

E-commerce and the trade-off between consumer protection and sustainability

HANS W. MICKLITZ / NIKOLA SCHIEFKE /
CHRISTA LIEDTKE / PETER KENNING /
LOUISA SPECHT-RIEMENSCHNEIDER / NINA BAUR

SVRV
SACHVERSTÄNDIGENRAT
FÜR VERBRAUCHERFRAGEN



Recommended citation for this publication:

Micklitz, H. W., Schiefke, N., Liedtke, C., Kenning, P., Specht-Riemenschneider, L., Baur, N. [2020].
Onlinehandel im Spannungsfeld von Verbraucherschutz und Nachhaltigkeit [E-commerce and the trade-off between consumer protection and sustainability]. Publications of the Advisory Council for Consumer Affairs (*Sachverständigenrat für Verbraucherfragen*, SVRV). Berlin: Advisory Council for Consumer Affairs.

Berlin, December 2020

Publications of the Advisory Council for Consumer Affairs

ISSN: 2365-919X

Edited and published by

Advisory Council for Consumer Affairs

at the German Federal Ministry of Justice and Consumer Protection

(*Bundesministerium der Justiz und für Verbraucherschutz, BMJV*)

Mohrenstraße 37

10117 Berlin, Germany

Tel.: +49 (0) 30 18 580-0

Fax: +49 (0) 30 18 580-9525

E-mail: info@svr-verbraucherfragen.de

Website: www.svr-verbraucherfragen.de

Design: Atelier Hauer + Dörfler GmbH

© SVRV 2020

E-commerce and the trade-off between consumer protection and sustainability

HANS W. MICKLITZ / NIKOLA SCHIEFKE / CHRISTA LIEDTKE / PETER KENNING /
LOUISA SPECHT-RIEMENSCHNEIDER / NINA BAUR

Hans W. Micklitz

Advisory Council for Consumer Affairs (SVRV),
European University Institute in Florence and
Academy of Finland Distinguished Professor at
the University of Helsinki

Nikola Schiefke

Secretariat of the Advisory Council for Consumer
Affairs (SVRV), Federal Ministry of Justice and
Consumer Protection (BMJV), Berlin

Christa Liedtke

Advisory Council for Consumer Affairs (SVRV),
Wuppertal Institute for Climate, Environment
and Energy and Folkwang University of the Arts
in Essen

Peter Kenning

Advisory Council for Consumer Affairs (SVRV) and
Faculty of Business Administration and Economics
at the Heinrich Heine University of Düsseldorf

Louisa Specht-Riemenschneider

Advisory Council for Consumer Affairs (SVRV) and
Rhenish Friedrich Wilhelm University of Bonn

Nina Baur

Advisory Council for Consumer Affairs (SVRV) and
Department of Sociology at the Technical University
of Berlin

Comments

The language used in this text is fundamentally intended to be gender-neutral. Continuous references to each gender have not been made so as to make the text easier to read.

Acknowledgements

The Advisory Council for Consumer Affairs would like to thank Dr. Jutta Kemper (Head of Directorate at the Federal Ministry of Justice and Consumer Protection), Dr. Thomas Weber (Head of the Sustainability Division at the Federal Ministry of Justice and Consumer Protection) and Barbara Leier, LL.M. (Duke University), Head of the Secretariat of the Advisory Council for Consumer Affairs, for their invaluable input and the fruitful discussions, as well as Dr. Björn Asdecker (University of Bamberg) for sharing the Returns Management Research Group's relevant findings.

Members and staff of the Advisory Council for Consumer Affairs

Members of the Advisory Council for Consumer Affairs

Prof. Dr. Peter Kenning (Chair)

Chairholder for Business Administration, specialising in Marketing, for the Faculty of Business Administration and Economics at the Heinrich Heine University of Düsseldorf

Prof. Dr. Louisa Specht-Riemenschneider (Deputy Chair)

Chairholder for Civil Law, Information Law and Data Protection Law for the Faculty of Law and Economics at the Rhenish Friedrich Wilhelm University of Bonn

Prof. Dr. Nina Baur

Chair for Methods of Social Research at the Department of Sociology at the Technical University of Berlin

Susanne Dehmel

Member of the Executive Board for Law and Security at Bitkom, Germany's digital association

Prof. Dr. Veronika Grimm

Chairholder for Economic Theory for the Faculty of Business, Economics and Law at the Friedrich Alexander University of Erlangen-Nuremberg

Prof. Dr. Christa Liedtke

Head of the Sustainable Production and Consumption Division at the Wuppertal Institute for Climate, Environment and Energy, and Chair of Sustainability in Design for the Faculty of Industrial Design at the Folkwang University of the Arts in Essen

Prof. Dr. Dr. h. c. Hans W. Micklitz

Professor of Economic Law at the Robert Schuman Centre for Advanced Studies, European University Institute in Florence, and Academy of Finland Distinguished Professor at the University of Helsinki

Sven Scharioth

Market Watch Division Manager and Member of the Management Board of the Federation of German Consumer Organisations (vzbv)

Prof. Dr. Dr. h. c. Gert G. Wagner

Max Planck Fellow at the Max Planck Institute for Human Development (MPIB) in Berlin, Research Associate at the Alexander von Humboldt Institute for Internet and Society (HIIG) in Berlin and Senior Research Fellow for the Socio-Economic Panel (SOEP) longitudinal study at the German Institute for Economic Research (DIW) in Berlin

Staff of the Advisory Council for Consumer Affairs

Head of the Secretariat:

Barbara Leier, LL.M. (Duke University)

Research Associates of the Secretariat:

Dr. Christian Groß
Sarah Sommer, M.A.
Dr. Patrick Weber

Executive Summary

Consumers are increasingly taking an interest in the conditions under which goods are produced and services are provided. They are keen to ensure that their consumer behaviour is as sustainable as possible, yet at the same time they also want to benefit from unencumbered consumption which is as convenient and hassle-free as possible. This leads to conflicts which are not only the subject of social debate but are also reflected in legal issues. Although sustainability has so far been enshrined in environmental law, attempts to establish a solid basis for it in consumer law are few and far between and still only in their infancy. The resulting issue, whereby consumer law is focused heavily on the conclusion of contracts at a time when sustainable consumption is gaining increasing importance, will be illustrated in this paper using a particular example: the issue of returns in e-commerce.

In 2019, e-commerce accounted for 10 % of total retail revenue in Germany. In absolute terms, it is currently worth EUR 72,6 billion. More than 80 % of Germans aged between 14 and 69 shop online. All forecasts suggest that this sales channel will only continue to grow. However, as e-commerce surges, so too does the number of returns that are made. Approximately 12 % of all ordered items and approximately 45 % of textiles and footwear ordered online in 2018 were returned by consumers. The total cost to the industry for these returns is an estimated EUR 5.46 billion. This is more or less equivalent to the gross annual salary of 138,000 people. One of the main reasons why this figure is so high is the fact that consumers can withdraw from the contract within 14 days of taking physical possession of the goods without any reason and subsequently recover the purchase price and, normally, the shipping costs from the company concerned. In most cases, the company will even cover the return shipping costs.

A holistic examination of all the regulations that apply throughout product life cycles, from production all the way through to anticipated recycling, shows that the stages, which tend to receive less attention, well before and long after contract conclusion, are subject to different legal requirements, nationally and internationally. At present, consumers have virtually no chance at all of obtaining an overview of the applicable rules or, in particular, finding out the conditions under which the products they have purchased online were manufactured or transported and whether or how they will be recycled.

Expanding and building on existing consumer law to incorporate sustainable consumption simply by including additional obligations to provide information and clarification will not work. The provisions of environmental law and consumer law need to be intertwined and interconnected. The Advisory Council for Consumer Affairs intends to make initial headway with that Herculean task by means of this policy brief.

The responsibilities of companies, the legislature and consumers need to be evenly rebalanced if we are to find a way to become a sustainable consumer society, as contradictory as that may sound. All stakeholders need to play their part. The Advisory Council for Consumer Affairs will set out the pros and cons of potential approaches for promoting sustainable consumption: introducing incentive schemes, empowering consumers by giving them the tools to act responsibly (using boosting or nudging), imposing taxes on resources, encouraging voluntary commitments, introducing an obligation for consumers to bear the costs of returning any products which are free from defects, implementing technological solutions to reduce the number of returns and introducing supply chain legislation. Whichever option turns out to be the most attractive, transforming the economy with a view to increasing sustainability will require extensive and in-depth political and social debate in order to lay the foundations for the necessary legislative changes. This kind of transformation should not only take place at supranational level but also be driven at national level.

Keywords

SUSTAINABLE DEVELOPMENT GOALS / CONSUMER LAW / SUSTAINABILITY / CONSUMER RESPONSIBILITY / E-COMMERCE / RETURNS / PRODUCT LIFE CYCLE / OBLIGATIONS TO PROVIDE INFORMATION / ENVIRONMENTAL LAW / SUPPLY CHAINS / HUMAN RIGHTS

Table of contents

I. General outline of the issue	7
II. Empirical foundations of e-commerce	11
1. Revenue and product groups	11
2. Returns	12
III. E-commerce through the lens of legal regulations	14
1. Consumers – contract law	14
a) Contract conclusion	14
b) Withdrawal from the contract	15
c) Interim conclusion	16
2. Legal bases from production through to recovery	16
a) Cultivation/extraction of raw materials and production requirements	17
b) Pre-contractual stage, advertising and pre-contractual information	21
c) Transportation, in particular from the manufacturer to the wholesaler or trader and from the wholesaler or trader to the customer	23
d) Post-contractual stage, in particular after-sales promotion and product usage	24
e) Cessation of use, in particular disposal and reprocessing (refurbishment)	26
f) Conclusion	29
IV. Solutions for the sustainable development of e-commerce	31
1. Starting point	31
a) Allocation of responsibilities	31
b) Levels of regulation	32
2. Approaches for the sustainable development of e-commerce	33
a) Pros and cons of introducing an obligation to bear costs	33
b) Pros and cons of technological solutions	34
c) Pros and cons of a voluntary commitment designed to reduce the free-shipping effect	34
d) Technological approaches for a more sustainable product range in online stores	35
3. Approaches for the sustainable development of consumer contract law	35
4. Approaches outside of consumer contract law	36
a) Supply chain legislation	36
b) Manufacturers' contribution towards the costs of recycling	37
c) Reduction in the consumption of primary raw materials	37
V. Concluding remarks	38
References	39

I. General outline of the issue

The types of consumer policy, environmental policy, consumer law and environmental law that shape and dominate political debate today emerged almost simultaneously in the 1960s. Consumer **law** dates back to President John F. Kennedy's special message to Congress on protecting the consumer interest in 1962.¹ Policy and ideology are manifested in the rhetoric of consumer rights, the idea that consumers must be afforded rights in order to be able to assert themselves within the consumer society. The past six decades have seen significant developments and improvements in consumer rights, and consumer law has become a fully-fledged field of law in its own right. However, so far, no universal, all-encompassing definition for the term "consumer law" has emerged, and there is no crystal-clear dividing line preventing it from ever overlapping with other fields of law. This is, in particular, due to the fact that Germany does not have a separate legal code for consumer law and, instead, the respective provisions are dispersed throughout many different legislative acts. Even in EU Member States which do have a separate consumer code, such as France and Italy, it still does not feel as though consumer law, as a separate notion, is built on its own solid, free-standing foundations. It is predominantly a body of laws, the very basis of which is grounded in and underpinned by the legal provisions of national civil codes, and which would fall short without this reference system.

The definition of consumer **protection** laws set out in Section 2 (1) of the German Injunctive Relief Act (*Unterlassungsklagengesetz*, UKlaG), as "provisions [...], which serve to protect consumers", provides a certain amount of help and guidance. The general understanding is that

consumer law in particular includes the special provisions of consumer contract law set out in Sections 312 et seqq., 355 et seqq. and 310 (3) of the German Civil Code (*Bürgerliches Gesetzbuch*, BGB) as well as the special rules added in the case of individual contract types such as Sections 474 et seqq., 491 et seqq. and 651a et seqq. of the Civil Code. There is also a variety of statutory preventive consumer protection provisions set out in public law,² for example regulations concerning consumer protection standards and their enforcement under administrative law as well as, for example, pharmaceutical law and food law. The far from conflict-free relationship between consumer law and environmental law has been well-documented since at least the 1990s.³ Consumer law and consumer policy are rooted in the idea of unencumbered consumption. Consumer rights are designed to ensure that defective products can be repaired or exchanged. Rights of withdrawal in the case of direct selling, distance selling, time-sharing and consumer credit enable consumers to terminate undesirable contracts, even if it is simply because they have found a better, i. e. cheaper, offer after concluding a contract.

Environmental policy, environmental protection and environmental law promote a different philosophy and pursue a different aim: protecting nature from potential risks posed by production-led consumer society.⁴ Environmental law and consumer law cover cross-cutting issues, but their regulations have so far been passed, by and large, without any reference to each other. The rise of sustainability as a political concept (since the Brundtland Report in 1987 through to the drafting and adoption of the international Sustainable Development Goals in 2015 – the 2030 Agenda) has not had any fun-

1 Schrader, U., Liedtke, C., Lamla, J., et al., *Verbraucherpolitik für nachhaltigen Konsum – Verbraucherpolitische Perspektiven für eine nachhaltige Transformation von Wirtschaft und Gesellschaft [Consumer policy for sustainable consumption – consumer policy perspectives for a sustainable transformation of the economy and society]*, 2013; Von Hippel, E., *Verbraucherschutz [Consumer protection]*, first edition 1974, printing the documents relevant to the historical origin.

