61.7 M	45%
2	Marketplace and vendor	Amazon	Global	General	28.5 M	21%
3	Marketplace	Trade Me	New Zealand	General	17.7 M	13%
4	Marketplace and vendor	Catch.com.au	Australia	General	7.2 M	5%
5	Marketplace and vendor	The Iconic	Australia	Fashion	6.4 M	5%
6	Marketplace and vendor	ASOS	Global	Fashion	4.7 M	3%
7	Marketplace	MyDeal.com.au	Australia	General	3.5 M	3%
8	Marketplace and vendor	Target.com	USA	General	1.1 M	1%

### Africa

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace	Jumia	Africa	General	23.3 M	45%
2	Marketplace and vendor	Takealot.com	South Africa	General	10.5 M	20%
3	Marketplace and vendor	Souq	Middle East	General	10.0 M	19%
4	Marketplace and vendor	Konga	Nigeria	General	2.3 M	4%
5	Marketplace	bidorbuy	South Africa	General	1.9 M	4%
6	Marketplace and vendor	noon	Middle East	General	1.8 M	3%
7	Marketplace and vendor	Zando	South Africa	Fashion	569.9 K	1%
8	Marketplace and vendor	Amazon	Global	General	445.5 K	1%
9	Marketplace	Kilimall	Africa	General	267.2 K	1%

### United States

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace and vendor	Amazon	Global	General	2.0 B	49%
2	Marketplace	eBay	Global	General	688.9 M	17%
3	Marketplace and vendor	Walmart.com	USA	General	388.8 M	10%
4	Marketplace	Etsy	Global	Arts, crafts, and gifts	238.4 M	6%



5	Marketplace and vendor	Target.com	USA	General	175.7 M	4%
6	Marketplace and vendor	Wayfair	North America, Europe	Homewares	122.5 M	3%
7	Marketplace	Poshmark	USA	Fashion	41.3 M	1%
8	Marketplace and vendor	Overstock	USA	General	37.9 M	1%
9	Marketplace and vendor	Kroger Ship	USA	General	37.2 M	1%
10	Marketplace	AliExpress	Global	General	28.9 M	1%

## China

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace	Taobao	China	General	265.9 M	32%
2	Marketplace	Pinduoduo	China	General	234.8 M	28%
3	Marketplace and vendor	JD.com	China	General	160.8 M	19%
4	Marketplace	Tmall	China	General	97.7 M	12%
5	Marketplace and vendor	Amazon	Global	General	49.0 M	6%
6	Marketplace and vendor	Vipshop	China	General	11.1 M	1%
7	Marketplace	Shopee	Southeast Asia	General	3.9 M	0%
8	Marketplace and vendor	Lazada	Southeast Asia	General	2.8 M	0%
9	Marketplace	Rakuten	Japan	General	1.1 M	0%
10	Marketplace	eBay	Global	General	1.0 M	0%

## India

#	Type	Name	Region or country	Product category	Visits per month	Market share
1	Marketplace and vendor	Amazon	Global	General	295.8 M	56%
2	Marketplace	Flipkart	India	General	167.4 M	32%
3	Marketplace	Myntra	India	Fashion	32.9 M	6%
4	Marketplace	Snapdeal	India	General	15.1 M	3%
5	Marketplace	Shopclues	India	General	5.9 M	1%
6	Marketplace	Meesho	India	General	3.0 M	1%
7	Marketplace and vendor	Pepperfry	India	Homewares	2.5 M	0%
8	Marketplace	Paytm Mall	India	General	2.0 M	0%

9	Marketplace	Limeroad	India	Fashion	1.6 M	0%
10	Marketplace and vendor	Walmart.com	USA	General	1.0 M	0%