2 Schmidt-Kessel, M., *Lehrbuch Verbraucherrecht [Consumer law manual]*, 2018, p. 6.

3 Krämer, L., Micklitz, H. W., and Tonner, K., *Law and Diffuse Interests in the European Legal Order*, Liber Amicorum Norbert Reich, 1997.

4 See also Liedtke, C., Baur, N., Dehmel, S., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen – Empfehlungen für die Verbraucherpolitik [Enabling sustainable consumption and sustainable production – recommendations for consumer policy]*, 2020; European Commission, Action Plan for sustainable consumption, production and industry, 2008.

damental impact on the lack of conceptual and systematic connection or lack of interpenetration between both legal areas. That is not to say that there have not been any attempts in consumer law to incorporate the environment and sustainability into existing legal provisions.⁵ Whatever the level of importance attached to the Sustainable Development Goals, much more needs to be done than simply continuing with the current “approaches” towards sustainable consumer rights. **Consumer law in its current format, having been continuously developed over several decades, needs to be completely re-evaluated and redefined.**⁶

Sustainability is understood to be a transformational goal in the sense of the 2030 Agenda. According to the 2030 Agenda, sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.⁷ It has three dimensions – an economic dimension, a social dimension and an ecological dimension. Despite the fact that specific, cross-policy, globally recognised international goals have existed since 2015 (in the form of the SDGs or Sustainable Development Goals), their incorporation into the legal bases of consumer law has so far, at best, been very limited. SDG 8 “Promote inclusive and sustainable economic growth, employment and decent work for all” and SDG 12 “Ensure sustainable consumption and production patterns” take sustainable development of the production-led consumer society into consideration.⁸

At first glance, the term “sustainable consumption” sounds like an oxymoron that is trying to combine what

are, based on a traditional understanding, conflicting and competing goals. In order to resolve this contradiction in terms, both legal concepts need to be seen as two sides of the same coin, coordinated and synchronised, and intertwined and interconnected. This will require exploring the dividing lines of legal arguments. Legal experts who want to see the two combined under existing law or want to see consumer law be further developed and reshaped with environmental goals argue for **consumer rights to be developed and expanded** in such a way as to help achieve sustainable consumption.⁹ With this type of outlook, the achievement of sustainability would depend on the use and exercise of consumer rights. Rights would basically be extended to cover and include sustainability. For there to be any real change, much more needs to be done. Consumers must **actively take responsibility** for their own consumption, just as manufacturers must take responsibility for achieving sustainable production and the legislature must take responsibility for providing a proper legal framework.¹⁰ Neither the responsibility of consumers nor that of manufacturers for sustainable consumption has so far been reflected in consumer law. **A key consumer policy issue is how to promote responsible and sensible consumer behaviour in terms of sustainability.** Widely discussed incentive schemes (boosting¹¹ and nudging¹²), which are often associated with the idea of educating consumers and improving people’s understanding of sustainable development, are of interest here.¹³

The SDGs do not directly address consumer law at any point. However, as a cross-cutting issue they do provide a solid starting point from which to begin realigning

5 Overview in Halfmeier, A., *Nachhaltiges Privatrecht [Sustainable Private Law]*, Archiv für die civilistische Praxis (AcP), Vol. 215, 2016, p. 717.

6 Micklitz, H. W., *Squaring the Circle? Reconciling Consumer Law and the Circular Economy*, in: Keirsbilck, B., and Terryn, E. (eds.), *Consumer Protection in a Circular Economy*, 2019, p. 321.

7 This definition in particular dates back to the Brundtland Report of the UN World Commission on Environment and Development.

8 Liedtke, C., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen [Enabling sustainable consumption and sustainable production]*, 2020.

9 Tonner, K., Gawel, E., Schlacke, S., et al., *Gewährleistung und Garantie als Instrumente zur Durchsetzung eines nachhaltigen Produktumgangs [Warranty and guarantee as instruments for ensuring sustainable handling of products]*, Verbraucher und Recht (VuR), 2017, p. 3; as well as in the European context: Keirsbilck, B., and Terryn, E. (eds.), *Circular Economy and Consumer Protection*, 2019.

10 Schrader, U., et al., *Verbraucherpolitik für nachhaltigen Konsum [Consumer policy for sustainable consumption]*, 2013, pp. 6 and 17.

11 Max Planck Institute (MPI) for Human Development, *Stärkung von Entscheidungskompetenzen („Boosting“) [Boosting Decision Making]*.

12 Sunstein, C.R., and Reisch, L.A., *Trusting Nudges: Toward a Bill of Rights for Nudging*, 2019; German Federal Environment Agency (Umweltbundesamt, UBA), *Nudge-Ansätze beim nachhaltigen Konsum: Ermittlung und Entwicklung von Maßnahmen zum „Anstoßen“ nachhaltiger Konsummuster [Nudging in the case of sustainable consumption: Identification and development of measures designed to “encourage” sustainable consumption patterns]*, 2017.

13 Schrader, U., et al., *Verbraucherpolitik für nachhaltigen Konsum [Consumer policy for sustainable consumption]*, 2013, p. 17.

and refocusing consumer law.¹⁴ Since it is primarily a ministry of legislation, the German Federal Ministry of Justice and Consumer Protection (*Bundesministerium der Justiz und für Verbraucherschutz*, BMJV) is responsible for upholding the rule of law, the importance of which for achieving sustainable development is set out in SDG 16 of the 2030 Agenda set of goals.¹⁵ The Federal Ministry of Justice and Consumer Protection is also responsible for economic consumer protection, which is interlaced and entangled with SDG 12 on account of sustainability. The Federal Ministry of Justice and Consumer Protection has a dual responsibility: as a ministry of legislation it is responsible for aligning legislation with the sustainability goals, and as the ministry of consumer protection it is responsible for the sustainable development of consumer law. This paper therefore addresses the very core of the Federal Ministry of Justice and Consumer Protection's work.

So far, the sustainability debate has not yet truly reached the realms of consumer **law**. Generally speaking, no responsibilities on the part of consumers are set out in consumer law; however, of course, consumers must not deceive the other party to the contract, otherwise they may be accused of fraudulent behaviour. Conversely, consumers are not penalised by the legal system for not exercising their rights, in particular their rights to information. This way of thinking originated in the consumer society of the 1960s and 1970s. In cases of conflict, consumer rights are intended to protect consumers from abusive corporate practices. From this perspective, sustainability will crucially be achieved by expanding and developing people's rights to information. If consumers decide to take it upon themselves to act responsibly, they will need to be in a position to be able to make sustainable consumption decisions, and rightly so, i. e. they will need to make their purchasing

decisions in the light of potential environmental impacts. Consumers' rights and their personal responsibility are therefore inextricably linked. An analysis of the legal provisions will show that even consumers who are willing to meet this challenge are confronted with obstacles in terms of information policy and often find that there are structural barriers too. In short, in reality, it is virtually impossible for them to obtain the necessary information to be able to make responsible and sustainable decisions.¹⁶

However, the fundamental conflict between the environment and consumption runs further and deeper.¹⁷ Despite the fact that the overwhelming majority of consumers feel that sustainable development is, in principle, worthy of support,¹⁸ their actual consumer behaviour often deviates from this principle.¹⁹ Consumers therefore need to (be able to) assume greater responsibility for their own behaviour. This assumption of responsibility is theoretically not at odds with their consumer rights. When people are presented with a choice of different actions, they are also responsible for their actions.²⁰ There is no suggestion here that consumers alone should be unilaterally assuming responsibility. If anything, what is being suggested is a sense of shared responsibility,²¹ whereby no party is primarily responsible, but instead there is an interplay of mutual responsibilities between numerous stakeholders such as companies, consumers, national and international legislatures, associations and organisations. It is often argued that very few consumers can actually afford to exercise responsible consumption. Regardless of the fact that the proportion of income which consumers spend on basic services has reduced significantly in recent years, this line of thinking fails to move away from traditional consumption patterns and structures. Suppliers and, where applicable, the gov-

14 Federal Ministry of Justice and Consumer Protection, *Ressortbericht Nachhaltigkeit: Bericht zum Stand der Integration der Rechts- und Verbraucherpolitik in die Agenda 2030 [Ministerial report on sustainability: Report on the status of the integration of legal policy and consumer policy in the 2030 Agenda]*, 2020.

15 Federal Ministry of Justice and Consumer Protection, 2020.

16 Liedtke, C., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen [Enabling sustainable consumption and sustainable production]*, 2020.

17 Schrader, U., et al., *Verbraucherpolitik für nachhaltigen Konsum [Consumer policy for sustainable consumption]*, 2013.

18 Caggemini Research Institute, *Consumer Products and Retail: How sustainability is fundamentally changing consumer preferences*, 2020; Price-waterhouseCoopers (PwC), *Surviving the Retail Apocalypse, What to learn from "Clicks-to-bricks"*, 2019.

19 Barbarossa, C. and Pastore, A., *Why environmentally conscious consumers do not purchase green products: A cognitive mapping approach*, 2015; this also includes studies which deal with the attitude/intention-behaviour gap.

20 Schrader, U., et al., *Verbraucherpolitik für nachhaltigen Konsum [Consumer policy for sustainable consumption]*, 2013.

21 Schrader, U., et al., *Verbraucherpolitik für nachhaltigen Konsum [Consumer policy for sustainable consumption]*, 2013.

ernment also need to be bolder and more innovative in order to drive the transformation. Adopting sustainable behaviour should not be expensive or more expensive, quite the opposite. People must be given the chance to act responsibly and sustainably, they must be given a choice, and they must also be equipped with the knowledge and ability to use this responsibly for the benefit of sustainability. Politicians, businesses and scientists are therefore required to do their part, since they are the key stakeholders able to shape the production and consumption system.

The Advisory Council for Consumer Affairs is acutely aware of the responsibilities that need to be assumed to ensure that the economy and policies focus properly on sustainable consumption. If the ambitious 2030 Agenda goals are to be achieved, businesses and politicians but also consumers themselves will need to assume responsibility. If only sustainably produced products were ever made, our economic system and our legal system and hence also the distribution and balance of responsibilities would look very different.

The 17 global Sustainable Development Goals unanimously adopted by the UN in 2015 represent a unique opportunity to place consumer law under the scrutiny of sustainability. Under the leadership of its President, Ursula von der Leyen, the European Commission has committed itself to the Green Deal, to making a transition to and to refocusing the entire economy on sustainability.²² In the second half of 2020, climate change and sustainability were named as the central focus of Germany's Presidency of the Council of the European Union. In view of the ever-changing socio-economic environment, consumer policy and consumer law must also increasingly consider how sustainable consumer law could and should look.

The Advisory Council for Consumer Affairs will use the example of e-commerce to demonstrate that a holistic approach is required in order to be able to provide an adequate response for achieving sustainable consumption. Consumer policy and, in particular, consumer law often draw on and focus on contracts and/or the prior stage, namely advertisement, and/or the subsequent stage, namely withdrawal from the contract. They are therefore stuck with a one-dimensional perspective of this two-sided relationship. The sustainability requirement will be met only with an approach which analyses the entire product life cycle, from provision of the raw materials through to production and all the way through to recycling. By carrying out a holistic analysis of e-commerce, the Advisory Council for Consumer Affairs intends to make a solid contribution to the debate and hence help achieve holistic legislation which focuses heavily on this cycle. E-commerce is ideal for illustrating the issues involved because it is easy to define, is currently experiencing extremely dynamic growth and is increasingly international in nature. The problems involved are evident, and the conflicting priorities and trade-offs between consumption and the environment are clear. There are no signs of any swift solutions on the horizon, and so an open socio-political debate is all the more necessary. In order to provide a solid basis for this debate, first of all the empirical foundations of e-commerce will be presented and the relevant legal provisions of consumer contract law will be summarised. The Advisory Council for Consumer Affairs would subsequently like to broaden the perspective and, in addition to the legal provisions specifically relevant to e-commerce, also incorporate the provisions applicable to trade in goods as a whole in order to enable the aforementioned holistic approach to be achieved. Potential solutions will then subsequently be set out.

²² The Commission intends to submit legal and non-legal proposals. The main thrust is still not clear, so it is not yet possible to say whether the Commission will undertake a paradigm shift, i. e. away from developing and expanding consumer protection through more and more rights to information.

II. Empirical foundations of e-commerce

1. Revenue and product groups

Over the past 15 years, e-commerce has experienced significant growth in Germany. In 2008, it accounted for just under 3% of retail revenue, but that figure has now increased to more than 10%.²³ Interactive trade as a whole (which includes online sales of goods and services as well as orders placed in writing and over the telephone) was worth EUR 94 billion in Germany in 2019.²⁴ E-commerce in goods accounted for by far the largest proportion of that (EUR 72.6 billion),²⁵ which is why the following remarks will focus solely on this. The trend shows that the sector is expected to experience further growth. Gross revenue increased by 11.6% in 2019 compared to the previous year.²⁶

Recent development: Due to the coronavirus crisis, 58% of online traders stated in April that they were suffering a drop in sales, whereas 31% reported an increase.²⁷ The number of packages being sent increased since stricter measures were introduced on 13 March by 90% by 6 April 2020.²⁸ An increase in sales is being recorded in particular in the case of items relating to healthcare, items relating to pastimes that can be enjoyed at home and home office accessories.²⁹ Experts predict that some of the sales revenue lost by physical retail stores to e-commerce will permanently remain with e-commerce even once the physical stores have reopened.³⁰

It is already the case that 66% of Germans aged over 14 and more than 80% of Germans aged between 14 and 69 shop online.³¹ The **product groups with the highest sales figures** in e-commerce are **textiles** (25.6%) and **consumer electronics** (28.7%).³² Just under a fifth of goods currently purchased online are supplied from other EU Member States, whereby it can only be assumed that international mail-order trade will continue

23 German Economic Institute (Institut der deutschen Wirtschaft, IW), Report 33/19: *Lage und Trends im deutschen Online-Handel [Situation and trends in German e-commerce]*, 2019.

24 German E-Commerce and Mail Order Association (Bundesverband E-Commerce und Versandhandel Deutschland, bevh), press release from 21 January 2020: *Vielbesteller treiben E-Commerce-Umsatz in 2019 auf neuen Höchststand [Consumers who order a lot online drove e-commerce revenue to record levels in 2019]*.

25 German Economic Institute (IW), 2019.

26 German E-Commerce and Mail Order Association (bevh), 2020.

27 Händlerbund (German association of online retailers and service providers), Studie Teil 2: *Coronavirus 2020 – Auswirkungen im Online-Handel [Study part 2: Coronavirus 2020 – Effects on e-commerce]*, 2020.

28 Sendcloud, *Corona-Krise im E-Commerce: Die Auswirkungen auf den Onlinehandel und Onlinehändler [The coronavirus crisis and its impacts on e-commerce and online retailers]*.

29 Sendcloud, *Corona-Krise im E-Commerce [The coronavirus crisis and its impacts on e-commerce and online retailers]*.

30 Bulwiengesa, *Auswirkungen des Shutdown auf die Einzelhandelsmieten [The effects of lockdown on rent prices for retail spaces]*, 2020.

31 German Retail Federation (Handelsverband Deutschland, HDE), *Online Monitor 2020*, 2020.

32 German Retail Federation (HDE), 2020; Cologne Institute of Trade Research (Institut für Handelsforschung, IFH Köln) in, *Online-Anteil am Gesamtumsatz nach Warengruppen [Online share of total revenue by product group]*, 2018.

to grow.³³ The number of parcel, express and courier shipments increased in Germany in 2018 to over 3.5 billion.³⁴ In the national B2C market, the number of shipments increased by 7.4% from 2017 to 2018.³⁵

2. Returns

A significant proportion of goods ordered online are sent back to traders for various different reasons as *returns*.

In 2018, approximately 280 million packages and 487 million items, i.e. 16.3% of delivered packages and 12.1% of ordered items, were returned.³⁶ However, the percentage of returned items varies heavily depending on the product group in question. As such, this figure is comparatively **high** in the **textiles and footwear** group (45.1% of packages and 21.0% of items), whereas considerably **fewer consumer electronics** are returned (5.6% of shipments and 5.1% of items).³⁷

The main reason could be that customers do not get the opportunity to try clothing or footwear on when they buy online. There are no standard fits for the precise length and width of items, which means that the items often do not meet customers' expectations despite sizing information being provided.³⁸

The costs of returns are, on average, EUR 11.24 per returned item (EUR 5.67 transport costs + EUR 5.57 processing costs) or EUR 19.51 per return shipment, i.e. returned package (EUR 9.85 transport costs + EUR 9.66 processing costs).³⁹ According to traders, the biggest cost drivers are transport costs, diminished value and the time and effort involved in inspecting returned goods.⁴⁰

The total cost of returns for the industry is estimated to be EUR 5.46 billion per annum.⁴¹

Despite this, in 2019, just 15% of traders charged their customers return shipping fees. A further 4% plan to introduce them. The majority of traders (81%) do not charge any fees, nor do they intend to introduce them.⁴² Whether or not companies charge return shipping fees varies heavily depending on their size: the smaller the trader, the more likely it is to charge return shipping fees.⁴³

Returns inevitably result in increased transport volumes. The Returns Management Research Group at the University of Bamberg has discovered that returning goods ordered online alone produces 238,000 tonnes of CO₂ equivalent.⁴⁴ This equates to 0.0262% of Germany's total carbon emissions.

33 German Economic Institute (IW), 2019; Händlerbund, *E-Commerce Weltweit: Recht & Steuern [E-commerce around the world: Law & taxes]*, 2019.

34 German Parcel & Express Logistics Association (Bundesverband Paket & Express Logistik, BIEK), *Kurier-Express-Paketdienste-Studie (KEP-Studie) [Courier, express and parcel services study (CEP study)]*, 2019; this also covers B2B and C2C shipments; however, the proportion of these remained the same as in the previous year.

35 German Parcel & Express Logistics Association (BIEK), 2019.

36 Returns Management Research Group at the University of Bamberg, *Retourentacho 2018/19 [Returns speedometer 2018/2019]*, 2019c.

37 Returns Management Research Group, 2019c.

38 Pur, S., Weinfurter, S., Wittmann, M., et al., *Retourenmanagement im Online-Handel – Das Beste daraus machen [Returns management in e-commerce – How to make the best out of a bad situation]*, 2012.

39 Returns Management Research Group, 2019c.

40 Returns Management Research Group, 2019c.

41 Returns Management Research Group, 2019c.

42 Returns Management Research Group at the University of Bamberg, *Präventives Retourenmanagement und Rücksendegebühren [Preventive returns management and return shipping fees]*, 2019a.

43 Returns Management Research Group, 2019a.

44 Returns Management Research Group, 2019a.

What happens with the items that are returned to traders largely depends on their value and condition. Some of the goods may be immediately resold as new goods, whereas others will need to be refurbished before they can be sold or may simply be resold as B-stock products.⁴⁵ **Approximately 4%** of returns, i.e. around **20 million returned items**, were **disposed of, i.e. thrown away**, in 2018.⁴⁶ These figures are based on a survey of online traders. No information is available as to how representative the data are. The traders who responded named the following as reasons: the items could not be technically refurbished (53%), refurbishment was not cost-effective because the financial outlay for donating them would have been higher than that for disposing of them or there were no recipients to which to donate them (40%), or the trademark proprietors and patent owners have prohibited any further use (5%).⁴⁷ In 80% of cases, the value of the goods that had been disposed of was less than EUR 15, which may be a reason why 55% of traders estimated the costs of disposing of goods to be just EUR 0.85 per item, though they do not actually keep any statistics themselves.⁴⁸

45 Pur, S. et al., *Retourenmanagement im Online-Handel [Returns management in e-commerce]*, 2012.

46 Returns Management Research Group at the University of Bamberg, *Retourenentsorgung [Returns disposal]*, 2019b.

47 Returns Management Research Group, 2019b.

48 Returns Management Research Group, 2019b.

III. E-commerce through the lens of legal regulations

Consumer law, which falls under civil law, focuses squarely on contractual provisions which take the situation at the time of or prior to contract conclusion into account. In this context, regulatory shortcomings, in terms of obligations to disclose sustainability-related information, become particularly clear.⁴⁹ However, an analysis of all the provisions that cover the product life cycle reveals the whole dilemma of a regulatory philosophy which subjects each of the respective stages to different requirements, without these regulations being aligned with each other, let alone with consumer law.

1. Consumers – contract law

a) Contract conclusion

E-commerce between consumers and companies primarily concerns the supply of goods in exchange for money. The parties involved will routinely want to conclude a purchase agreement or sales contract in accordance with Section 433 of the Civil Code (cf. Article 2 (5) of Directive 2011/83/EU).⁵⁰

For this to happen, an offer needs to be made and accepted. If a trader presents its products on its website or on an online marketplace, this is usually a case of *invitatio ad offerendum* (legally non-binding invitation for an offer to be made, also known as an invi-

tation to treat).⁵¹ The customer informs the trader of their intention to enter a legally binding relationship and their willingness to pay for a specific product and hence makes an offer. In accordance with Section 312j (3) of the Civil Code and Article 8(2) of the Consumer Rights Directive, for this to happen, in the relationship between consumers and traders, consumers must **explicitly acknowledge** the obligation to pay, usually by clicking a button labelled with the words “order and pay” or “order with obligation to pay” or a corresponding unambiguous formulation.

There are various different ways in which traders can accept offers. Most companies send an order confirmation by e-mail or stipulate a specific action in their General Terms & Conditions, for example shipment of the goods, which is deemed to imply acceptance.⁵² If it is not explicitly stated that the contract has been accepted, this may also be implied through shipment of the goods or a request for payment.⁵³

In e-commerce, it is generally agreed that the trader will not deliver the goods to the customer’s address itself but will properly package the goods and hand them over to a carefully selected haulage company which will then deliver them to the customer (“obligation to send” as opposed to “obligation to bring”).⁵⁴ The parties typically agree who must pay the shipping costs by means of the General Terms & Conditions.

49 See also Liedtke, C., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen [Enabling sustainable consumption and sustainable production]*, 2020, p. 27.

50 Hereinafter referred to as the Consumer Rights Directive.

51 Munich Commentary on the German Civil Code (Münchener Kommentar zum BGB, MüKoBGB)/Busche, Section 145 margin no. 14.

52 Föhlich, C., and Stariradef, T., *Zahlungsmittel und Vertragsschluss im Internet [Payment method and contract conclusion online]*, Neue Juristische Wochenschrift (NJW), 2016, pp. 353 and 354.

53 Föhlich, C., and Stariradef, T., *Zahlungsmittel und Vertragsschluss im Internet [Payment method and contract conclusion online]*.

54 Beck Online Commentary on the German Civil Code (Beck’scher Online Großkommentar, BGB)/Beurskens, Section 269 margin nos. 64 et seq.

b) Withdrawal from the contract

The principle of *pacta sunt servanda* (agreements must be kept) applies in both German law (cf. Section 241 (1) of the Civil Code) and European law. This means that the parties are bound by their agreement, in this case the sales contract, and are obliged to achieve the agreed performance. Legitimate withdrawal from the contract in accordance with Section 355 (1) of the Civil Code is deemed to be an exception to this principle. Reliable figures regarding the exercising of the right of withdrawal are yet to be obtained; however, the total proportion of returns is known. In **2018, 16.3% of delivered packages and 12.1% of ordered items were returned**; however, in addition to returns on account of the exercising of rights of withdrawal, these figures also include, for example, returns on account of deliveries of the wrong goods and deliveries of faulty goods. Section 355 (1) of the Civil Code applies only to consumer contracts, i.e. contracts between consumers and traders, that have as their subject matter the nongratuitous performance by the trader (Sections 312 (1), 310 (3) and 13 et seq. of the Civil Code; cf. Articles 2(1) and (2) and 3(1) of the Consumer Rights Directive).

As contracts in e-commerce are distance contracts within the meaning of Section 312c (1) of the Civil Code and Article 2(7) of the Consumer Rights Directive, in accordance with Section 312g (1) of the Civil Code, the consumer placing the order has a right of withdrawal within the meaning of Section 355 (1) of the Civil Code and Article 9 of the Consumer Rights Directive. In order to exercise the right of withdrawal, the consumer must unambiguously inform the trader of the withdrawal from the contract, whereby it shall be sufficient for the consumer's declaration to set out the consumer's wish to be definitively released from the contract.

The declaration of withdrawal must usually be made within 14 days of receipt, i.e. physical acceptance, of the goods by the consumer (Sections 355 (2) and 356 (2) (1) of the Civil Code and Article 9(2)(b) of the Consumer Rights Directive). However, in accordance with Section 356 (3), first sentence, of the Civil Code, the withdrawal period does not commence prior to the trader having informed the consumer in accordance

with the requirements of Article 246a Section 1 (2), first sentence, no. 1 of the German Introductory Act to the Civil Code (*Einführungsgesetz zum Bürgerlichen Gesetzbuche*, EGBGB). It expires at the latest 12 months and 14 days following receipt of the goods (Section 356 (3), second sentence, of the Civil Code). Dispatch of the declaration of withdrawal in good time is sufficient to comply with the time limit (Section 355 (1), fifth sentence, of the Civil Code).

The legal consequence of effective withdrawal is annulment of the binding nature of the contract and the transformation of the sales contract into a restitution obligation (Section 355 (3), first sentence, of the Civil Code and Articles 12 et seqq. of the Consumer Rights Directive). The trader is obliged to reimburse the payments received from the consumer within 14 days of being informed of the decision to withdraw from the contract (Section 357 (1) of the Civil Code and Article 13(1) of the Consumer Rights Directive). In addition, the trader must reimburse the standard delivery costs if the consumer originally paid them (Section 357 (2) of the Civil Code and Article 13(1) and (2) of the Consumer Rights Directive). The consumer must send back the goods within 14 days of informing the trader of the decision to withdraw from the contract (Section 357 (1) of the Civil Code and Article 14 of the Consumer Rights Directive). It would appear that there are no figures available showing which traders charge costs and which do not, and, if they do, how much they charge.

The consumer bears the costs of return shipment of the goods only if the trader has informed the consumer, pursuant to Article 246a Section 1 (2), first sentence, no. 2 of the Introductory Act to the Civil Code, of this obligation (Section 357 (6) of the Civil Code and Article 14(1)(2) of the Consumer Rights Directive).⁵⁵ Furthermore, the consumer shall be liable towards the trader for any diminished value of the goods if the diminished value results from the handling of the goods other than what is necessary to establish the nature, characteristics and functioning of the goods and the trader informed the consumer of the conditions, time limits and procedure for exercising the right of withdrawal (Section 357 (7) of the Civil Code and Article 14(2) of the Consumer Rights Directive).

⁵⁵ More detailed information on costs and how they are borne in practice can be found on page 12.

c) Interim conclusion

The summary demonstrates that the provisions of consumer contract law laid down in EU law set out the parties' rights and obligations in detail. However, they contain **almost no specific, targeted provisions for achieving the Sustainable Development Goals**, although consumer contract law is otherwise tightly regulated to the greatest extent possible. The way in which consumer contract law has been designed reveals a traditional understanding of consumer law in which the primary focus is the development and expansion of consumer rights in order to enable unencumbered consumption as part of e-commerce. Achieving sustainable consumption means addressing the responsibilities of manufacturers, the legislature and consumers and

ensuring that they are evenly rebalanced. The e-commerce provisions under EU law, which were agreed by the Member States together with the European Parliament, fail to do precisely that.

2. Legal bases from production through to recovery

In order to gain an overview of the legal framework conditions governing e-commerce with regard to textiles and consumer electronics, thought needs to be given to more than just contract law alone. A full picture can be

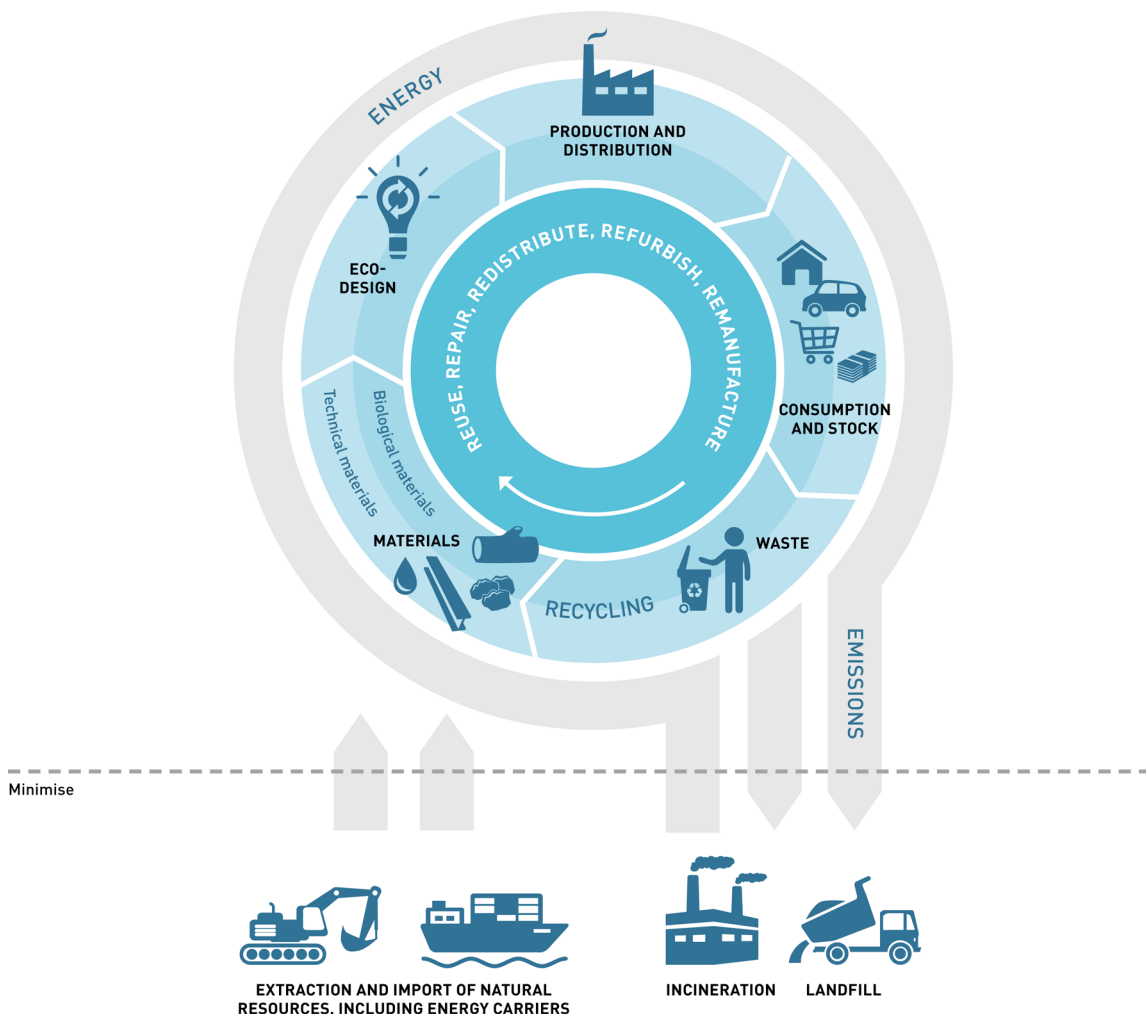


Figure 1: European Environment Agency, Circular economy in Europe, EEA Report No 2/2016, 2016 (the layout has been modified).

achieved only by taking stock of all the legal provisions that apply to the various different stages of a product's life cycle, from the cradle to the grave or, perhaps more accurately, from the cradle to the cradle, so to speak, i. e. from production through to disposal or recycling. There are, in fact, a variety of different regulations regarding the manufacture, transportation, usage and disposal of products.

This study focuses on consumer-related regulations and those which are of particular interest from a sustainability point of view. As such, there is a shift in perspective. In addition to German statutory rules, in the light of the emergence of global supply chains, international conventions and contracts as well as voluntary agreements of companies are also of key interest.

Identifying the relevant regulations relating to a product's sustainability can be hard even for legal experts. The summary below is intended to do two things: provide a cross-sectional overview of the different regulations that exist in each area and reveal the point in time at which consumers can, must or should obtain certain information regarding a product's sustainability. No claim is made as to the description's completeness. The sheer countless number of voluntary agreements, labels and alliances at national, European and international level, which have at least an indirect impact on a product's overall sustainability credentials, means that focus really needs to be centred on the essential framework conditions.

a) Cultivation/extraction of raw materials and production requirements

Before the actual product, for example a T-shirt or a smartphone, can be produced, raw materials need to be cultivated and harvested or extracted. South Africa, South America and Asia are of particular interest here

as suppliers of raw materials but also as producers.⁵⁶ A major issue in terms of information gathering can be encountered as early on as this stage. Initial approaches to resolving this issue have already been adopted, for example the VDI Centre for Resource Efficiency (VDI ZRE) has developed standards for raw material demand.⁵⁷

Most electronic devices are made from a variety of different metals extracted in numerous different countries. The same applies to the cultivation of textile fibres. Country-of-origin labelling, which is relevant from the point of view of consumers, is fraught with extremely complex legal issues whereby national law, EU law and world trade law become entwined and entangled. In principle, the European economic order and world economic order are based on a distinction between product-related and process-related regulations. From a global perspective, neither national nor European regulations can have a discriminatory effect on production outside of Europe. Whether and to what extent standardised European labelling obligations with regard to sustainable consumption are compatible with the General Agreement on Tariffs and Trade (GATT)/World Trade Organization (WTO) is still a contentious issue. The desirable outcome from the perspective of consumers, i. e. disclosure of the country of origin and perhaps even disclosure of the conditions under which the respective raw material was extracted or product was manufactured, is proving to be a legal minefield.⁵⁸

As manufacturers and sellers do not have to state the countries from which the raw materials that have been used originated, either on the finished product or at any other point, even particularly attentive, observant and keen consumers cannot know which national statutory regulations were applicable locally for the extraction of the raw materials used in the product that they are interested in purchasing.⁵⁹ The issue is

56 International Resource Panel, *Global Resources Outlook 2019: Natural Resources for the Future We Want*, 2019; Munich Environmental Institute (Umweltinstitut München), *Anbau von Baumwolle [Cultivation of cotton]*; MISEREOR, the German Catholic Bishops' Organisation for Development Cooperation, et al., *Fairer Abbau, gerechte Teilhabe [Fair extraction and equitable participation]*, 2013.

57 VDI Centre for Resource Efficiency (Zentrum Ressourceneffizienz, VDI ZRE), *Ressourceneffizienz – Bewertung des Rohstoffaufwands [Resource efficiency – Evaluation of raw material demand]*, VDI Standard 4800, Part 2, 2018; also consult the Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRU).

58 Sankari, S.E., *Collective valuation of the common good through consumption: What is (un)lawful in mandatory country-of-origin labelling of non-food products?*, in: Do Amaral Junior, A., Klein Vieira, L., and De Almeida, L. (eds.), *Sustainable Consumption: The Right to a Healthy Environment*, 2019, pp. 207–227.

59 As from 1 January 2021, however, new rules will enter into force regarding the importation of four "conflict minerals" into the EU from conflict-affected and high-risk areas: Regulation (EU) 2017/821.

further complicated by the fact that raw materials are traded on exchanges and platforms. Companies which purchase raw materials on such exchanges and platforms do not necessarily know and may not be able to find out where the raw materials originated. The same applies to the various different production stages such as the spinning of raw fibres, textile finishing, the extraction of metals from ore, the manufacture of primary products and intermediate products, and the assembly of electronic equipment. As part of global value chains, production processes span networks and cross national borders in order to make the best possible use of different sites' strengths and make production as a whole more efficient.⁶⁰ As such, it is practically impossible to track and trace the statutory regulations relating to the sustainability of the finished product in the countries of extraction, processing and production. There is also another issue: even if consumers knew which national statutory regulations applied to the production of the product in question, they could not be sure that compliance with the regulations was actually ensured. Statutory sustainability standards are, in fact, being gradually developed in many developing countries; however, compliance with the standards is not universally sufficiently controlled or monitored by government authorities or independent NGOs.⁶¹

If production is carried out in Germany, compliance with the Technical Instructions on Air Quality Control (*Technische Anleitung zur Reinhaltung der Luft*, TA Luft)⁶², the German Federal Ordinance on Immission Control (*Bundesimmissionsschutzverordnung*, BImSchV)⁶³, the German Waste Water Ordinance (*Abwasserverordnung*,

AbwV)⁶⁴ and Regulation (EC) No 1907/2006⁶⁵ must be ensured. In most cases, these environmental legal requirements are rooted in EU law. In fact, the EU has created a dense network of rules meaning that production within the EU must meet specific protection standards. However, even in the EU, legal requirements and practical monitoring of such requirements can fall by the wayside. However, a Member State is precluded from preventing imports from another EU Member State on the sole ground that compliance with environmental legal requirements is not efficiently monitored in the EU country of origin.⁶⁶

The reorganisation of the world economy with global value chains and supply chains has increasingly focused political attention on the conditions under which products from outside Europe, in particular from Asia, Africa and South America, are made. This reorganisation is improving not only the opportunities that the manufacturer(s) and equipment suppliers have to obtain information about the process flow throughout the supply chain, but also the opportunities available to consumers to do the same, not least with the help of modern means of communication. Whether and to what extent these opportunities for monitoring and exercising responsibility are actually utilised as part of a legally binding framework is a whole other matter.

A standardised legal obligation for European companies to comply with human rights standards and environmental standards throughout their supply chains does not yet exist but is currently being discussed.⁶⁷ Currently, only France has established a cross-sector binding human rights and environmental stand-

60 Herr, H., et al., *Wirtschaftliche Entwicklung und Arbeitsbedingungen in globalen Wertschöpfungsketten [Economic development and working conditions in global value chains]*, 2020.

61 Institute for Applied Ecology (Öko Institut), Working Paper 3/2018, *Umweltschutz wahrt Menschenrechte! Deutsche Unternehmen in der globalen Verantwortung [Environmental protection safeguards human rights! German companies and their global responsibility]*, 2018; German Federal Environment Agency (Umweltbundesamt, UBA), *Verantwortungsvolle Rohstoffgewinnung? Herausforderungen, Perspektiven, Lösungsansätze [Responsible mining? Challenges, perspectives and approaches]*, 2017.

62 The Technical Instructions on Air Quality Control are designed to safeguard against adverse environmental impacts from air pollution caused by technical facilities.

63 The German Federal Ordinance on Immission Control (*Bundesimmissionsschutzverordnung*, BImSchV) governs the requirements applicable to combustion plants with regard to the release of harmful substances.

64 The German Waste Water Ordinance (*Abwasserverordnung*, AbwV) sets out the minimum requirements for introducing waste water into bodies of water from the sources named in the annexes. Annex 38, for example, covers textile manufacturing and finishing, and Annex 40 covers metal working and processing.

65 The REACH Regulation is a European chemicals regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

66 See judgment of the Court of Justice of the European Union of 23 May 1996 – Case C-5/94.

67 European Commission, *Study on due diligence requirements through the supply chain*, 2020.

ard throughout supply chains for companies based in France. Other EU Member States have isolated, sector-specific regulations or regulations relating to specific aspects of human rights or environmental protection.⁶⁸ In Germany, the discussion surrounding the introduction of supply chain legislation is still ongoing. In view of the impacts of the COVID-19 pandemic, the German Federal Ministry for Economic Affairs and Energy (*Bundesministerium für Wirtschaft und Energie*, BMWi) is making the case for companies not to be put under any extra pressure or burden, whilst the German Federal Ministry of Labour and Social Affairs (*Bundesministerium für Arbeit und Soziales*, BMAS) is not alone in its belief that sustainable supply chains will help companies deal with crises such as the coronavirus pandemic better.⁶⁹ The National Action Plan (NAP) for implementing the United Nations Guiding Principles on Business and Human Rights does not contain any mandatory provisions but simply makes requests of companies and hence relies on voluntary commitments.⁷⁰ No general voluntary commitment to comply with the UN Guiding Principles exists for German companies. However, there are numerous sector, association and company-specific voluntary commitments. Their worth depends crucially on whether the companies actually fulfil the self-imposed obligations and publicly account for them. There are, in fact, companies which are seizing the initiative themselves and playing a leading role in developing sustainable production.⁷¹

As part of a monitoring process between 2018 and 2020, the Federal Government reviewed companies' execution of the due diligence measures set out in the National Action Plan. In the first survey phase (2019), just under 20% fulfilled the requests,⁷² and the assessment of the second survey phase (2020) shows that just 13% to 17% of companies are fulfilling the requests relating to the due diligence measures set out in the NAP.⁷³ The findings are based on a survey of companies and a consultation with stakeholder groups. The findings are reportedly subject to a multi-level plausibility check. In a press release issued on 14 July (the day on which the preliminary findings of the second survey were presented), Ministers Heil and Müller stated that the arrangements in the coalition agreement were now effective and that the intention was still to introduce supply chain legislation in the current legislative period.⁷⁴ The background to this is that both the coalition agreement and the NAP state that the Federal Government shall take further steps to ensure statutory regulation of the human rights due diligence measures if less than 50% of companies fulfil the requests set out in the NAP. The call for the introduction of supply chain legislation is supported, for example, by the Federation of German Consumer Organisations (vzbv), the German Council for Sustainable Development, which advises the Federal Government as an independent body of experts,⁷⁵ and the Supply Chain Legislation Initiative (Initiative Lieferkettengesetz), which consists of more than 100 NGOs.⁷⁶

68 For example, the United Kingdom (Modern Slavery Act, 2015); France (Loi relative au devoir de vigilance, 2017); the Netherlands (Child Labour Due Diligence Act, 2019); as a whole, Salminen, J., and Rajavuori, M., *Transnational sustainability laws and the regulation of global value chains: comparison and a framework for analysis*, Maastricht Journal of European and Comparative Law, 2019, Vol. 26, Issue 5, p. 602.

69 See press release from the German Federal Ministry for Economic Affairs and Energy (BMWi) from 12 June 2020.

70 See also the Federal Government guidelines for promoting deforestation-free supply chains passed in April 2020.

71 Business & Human Rights Resource Centre, Business Statement, *Our responsibility in a globalised world: A call for mandatory human rights and environmental due diligence legislation*, 2020.

72 German Federal Government, *Monitoring des Umsetzungsstandes der im Nationalen Aktionsplan Wirtschaft und Menschenrecht 2016–2020 beschriebenen menschenrechtlichen Sorgfaltspflicht von Unternehmen, Zwischenbericht: Erhebungsphase 2019 [Monitoring of the status of the implementation of companies' human rights due diligence described in the National Action Plan for Business and Human Rights 2016–2020: Interim report regarding the 2019 survey phase]*.

73 German Federal Government, *Monitoring des Umsetzungsstandes der im Nationalen Aktionsplan Wirtschaft und Menschenrecht 2016–2020 beschriebenen menschenrechtlichen Sorgfaltspflicht von Unternehmen, Zwischenbericht: Erhebungsphase 2020 [Monitoring of the status of the implementation of companies' human rights due diligence described in the National Action Plan for Business and Human Rights 2016–2020: Interim report regarding the 2020 survey phase]*; see also German Federal Environment Agency (Umweltbundesamt, UBA), *Umweltbezogene und menschenrechtliche Sorgfaltspflichten als Ansatz zur Stärkung einer nachhaltigen Unternehmensführung, Zwischenbericht Arbeitspaket 1 – Analyse der Genese und des Status quo [Environmental and human rights due diligence as a means to strengthen sustainable business conduct, Interim report work package 1 – Analysis of the original emergence and the status quo]*, 2019.

74 Joint press release of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the German Federal Ministry of Labour and Social Affairs (BMAS) from 14 July 2020.

75 German Council for Sustainable Development (Rat für nachhaltige Entwicklung, RNE), *Sustainable Supply Chains*, 2020.

76 Supply Chain Legislation Initiative (Initiative Lieferkettengesetz), „Ein starkes Zeichen“: Initiative Lieferkettengesetz zur Ankündigung eines EU-Lieferkettengesetzes von Justizkommissar Reynders [“A strong signal”: Supply Chain Legislation Initiative on the announcement of EU supply chain legislation by Commissioner for Justice, Didier Reynders], press statement from 30 April 2020; Business & Human Rights Resource Centre, 2020.

At European level, the production of electronic equipment is subject to the Ecodesign Directive⁷⁷ which, in conjunction with the respective product-specific implementing measures, is intended to create, for example, incentives for sustainable development, in particular sustainable choice, sustainable use of raw materials and sustainable manufacturing.⁷⁸ Operators of major facilities must also enter the emissions and waste generated as a result of their production operations in the EU in a Pollutant Release and Transfer Register (PRTR)⁷⁹ which is freely accessible to the public at no charge so that consumers can at least theoretically obtain information on this aspect of production.⁸⁰ The register provides information about specific facilities, sectors and locations. After searching for a specific facility, users are provided with a data set which contains information on releases to air, water and land, and transfers of pollutants and waste. Non-experts are unable to do much with the information; however, the format is currently being reworked, and the way in which the information is presented will potentially be made clearer and more accessible.

International conventions govern social sustainability in order to establish a standard which is independent of national regulations. The International Labour Organization (ILO) has, for example, developed a set of minimum Core Labour Standards. A total of 146 countries have ratified all eight Core Labour Standards, meaning that they now apply virtually worldwide.⁸¹ However, the standards are binding upon the states only as subjects of international law. For them to apply directly to companies, they would have to be transposed into national

law in the relevant country. In addition, the United Nations⁸², the OECD⁸³ and the United Nations Global Compact initiative⁸⁴ set out sustainability standards which numerous multinational and national companies use as guidance. Since the recommendations and guidelines mentioned are not binding regulations, consumers cannot be certain that products have been manufactured in line with these principles.

In the light of this, numerous governmental and non-governmental initiatives have been set up with the aim of obliging traders and companies to monitor compliance with certain sustainability standards throughout the production chain themselves and make a record of the monitoring that they carry out. In addition to the more general sustainability initiatives such as Fairtrade, there are also sector-specific and production stage-specific initiatives such as Green Button (Grüner Knopf) and the Partnership for Sustainable Textiles and, in relation to the electronics industry, the Initiative for Responsible Mining Assurance (IRMA). Given the variety of agreements, labels, partnerships and alliances, which are intended to guarantee different sustainability standards for different production stages but which have not been aligned or harmonised with each other, it is not always immediately obvious for whom which agreements apply and whether they involve only non-binding guidelines or provisions of a binding nature. Help is now at hand in the form of several websites which provide an overview of the alliances and labels which are available for a specific product or industry sector, for example the Siegelklarheit.de project initiated by the Federal Gov-

77 Originally Directive 2005/32/EC, recast by means of Directive 2009/125/EC; transposed into German law by means of the Energy Consumption-Relevant Products Act (*Energieverbrauchsrelevante-Produkte-Gesetz*, EVPG).

78 As a whole: Ries, F., Report on the implementation of the Ecodesign Directive (2009/125/EC), Committee on the Environment, Public Health and Food Safety, 2018; Durand, P., A longer lifetime for products: benefits for consumers and companies, Committee on the Internal Market and Consumer Protection, 2017; Kemna, R., Wierda, L., and Aarts, S., Van Holsteijn en Kemna B.V. (VHK), Ecodesign Impact Accounting – Overview Report 2016, prepared for the European Commission, 2016; Pietikäinen, S., Resource efficiency: moving towards a circular economy, 2014/2208 (INI), Committee on the Environment, Public Health and Food Safety, 2015; Stamminger, R., and Geppert, J., *Energielabel – Fluch oder Segen für Verbraucher? [Are energy labels a curse or a blessing for consumers?]*, in: Bala, C., and Schuldzinski, W. (eds.), *Der verantwortungsvolle Verbraucher: Aspekte des ethischen, nachhaltigen und politischen Konsums* [Responsible consumers: Aspects of ethical, sustainable and political consumption], 2015, pp. 109–121.

79 The German register can be consulted at thru.de. The reports are sent by the Member States to the European Commission and entered in the E-PRTR.

80 Users have various different options to choose from. They can either search for specific facilities or view a list of facilities within specific sectors or in specific locations. As simply a data set with information regarding emissions of pollutants and waste is provided for each facility without any comparative values for benchmarking, non-experts can find it difficult to extract much knowledge from it.

81 International Labour Organization (ILO), www.ilo.org; including Indonesia, the Democratic Republic of the Congo and Pakistan; however, Bangladesh and India have ratified seven and six of the Core Labour Standards, respectively.

82 United Nations, Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, 2011.

83 Organisation for Economic Co-operation and Development (OECD), OECD Guidelines for Multinational Enterprises, 2011.

84 Global Compact Network Germany, *Die zehn Prinzipien des Global Compact [The 10 Principles of the Global Compact]*.

ernment or label-online.de which the Advisory Council for Consumer Affairs mentioned in its Sustainable Consumption policy brief.⁸⁵ However, their very existence alone is proof that these labels and initiatives, or rather, the overwhelming number of these labels and initiatives is apparently not properly meeting consumers' need for information. As part of a survey, 72% of respondents said that they felt confused by the variety of different labels.⁸⁶ Only one in six respondents said that they felt well informed about the labels applied to products.⁸⁷

The certification mark which was designed in order to provide quality labels with trade mark protection and was enshrined in national law in 2019 also has the potential to help remedy the situation. Its proprietor can guarantee the existence of certain properties and characteristics, for example sustainability aspects, for goods and services for which the certification mark has been registered. Mark applicants can obtain trade mark protection only, for example, if they are independent, i. e. they do not themselves supply the goods and services certified by them, and they disclose the standards to be met with regard to product features and quality levels as well as the terms of use in a set of rules governing use of the mark accessible to anyone in the register of marks.⁸⁸ It is still too early to be able to gauge the effectiveness of the certification mark on sustainability.

b) Pre-contractual stage, advertising and pre-contractual information

Green claims are regulated by specific legal provisions, primarily under EU law, which concern product labelling but also possible infringements in the event of the provision of false or misleading information. These provisions cover a broad range of product-related rules.⁸⁹ General statutory rules governing environmental advertising do not exist.⁹⁰ The legal boundaries for environmental advertising should be gauged in line with the ban on misleading advertising in accordance with Sections 3 and 5 of the German Act Against Unfair Competition (*Gesetz gegen den unlauteren Wettbewerb*, UWG). Germany's fair trading law is based on the Unfair Commercial Practices Directive.⁹¹ It does not contain any legally enshrined obligations to provide information. Advertisers are not obliged to provide consumers with clarification but they must also not mislead them. This means that, if a company's advert states that its products are environmentally friendly and/or sustainable, it is not obliged to provide consumers with all the intricate details as to why it deems the products to be environmentally friendly, but, conversely, it also must not mislead consumers by leaving out relevant pieces of information, known as misleading by omission. It is difficult to draw a clear line. In case law and also in the debate surrounding the structuring of specific requirements, there is a tendency to impose increasingly stricter standards for advertising products as environmentally friendly. The ban on misleading advertising can, in specific situations, be converted into an obligation to provide information, the scope of which is determined

85 Liedtke, C., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen [Enabling sustainable consumption and sustainable production]*, 2020, p. 27.

86 Federal Consumer Initiative Association (Verbraucher Initiative), *Wirkung von Siegeln auf das Verbraucherverhalten [The effect of labels on consumer behaviour]*, 2016; 1,004 German-speaking individuals aged 14 and older were surveyed as part of a representative random sample.

87 Consumer Initiative Association (Verbraucher Initiative), 2016.

88 Liedtke, C., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen [Enabling sustainable consumption and sustainable production]*, 2020, p. 26.

89 European Commission, *Misleading green claims*, Extract of the Guidance for the implementation/application of Directive 2005/29/EC on unfair commercial practices.

90 Köhler, H., Bornkamm, J., and Feddersen, J., *Gesetz gegen den unlauteren Wettbewerb: UWG [German Act Against Unfair Competition]*/Köhler, 38th edition, 2020, Section 3 of the German Act Against Unfair Competition margin no. 9.19; approaches for rules under secondary legislation, which define requirements for environmental advertising, are set out in the Munich Commentary on German Fair Trading Law (Münchener Kommentar zum Lauterkeitsrecht)/Micklitz and Namyslowska, 2020, margin nos. 100 et seqq.

91 Directive 2005/29/EC; last amended by means of the Omnibus Directive (Directive (EU) 2019/2161) which came into force on 7 January 2020 and must be transposed into national law by January 2022; however, no amendments are envisaged with regard to sustainability aspects.

by the courts.⁹² Advertising a product as being particularly environmentally friendly is therefore permitted in principle. However, strict requirements are imposed in terms of the reliability of the advert's claims in the specific case in question.⁹³ This is essentially measured based on the expectations of the average consumer taking the overall circumstances into consideration, whereby the trader must not make any false statements or provide other information suited to deception in relation to the product. Recently, the case law of the Court of Justice of the European Union has shown a cautious tendency to deviate from the practice of using the average consumer as a benchmark in favour of focusing more heavily on the specific target group.⁹⁴ Whether this change of direction will result in stricter requirements for environmental advertising remains to be seen.

Not least spurred into action by the EU, the German legislature has continuously expanded the range of obligations to provide information imposed on manufacturers and sellers. Despite how detailed pre-contractual obligations to provide information are for individual contract types and individual legal remedies, **there is no regulation of product sustainability**. In accordance with Section 312d (1) of the Civil Code in conjunction with Article 246a Section 1 (1), first sentence, no. 10 of the Introductory Act to the Civil Code, companies are obliged to provide consumers with information regarding codes of conduct which apply to them (including, for example, voluntary commitments to uphold human rights and meet environmental standards throughout the supply chain). However, in cases where presentation options are limited in the distance contract (for example contract conclusion via SMS), it is sufficient for such information to be "made available in an appropriate manner" (Article 246a Section 3 (2) in conjunction with Section 4 (3) of the Introductory Act to the Civil Code). As such, stating in the contract that further information is

available on the company's website is sufficient.⁹⁵ Links can be provided to the respective codes of conduct, or the codes of conduct themselves can be inserted there. However, the onus is on the consumer to take the initiative and access the information. In all other cases of distance contracts, a "media-compatible presentation" (Article 246a Section 4 (3), first sentence, of the Introductory Act to the Civil Code) shall suffice. Where contracts are concluded online, it is sufficient for the company to provide a link to the relevant information prior to the conclusion of the contract and for the consumer to be able to click through on the website.⁹⁶ Even here, the statutory regulation does not stipulate that the consumer must have accessed the information prior to concluding the contract, just that the consumer must be able to access the information easily. This is partly on account of legal barriers under European and international economic law, although there is some leeway for further national approaches. This will be discussed below. The two product groups at the heart of e-commerce will, first of all, be presented in more detail.

In accordance with Section 4 of the German Textile Labelling Act (*Textilkennzeichnungsgesetz*, *TextilKennzG*) in conjunction with Regulation (EU) No 1007/2011, textile products may be placed on the market provided that they have a label which details the fibre composition. This equates to a general obligation to provide information prior to the conclusion of a contract. The problem is that, although traders must essentially state all the fibre constituents, a product can still be described as being exclusively composed of the same fibre if it contains no more than 2% of extraneous fibres, provided this is technically unavoidable and is not added as a matter of routine. Therefore, despite the labelling obligation, consumers cannot tell whether a product is really 100% composed of the stated material or whether it contains extraneous fibres. Also, if tex-

92 German Federal Court of Justice, *Journal of Intellectual Property Law* (BGH GRUR), 1991, pp. 548 and 549 – *Umweltengel* [*Blue Angel*, German ecolabel]; German Federal Court of Justice, *Journal of Intellectual Property Law* (BGH GRUR), 1991, pp. 546 and 547 – "... aus Altpapier" ("made from recycled paper"); Rohnke, C., *Werbung mit Umweltschutz* [*Advertising and environmental protection*], *Journal of Intellectual Property Law* (GRUR), 1988, pp. 667 and 669.

93 Ohly, A., and Sosnitza, O., *Gesetz gegen den unlauteren Wettbewerb* [*German Act Against Unfair Competition*]/Sosnitza, 7th edition, 2016, Section 5 of the German Act Against Unfair Competition (UWG), margin nos. 301 et seqq.

94 Purnhagen, K.P., and Schebesta, H., *The behaviour of the average consumer: A little less normativity and a little more reality in [the] CJEU's case law? Reflections on Teekanne*, ELR 2016, p. 590.

95 Beck Online Commentary (Beck'scher Online Großkommentar)/Busch, July 2020, Article 246a Section 4 of the German Introductory Act to the Civil Code, margin no. 25.

96 Spindler, G., and Schuster, F., *Recht der elektronischen Medien* [*Legislation on electronic media*]/Schirmbacher, 2019, Article 246a of the German Introductory Act to the Civil Code, margin nos. 246 et seqq.

tiles are to be subsequently recycled, the question as to whether the fibres are pure fibres or blended fibres is extremely important, as complex and costly sorting and separation operations may need to be carried out before they can be reused.⁹⁷ Other new issues are also starting to emerge. Textile manufacturers are increasingly incorporating electronics into clothing. This trend is only in its infancy, and, although the main issue with these products, which are referred to as “wearables” and “smart textiles”, concerns data protection, there are also labelling implications.⁹⁸

The European Environment Agency stipulates that it must be possible for any materials and components that are used to be cascaded, if not recycled, or be reintegrated into the biological cycle and contribute to protecting the environment.⁹⁹ As such, either textiles must be made from biodegradable materials or the proper conditions must be met during manufacturing to enable subsequent unmixed recycling.¹⁰⁰ However, the development of wearables is heading in the opposite direction. The incorporation of electronics is presenting recycling companies with problems that have so far not been resolved. In theory, this falls within the scope of the Ecodesign Directive. However, there has so far been a lack of corresponding legal provisions regarding product design and the placing on the market of such textiles.

The situation is similar with footwear whereby the material labelling obligation under Section 10a of the German Consumer Goods Ordinance (*Bedarfsgegenständeverordnung*, *BedGgStV*) applies in conjunction with Directive 94/9/EC. Electronic equipment is subject to Sections 3 and 6a of the German Energy Consumption Labelling Act (*Energieverbrauchskennzeichnungsgesetz*, *EnVKG*), in accordance with which energy consumption-relevant products must, when sold or advertised, be labelled with

energy efficiency classes and, where applicable, information regarding their consumption of other resources. The real problem with regard to sustainability here is once again the issue of combining materials such as metals and plastics to form hybrids, as the materials can no longer be separated during reprocessing.¹⁰¹

At this stage, the aforementioned labels and memberships of sustainability alliances come into play. If consumers are particularly interested in a product’s sustainability, they will need to pay close attention to its sustainability credentials in the advertising and product information. Assuming that the voluntarily provided information fulfils its purpose, there is still the issue that consumers cannot verify whether manufacturers are actually achieving their own self-imposed goals. The certification mark has the advantage here that the independent mark proprietor is obliged to verify that the mark users, i.e. those selling the certified goods and services, continue to meet the standards set out in the mark proprietor’s set of rules governing use of the mark.¹⁰² If they fail to meet those standards, use of the mark may be revoked. As such, the mark proprietor adopts a *de facto* monitoring and control function on behalf of consumers. How this monitoring and control process will need to look in practice remains to be seen.

c) Transportation, in particular from the manufacturer to the wholesaler or trader and from the wholesaler or trader to the customer

Information on how sustainable the transportation of a product is, both from the production site to the premises of the wholesaler or trader and from the latter to the customer, is provided to customers only on a voluntary basis. Online traders are not obliged to state where a product was produced, where it is currently being

97 Frieghe, H., *Leitfaden zur Wiederverwendung und Verwertung von Alttextilien [Guidelines for the reuse and recovery of used textiles]*, 2020; Bartl, A., *Recycling und Wiederverwendung von Fasern aus Abfällen [Recycling and reuse of waste fibres]*, Österreichische Wasser- und Abfallwirtschaft [Austrian Water and Waste Management] (ÖWAW), 2009.

98 North Rhine-Westphalia Consumer Organisation (Verbraucherzentrale Nordrhein-Westfalen), *Unsportlich: Datenschutz-Mängel bei Wearables und Fitness-Apps [Unsporting behaviour: data protection shortcomings with wearables and fitness apps]*, 2017; Kopp, R., and Sokoll, K., *Wearables am Arbeitsplatz – Einfallstore für Alltagsüberwachung? [Wearables in the workplace – gateways to daily monitoring?]*, *Neue Zeitschrift für Arbeitsrecht (NZA)*, 2i015, p. 1,352.

99 European Environment Agency, *Circular economy in Europe*, EEA Report No 2/2016, 2016.

100 Der Spiegel, *Attkleidermarkt vor dem Kollaps: Die Fast-Fashion-Flut (Video) [Second-hand clothing market on the brink of collapse: The fast-fashion flood (video)]*, 2020.

101 Reuter, M.A., and Van Schaik, A., *Recycling Indices Visualizing the Performance of the Circular Economy*, World of Metallurgy – Erzmetall, 2016.

102 See Liedtke, C., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen [Enabling sustainable consumption and sustainable production]*, 2020.

stored, what means of transport will be used to get it to the end customer, how quickly it will be delivered or whether the ordered items will be delivered in the same package or separately. Mail-order companies are also not obliged to reveal average carbon emission figures or similar resource consumption data.

Legal provisions covering product packaging for shipping purposes also exist. The German Packaging Act (*Verpackungsgesetz*, *VerpackG*), for example, states that the extent of the packaging must be kept to a minimum (Section 4 (1) of the Packaging Act), the materials used must be reusable or recoverable (Section 4 (2) of the same Act), and the packaging may be appropriately labelled in order to enable the material used to be identified (Section 6 in conjunction with Annex 5 of the same Act).

d) Post-contractual stage, in particular after-sales promotion and product usage

The legislature is gradually taking more and more of an interest in consumers' usage of products, as there is considerable potential here for influencing a product's overall sustainability credentials.¹⁰³ Initial legal provisions regarding the usage stage are set out in the EU's Digital Content Directive¹⁰⁴ and the EU's Sale of Goods Directive¹⁰⁵ from 2019, which must be transposed into German law by 31 December 2021. Articles 7 (d) and 8 (2) of the Digital Content Directive and Article 7 (3) of the Sale of Goods Directive set out an update obligation for the product's normal service life and/or for a period of time agreed under the contract. The aims set out in recital 32 of the Sale of Goods Directive for achieving more sustainable consumption patterns and developing a circular economy are only of limited legal significance. Typically, the recitals are consulted and

used by the Court of Justice of the European Union in its interpretation of the relevant provisions; however, they cannot establish any separate obligations.

The European Commission's Ecodesign Working Plan 2016–2019 specifies that requirements in terms of products' durability, reparability and ease of reuse must be taken into account when investigating possible Ecodesign implementing measures, as these product characteristics depend in large part on the initial design of the product.¹⁰⁶ In 2019, the first three Ecodesign implementing measures were passed with provisions on the duration of the availability of and the delivery time for spare parts as well as on the replaceability of spare parts with commonly available tools for the product groups of refrigerating appliances¹⁰⁷, household washing machines and household washer-dryers¹⁰⁸, and household dishwashers¹⁰⁹. The aforementioned provisions shall be valid as from March 2021. Factors such as a product's service life and the way in which it is used influence how sustainable it will actually be at the end of its lifetime. Companies can already have a positive influence on their customers' usage behaviour by providing them with proper usage instructions, for example the widespread inclusion of washing and ironing instructions for clothes. If consumers know how best to wash and iron an item of clothing, the product's service life will be extended, which will, in turn, have a positive impact on its sustainability credentials. However, a very distinct set of problems are created if manufacturers recommend dry cleaning in order to avoid any potential liability if items are washed in a washing machine. Since it is clear that the average consumer has only limited knowledge of how to look after and maintain smartphones, washing machines and dishwashers, there is significant potential for increasing the durability of these products.¹¹⁰

103 Also, Schlacke, S., Tonner, K., Gawel, E., et al., *Nachhaltiger Konsum bei der Produktnutzung als Herausforderung rechtlicher Steuerung [Sustainable consumption in product usage as a challenge in terms of legal regulation]*, *Zeitschrift für Umweltrecht (ZUR)*, 2016, p. 451.

104 Directive (EU) 2019/770.

105 Directive (EU) 2019/771.

106 European Commission, Ecodesign Working Plan 2016–2019, 2016, pp. 9 et seq.

107 Commission Regulation (EU) 2019/2024.

108 Commission Regulation (EU) 2019/2023.

109 Commission Regulation (EU) 2019/2022.

110 Jaeger-Erben, M., and Hipp, T., *Letzter Schrei oder langer Atem? Erwartungen und Erfahrungen im Kontext von Langlebigkeit bei Elektronikgeräten [The latest craze or products with staying power? Expectations and experiences with regard to the durability of electronic equipment]*, 2017; Bichler, S., Gorny, S., and Stamminger, R., *Are German consumers using their dishwashers in an energy efficient way? An online study of German households*, EEDAL, 7th International Conference, 2013; Geppert, J., and Stamminger, R., *Do consumers act in a sustainable way using their refrigerator? The influence of consumer real life behaviour on the energy consumption of cooling appliances*, in: *International Journal of Consumer Studies*, 34 (2) 2010, pp. 219–27; Gillingham, K., et al., *The rebound effect is overplayed*, *Nature*, Vol. 493, 2013, pp. 475–476.

Another usage aspect is of relevance in the case of consumer electronics. If, over time, a product becomes damaged, the customer's decision as to whether to continue or stop using the product will crucially depend on whether the product can, in principle, be repaired and, if so, whether the repair can actually be carried out in the case in question (for example whether the necessary spare parts are still in stock) and how much it would cost. In response to a survey, 74 % of consumers said that they decided not to get their electronic equipment repaired due to the costs involved.¹¹¹ Consumers feel that a repair is worth doing only if the value of the product after the repair has been carried out is at least as high as the cost of the repair and/or the repair will at least extend the product's service life. However, the manufacturer or trader would have to and would have to be able to provide information about the service life. As far as is known, there are no figures available regarding the minimum value of small appliances below which carrying out a repair is deemed not to be cost-effective.

Despite discussing the minimum durability of products as well as after-sales management and customer services for decades, the Member States of the EU have failed to agree on a set of common rules, with the exception of the limited provisions of the Digital Content Directive and the Sale of Goods Directive. The latter at least specify that the manufacturer must supply security updates for the duration of the contract or, in the case of a single act of supply, a period of time that the consumer may reasonably expect, given the type and purpose of the digital content or digital service and taking into account the circumstances and nature of the contract.¹¹² It is usually not in companies' interests for consumers to use products for as long as possible. On the contra-

ry, short product life cycles not only provide them with a chance to differentiate themselves from the competition but also provide them with an opportunity to generate higher sales figures with new purchases. Companies which are quick to innovate not only have a stronger say in terms of pricing but can also potentially improve their cost position through economies of scale and experience curve effects. Together, both lead to attractive profits for innovative products. Consumers are ambivalent, and their position changes depending on the product. In the case of small items of electrical equipment, which are the central focus of the study, consumers may welcome and even demand technical innovation. Their actual purchasing habits correspond with their desire for sustainable products, expressed in surveys, only to a limited degree.¹¹³ On the other hand, there are also consumers who leap frog, meaning that, when faced with ever-shorter innovation cycles, they simply skip one generation of the product in question.¹¹⁴

At the same time, there are also indications that companies purposefully limit the service life and useful life of their products and therefore induce premature ageing or a loss of functionality in order to encourage sales of new products (known as **planned obsolescence**).¹¹⁵ However, planned obsolescence could prove to be a clever and useful move if it prevents wear from occurring which would make recycling a product, individual components or materials difficult or even impossible. This would need to be accounted for by manufacturers, communicated and justified to consumers and integrated as part of a corresponding fair usage-focused product management and recycling programme. Repairs can, of course, extend a product's service life and hence fundamentally improve its overall sustainability credentials, but they can also create conflicts

111 Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband, vzbv), press release from 6 June 2017, *Elektroschrott verhindern – Reparaturen fördern* [Preventing e-waste by encouraging repairs].

112 Article 8(2) of the Digital Content Directive.

113 Consumer surveys show that the vast majority of consumers want durable and long-lasting products: French Agency for Ecological Transition, formerly the French Environment and Energy Management Agency (Agence de la Transition Écologique, formerly the Agence de l'Environnement et de la Maîtrise de l'Énergie, ADEME), *Évaluation économique de l'allongement de la durée d'usage de produits de consommation et biens d'équipement* [Economic evaluation of extending the service life of consumer goods and items of equipment], 2020. How consumers actually behave is another question altogether.

114 Backhaus, K. and Bonus, H., *Die Beschleunigungsfalle oder der Triumph der Schildkröte* [The pitfalls of moving too quickly and the tortoise's triumph], 1998.

115 Boos, A., Brönneke, T., and Wechsler, A., *Konsum und nachhaltige Entwicklung: Verbraucherpolitik neu denken* [Consumption and sustainable development: Rethinking consumer policy], 2019; Brönneke, T., and Wechsler, A., *Obsoleszenz interdisziplinär: Vorzeitiger Verschleiß aus Sicht von Wissenschaft und Praxis* [An interdisciplinary approach to obsolescence: Premature wear from a theoretical and practical point of view], 2015.

with aspects relating to sustainability and consumer protection.¹¹⁶ Looking at the overall picture, exchanging a product for a newer, more innovative product can, in individual cases, actually be more sustainable than repairing an old device. It is detrimental to consumers if repairs and a longer service life ultimately result in higher purchase prices and reduced fulfilment of consumers' needs. However, the reverse is also true. The ability to purchase products which have a short lifespan at low prices is of little use to consumers. These conditions should be taken into account when a product is being created and designed. Requirements should, as stated in the Ecodesign Working Plan 2016–2019, govern market access in a legally binding way.¹¹⁷

Return fraud is a similarly problematic phenomenon. This term is based on the assumption that, when certain returns are made, consumers are, in fact, abusing the opportunity afforded to them under Section 312g of the Civil Code¹¹⁸ and, for example, returning a wedding dress, an evening gown or a metal detector which was purchased in order to find a lost set of keys after a single use and then requesting their money back from the seller. Studies show that consumers' proclivity for this type of behaviour varies based on a number of different factors such as gender, age and education.¹¹⁹

e) Cessation of use, in particular disposal and reprocessing (refurbishment)

If a consumer decides to cease using a product, the question arises as to what its future fate will be. An overview of the different options available can be found in the waste hierarchy set out in Section 6 of the German Circular Economy Act (*Kreislaufwirtschaftsgesetz*, KrWG).¹²⁰ First in the order of preference is

waste **avoidance**, whereby, for example, the consumer **resells the product as a used, second-hand good**.¹²¹ If second-hand goods are sold by a trader, the trader benefits from less stringent legal provisions compared to the sale of new goods in that, in accordance with Section 476 (2), second half-sentence, of the Civil Code, the warranty can be limited to one year (and not a minimum of two years as is the case with new goods). Waste avoidance is followed in the order of preference by preparation for reuse, i. e. **refurbishment**, of the product so that it can once again serve its **original purpose**.¹²²

Companies have recently emerged, in particular in the area of electrical and electronic equipment, which purchase, check and, where applicable, repair used items of equipment and then sell them on as second-hand products. The less stringent legal provisions under Section 476 (2), second half-sentence, of the Civil Code (shorter statute of limitations) also apply here. In practice, lots of companies provide longer warranties covering their repair work in order to gain customers' trust. If a product cannot be refurbished or is not worth refurbishing, it can also be recycled. **Recycling** means any process whereby waste is processed into products, materials or substances either for their original or other purposes.¹²³ Both textiles and electrical and electronic equipment are being increasingly processed at large-scale recycling plants in order to extract secondary raw materials from them. In 2019, 17.4% of the world's e-waste¹²⁴ was recycled, whereas the fate of the remaining 82.6% remains unknown.¹²⁵ At 42.5%, Europe boasts the highest recycling rate, whereas Africa ranks in last place with a rate of 0.9%.¹²⁶ In 2018, with a collection rate of 43.1%, Germany narrowly missed the EU's collection target of 45%. However, the recy-

116 Schlacke, S., et al., *Nachhaltiger Konsum [Sustainable consumption]*, pp. 453 et seq.

117 Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRU), *Product Labelling Body for the promotion of product resource efficiency and recyclability*, 2017.

118 See Harris, L.C., *Fraudulent Return Proclivity: An Empirical Analysis*, *Journal of Retailing* 84, 2008, pp. 461–476.

119 Harris, L.C., *Fraudulent Return Proclivity*, p. 465.

120 National transposition of the European Union's Waste Framework Directive, Directive 2008/98/EC. The German legislation is currently being reworked; see ministerial draft bill of 5 August 2019: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, ministerial draft bill for legislation transposing the European Union's Waste Framework Directive.

121 Section 3 (20) of the German Circular Economy Act (*Kreislaufwirtschaftsgesetz*, KrWG).

122 Section 3 (24) of the German Circular Economy Act.

123 Section 3 (25) of the German Circular Economy Act.

124 In 2019, 53.6 million tonnes of e-waste were produced worldwide; by 2019, the volume of global e waste rose by 21% compared to 2014 (Forti, V., et al., *The Global E-waste Monitor 2020*, Quantities, flows and the circular economy potential, 2020).

125 Forti, V., et al., *The Global E-waste Monitor 2020*, 2020.

126 Forti, V., et al., *The Global E-waste Monitor 2020*, 2020.

cling rate indicates only what proportion is recovered, not what proportion is used in new products or in what capacity. A precise figure regarding this is not available for Germany.

The German Federal Environment Agency (*Umweltbundesamt*, UBA) believes that it is possible to increase the collection rate by significantly simplifying the options available for consumers to hand used products back.¹²⁷ Increasing the number of drop-off points in the immediate vicinity of the final users of old items of equipment could make returning them easier and more convenient and hence increase the collection rate. At the same time, the obligation set out in Section 18 (2) of the German Electrical and Electronic Equipment Act (*Elektro- und Elektronikgerätegesetz*, ElektroG) for manufacturers to inform private households of the options available for returning used items of equipment and for having them collected needs to be fleshed out in specific terms so as to ensure that consumers are aware of the options available to them. Another albeit more complicated approach would be to introduce a deposit-refund system (cf. Section 25 (1) (2) of the Circular Economy Act) for electrical equipment, similar to the one in place for beverage packaging, as recently proposed by The Left Party parliamentary group in the Bundestag.¹²⁸ However, there are subsequent follow-up questions which require more in-depth investigation.¹²⁹

There is another issue which needs to be addressed regarding textile recycling. In view of the fact that new collections are launched more and more frequently these days, firstly, there are more and more items of clothing in circulation and, secondly, the quality of these items is suffering as a result of increased production pressure. However, quality has a major impact on recycling success rates. The city of Hamburg has taken appropriate

measures in response to this and removed its textile collection containers, as handing over any collected textiles to textile recycling companies is proving less and less worthwhile.¹³⁰ The Textile Recycling (Textilrecycling) trade association highlights the fact that the cost of incinerating non-recyclable textiles has skyrocketed in recent years.¹³¹ It is therefore calling for a fee to be imposed within the fashion industry for each individual item of clothing sold in order to contribute towards the collection and recycling costs.¹³² Given that electronics are now also being incorporated into clothing, this call will grow only louder as recycling processes become more and more complicated and expensive. Recycling plants are subject to the same legal provisions as the production plants which make the original products (Technical Instructions on Air Quality Control, Federal Ordinance on Immission Control, Waste Water Ordinance and Regulation (EC) No 1907/2006). There are also opportunities for **other types of recovery** (in particular energy recovery and backfilling) as well as the **disposal of waste**, for example by transferring it to a permanent storage site.

Essentially, waste must be handed over to public disposal companies,¹³³ i. e. bodies mandated to dispose of waste, if the waste producer or owner cannot or does not wish to use it (Sections 7 (2) and 17 (1) of the Circular Economy Act). To ensure that waste can be handed over to the right disposal company, manufacturers are obliged, as part of their product stewardship commitments in accordance with Section 23 (2) (3) of the Circular Economy Act, to label products which contain pollutants.

Special rules apply to waste electrical and electronic equipment in this respect. Bodies mandated to dispose of waste (district and city councils) can choose whether

127 German Federal Environment Agency (Umweltbundesamt, UBA), *Elektroaltgeräte [Electrical and electronic waste]*, 2020.

128 Bundestag printed paper (BT-Drs.) 19/19642 from 28 May 2020.

129 For more in-depth information: Zeit Online, article from 5 January 2020, *Grüne wollen Pfand auf Handys und Tablets einführen [The Greens want to introduce a deposit-refund system for mobile phones and tablets]*.

130 Der Spiegel, *Altkleidermarkt vor dem Kollaps [Video] [Second-hand clothing market on the brink of collapse (video)]*, 2020.

131 German Association for Secondary Raw Materials and Waste Disposal (Bundesverband Sekundärrohstoffe und Entsorgung, bvse), *Textilstudie 2020: Bedarf, Konsum und Wiederverwendung von Bekleidung und Textilien in Deutschland [Textiles study 2020: Demand, consumption and recycling of clothing and textiles in Germany]*, 2020.

132 Der Spiegel, *Altkleidermarkt vor dem Kollaps [Video] [Second-hand clothing market on the brink of collapse (video)]*, 2020.

133 In accordance with Section 69 of the German Circular Economy Act (*Kreislaufwirtschaftsgesetz*, KrWG), failing to separate or incorrectly separating waste is illegal. Depositing waste which is toxic to the environment anywhere other than the allocated facilities is punishable in accordance with Section 326 of the German Criminal Code (*Strafgesetzbuch*, StGB).

to introduce a send-in system or a pick-up system.¹³⁴ These bodies have made extensive use of the option to delegate the task of receiving or collecting waste to public service companies. They can either award contracts in-house or by means of an invitation to tender. The e-waste which is subsequently collated can either be shredded or dismantled. Unlike shredding, dismantling allows the materials involved to be fully recycled. For this to happen, the recycler needs to know which products and materials or mixtures of materials were originally used. However, in the case of hybrid products, even having accurate information to hand regarding the composition of the materials is of no help. Materials and components cannot be dismantled into unmixed waste with current separation processes.¹³⁵ The Electrical and Electronic Equipment Act 2020 transposes the European Waste Electrical and Electronic Equipment Directive¹³⁶ into German law. The Waste Electrical and Electronic Equipment Directive had, for one thing, introduced a new classification system. Equipment classification is the essential first step for any reprocessing. However, one category in particular presents the recycling industry with all sorts of problems. Small items of IT and telecommunications equipment with an external dimension of a maximum of 50 cm are assigned to a single category without any further differentiation despite the fact that they are composed of an array of different materials and components.

In accordance with Section 5 of the Electrical and Electronic Equipment Act, manufacturers must set up a joint body (clearing house) for waste electrical and electronic equipment. Germany's Waste Electrical and Electronic Equipment Register Foundation (Stiftung EAR) has taken over this role. It registers manufacturers of electrical and electronic equipment and coordinates the provision of collection containers and the collection of waste equipment with the public waste management authorities across the whole of Germa-

ny. In fact, it is not just a register but an integral part of the overall waste management system. Manufacturers and sellers are exempted from having to hand over waste to disposal companies if they wish to take products back for themselves (Sections 17 (2) and 23 (2) (5) of the Circular Economy Act in conjunction with Section 26 of the same Act). The party responsible for product stewardship (manufacturer or seller) must inform the consumer of the option to hand the product back¹³⁷ (Section 23 (2) (4) of the Circular Economy Act). In practice, it is often impossible to identify who the manufacturer was because the label has faded over time, thus making it impossible to hand the item back. As such, the resulting cost must be covered by the recycling companies which receive waste electrical and electronic equipment for which the manufacturer can no longer be identified.

In accordance with Section 17 (1) of the Electrical and Electronic Equipment Act, sellers which have a shop floor space of 400 m² or more dedicated to electrical and electronic equipment are obliged to take back waste electrical and electronic equipment in exchange for the consumer purchasing a similar new item of equipment. Consumers are also allowed to take back to such sellers up to five old items of equipment which fall under the same category of equipment, provided that none of the external dimensions exceed 25 cm. Sellers are not obliged to accept items of equipment which are larger and fall under the Electrical and Electronic Equipment Act (edge length 50 cm). Environmental Action Germany (Deutsche Umwelthilfe) has initiated legal proceedings against two online traders on the grounds of consumers' having to travel unreasonable distances to hand back their used products.¹³⁸ Furthermore, e-waste and textile waste can be taken to designated collection points, so long as proper notification has been provided regarding the collection points (Section 17 (2) (3) and (4) of the Circular Economy Act in

134 Section 13 (1) and (3) of the German Electrical and Electronic Equipment Act.

135 Reuter, M.A., and Van Schaik, A., *Recycling Indices Visualizing the Performance of the Circular Economy*, World of Metallurgy – Erzmattal, 2016; Reuter, M.A., Van Schaik, A., and Ballester, M., *Limits of the Circular Economy: Fairphone Modular Design Pushing the Limits*, World of Metallurgy – Erzmattal, 2018; Reuter, M., Hudson, C., Van Schaik, A., et al., United Nations Environment Programme (UNEP), *Metal Recycling: Opportunities, Limits, Infrastructure*. A Report of the Working Group on the Global Metal Flows to the International Resource Panel, 2013.

136 Directive 2012/19/EU, amended by Directive (EU) 2018/849.

137 Product stewardship as such, which also includes the provision of information regarding options to take used products back, is an objective which is taken into account as part of the interpretation and consideration of other legal provisions. (Beck Online Commentary on German Environmental Law (Beck'scher Online-Kommentar zum Umweltrecht)/Konzak, 54th edition, April 2019, Section 23 of the German Circular Economy Act, margin no. 7).

138 Judgment of Dresden Regional Court of 5 December 2019 – file reference no. 44 HK O 147/18; Judgment of Ingolstadt Regional Court of 21 February 2020 – file reference no. 2 HK O 1582/18.

conjunction with Section 18 of the same Act).¹³⁹ These collection points are either commercial or charitable in nature (for example clothing containers of commercial textile recyclers or charities). They are faced with all the usual problems that are caused on account of insufficient labelling of product materials (hybrid products) and the existence of shortcomings in the classification of textiles and electrical equipment.

f) Conclusion

The legal situation outside of contract law under the Civil Code varies and is unclear for politicians, for businesses and for consumers. This is not only the case for vulnerable and trusting consumers, as even well-educated, interested, engaged and “empowered consumers” need to do a lot of in-depth research which may not even lead to a successful outcome in any case. Only in exceptional cases are companies obliged to inform consumers about the sustainability aspects of their products on their own initiative. Due to the global nature of many supply chains and production chains, the legal framework conditions are difficult to pin down and understand, and verifying whether they have been complied with is almost impossible. The numerous voluntary commitments and alliances for voluntary monitoring of supply chains and production chains as well as the voluntary provision of information and usage instructions by the companies concerned, at least where the companies verifiably disclose to the appropriate extent which measures they used to monitor compliance with the relevant standards, are essentially to be praised. **Due to the sheer number of different initiatives which have not been synchronised or aligned, it is ultimately very difficult and often impossible for consumers to make sustainable purchasing decisions without undertaking extensive research of their own.**

The really pressing issue, from a legal policy point of view, is the disconnect between consumer contract law and the legal rules which apply to the stages prior to and subsequent to contract conclusion, namely the extraction of resources, manufacturing, transportation, after-sales service, reprocessing and disposal.

The issue is that not only do entire fields of law exist in complete isolation from each other, such as consumer law and waste legislation or consumer law and provisions regarding production both in Germany and in other countries within the EU, but also, and perhaps worse, when it comes to achieving the goal of sustainable consumption, provisions set out in public law, which apply to society as a whole, and provisions set out in private law, which apply to the parties to a contract, are not synchronised. **Consumers have, to date, not been sufficiently taken into account, in their capacity as the party potentially being addressed by the rules or at least in their capacity as the beneficiaries of the rules, when the rules have been drawn up.** A poignant example is the lack of coordination between labelling requirements under public law and obligations to provide information under private law.

The systematic interweaving of consumer law with fields of law which apply prior to and subsequent to contract conclusion in order to achieve a circular economy is a Herculean task which, to date, no country anywhere in the world has successfully managed to execute. In the previous legislative period, the European Union dramatically improved consumer contract law. The EU’s primary objective was the full harmonisation of consumer law and, in particular, of legislation governing the sale of consumer goods as well as distance selling. Consumer law established under the Juncker Commission addresses sustainability and the need for sustainable consumption at best rhetorically. As such, the new Commission is faced with the not-so-simple task of rewriting the existing and adopted body of legislation, consisting of a range of different directives and regulations, in order to take account of sustainability aspects. By agreeing to full harmonisation, the Member States have delegated their regulatory powers within this area to the EU and thus, for now, surrendered their prerogative to act.

Nevertheless, Germany is still at liberty to provide fresh impetus itself and play a leading role within the EU in developing sustainable consumer law. The opportunity for Germany to proceed and make its own headway is, for example, set out in Article 114(5)

¹³⁹ The competent authority must be notified of commercial and charitable collections at least three months prior to the collection being made (Section 18 (1) of the Circular Economy Act). The authority may make the collection subject to restrictions, make the collection subject to conditions or prohibit the collection (Section 18 (5) of the Circular Economy Act).

of the Treaty on the Functioning of the European Union (TFEU), which allows Member States to introduce national provisions based on new scientific evidence relating to the protection of the environment or the working environment on grounds of a problem specific to that Member State arising after the adoption of the harmonisation measure. Such unilateral action can also be undertaken in accordance with the EU's economic constitution. Sustainability is mentioned as an objective, but the EU's powers are actually limited with regard to environmental law (Article 191 of the Treaty on the Functioning of the European Union). **This major solution, i. e. the development of sustainable consumer law, will definitely require further detailed scientific, legal, conceptual and empirical input.** The Advisory Council for Consumer Affairs can and will initiate and expedite this process.

The following proposals for reforming e-commerce are therefore just a small piece in the broader sustainable consumption puzzle. They are designed to make a swift and short-term improvement to a specific problem by reducing the number of returns in the interests of both traders and consumers. Nevertheless, the regulation of e-commerce exemplifies all the problems which truly sustainable consumer law must seek to address.

IV. Solutions for the sustainable development of e-commerce

As already discussed, the analysis of the issue of sustainability with regard to e-commerce requires a holistic approach and must not be restricted to contract law alone, and, as such, the same applies to potential solutions. What is really needed is an interweaving of regulatory and technological approaches as well as social change whereby the mutual responsibilities of all the parties involved are evenly rebalanced in order to provide a sustainable future for e-commerce. Several potential approaches are presented below along with their advantages and disadvantages in order to create a basis for discussion.

1. Starting point

a) Allocation of responsibilities

In accordance with current contract law, consumers are free to decide whether to return goods to traders or not, as they do not need to state their reason(s) for withdrawing from the contract. Traders can simply try to eliminate or at least minimise the causes of returns, such as consumers having false expectations of or the wrong idea about a product, from the outset.¹⁴⁰ Conversely, customers are able to factor in the option to return items when they order them, in that they can order the same product in several colours and sizes to start with so that they can view them properly and then decide on the best option. Customers only ever have to cover the return shipping costs if they were informed in advance by the trader, and, in reality, this is very rarely enforced. In response to the aforementioned survey carried out in 2019, only 15% of traders said that they exercise the option to pass on the return shipping costs to customers.¹⁴¹

Companies are constantly vying for business by not charging consumers return shipping costs. Also, when consumers return a product, both the purchase price and the shipping costs must be refunded. As such, if they are in two minds as to whether to return a product or keep it, there is no financial incentive for them to keep it – in fact, quite the opposite. However, whether not returning a product is really a more sustainable option is also debatable, as the product may then just end up lying around not being used or be immediately disposed of by the customer. Consumers therefore need to choose the items that they order carefully so that there is ordinarily no need to even consider having to return a purchase. Competition works in consumers' favour, as legal regulations almost encourage them to order a range of products and then decide on which one is the best fit. In theory, it is in traders' best interests to try to provide as extensive and accurate a description as possible of the product in question in order to minimise returns. However, even when some companies pursue this approach, they find that their efforts ultimately conflict with the overall shopping experience where customers can intentionally order too much without having to worry about the consequences. In any case, it is clear that the way in which shipping costs are applied is focused solely on the different interests of companies as sellers and consumers as customers and that neither sustainability nor the ideal of sustainable consumption have been taken into consideration in drawing up regulatory provisions.

With regard to further legal bases, the various responsibilities require a more nuanced assessment. Companies are (as things currently stand) not obliged to monitor their suppliers' compliance with environmental and social sustainability standards throughout the production chain. As such, consumers have to rely on companies'

¹⁴⁰ See Lemm, J., *Der Versandhausberater* no. 22/2020, pp. 4 et seq.

¹⁴¹ Returns Management Research Group, 2019a.

voluntary commitments and must themselves check to see whether a company has imposed its own voluntary commitments or is affiliated with an initiative or whether the product in question boasts a sustainability label. Yet, even if consumers were to obtain the relevant product information, the question would remain as to whether they would actually take proper note of it and base their decisions on it. The situation is different at the pre-contractual stage, whereby traders are not permitted to present any misleading environmental information in their advertising and are at least obliged to mention certain product characteristics. In that respect, consumers have the necessary information at their fingertips without having to go to any great lengths themselves. Consumers also have the option to find out if companies are members of any initiatives, have imposed voluntary commitments on themselves or have qualified to use any labels on their products and what those labels mean.

With regard to the transportation of their products, companies are only expected to follow guidelines and voluntarily provide consumers with the relevant information that they need to make an informed decision. At the post-contractual stage, both companies and consumers are responsible for ensuring that products are used sustainably. For example, when designing their products and providing an after-sales service, companies are required to ensure that consumers are able to use their products sustainably. Consumers also have a hand in a product's overall sustainability credentials on the basis of their usage habits and their decision whether to potentially return the product and withdraw from the contract as well as their decision as to whether to have the product repaired or replace it with a new purchase. Once consumers have finished with a product, companies need to meet their product stewardship obligations. However, ultimately, it is down to consumers to decide which disposal route to choose. As such, it is not easy to find out what exactly happens to waste electrical and electronic equipment or textiles, i. e. whether they are reprocessed for reuse or shredded. According to a study, in 2019 over 80 % of **global** e-waste was not collected via the official route.¹⁴² A tiny proportion (less than 10 %) of small items of equipment in particular was apparently disposed of with normal domestic waste, the

rest is unaccounted for and was presumably shipped in the form of second-hand goods to lower-income countries, exported illegally and disposed of or mixed in with other waste streams, making recycling difficult.¹⁴³ The issues faced in conventional recycling demonstrate how important it is for companies to bear what will happen at the end of a product's useful life in mind as early on as the product design stage. The processed materials involved and the product's design have a major impact on whether the product can be successfully recycled or what alternative options could be available at the end of a product's useful life. A clear concept and clear specifications for using (a mixture of) materials and ensuring the proper relevant logistics throughout the entire product life cycle will be necessary in order to be able to pursue, let alone achieve, a circular economy.¹⁴⁴

b) Levels of regulation

The provisions under contract law which are of relevance here are national regulations determined on the basis of EU law – this applies both in terms of distance selling and the sale of consumer goods. Both fields of law are fully harmonised. Accordingly, purchasers, i. e. consumers, cover the costs of return shipments if they withdraw from their contract. However, the obligation to pay those costs is subject to consumers' having been provided with the relevant information beforehand.

Germany does not operate in a legal vacuum even at the pre-contractual and post-contractual stages of production and distribution. In addition to ever-present EU law, there are also the provisions of the GATT and the WTO to consider, which do not contain any explicit specifications with regard to a sustainable economy or sustainable consumption. It could even be said that, as things currently stand, sustainability does not feature as a relevant category in respective international provisions, meaning that more sustainable products must not be given preferential treatment. Any national regulation, whether it sets out a potential obligation to indicate a product's geographical provenance or constitutes supply chain legislation, must be examined to ensure that it is compatible with EU law and world trade law.

142 Forti, V., et al., *The Global E-waste Monitor 2020*, 2020, p. 14.

143 Forti, V., et al., *The Global E-waste Monitor 2020*, 2020, p. 14.

144 Stahel, W.R., *The Circular Economy: A User's Guide*, 2019.

2. Approaches for the sustainable development of e-commerce

a) Pros and cons of introducing an obligation to bear costs

In 2019, the Returns Management Research Group at the University of Bamberg conducted a study into preventive returns management and, in particular, the idea of introducing return shipping fees.¹⁴⁵ The authors of the study concluded that even a minimal fee of, for example, EUR 3¹⁴⁶ would reduce the number of returns by 16%. Given that return-related costs have, to date, always been factored into companies' pricing, purchase prices would be lower for customers, and only customers who send a lot of items back would lose out. Traders can actually already force their customers to pay the return shipping costs provided that they make them aware of this prior to concluding the contract. Almost 60% of companies said in the survey that they would be happy to charge return shipping costs but cannot do so on account of the fact that they need to be competitive.¹⁴⁷ This problem would be solved if customers were obliged to pay the return shipping costs by law. Optional cost-related provisions do not have a negative impact on competition from the perspective of consumers but do have a negative impact in terms of sustainability. External costs (for example on account of any environmental damage caused) would be internalised and made visible and not passed on to all consumers by means of the purchase price. Mandatory provisions are required, although they would also raise their own legal issues. Such regulations are essentially alien to a market economy. The situation is usually the reverse: companies try to charge customers costs which the latter try to avoid.

Such a reallocation of costs would also fly in the face of what has, to date, been the dominant position of

consumer associations in Germany and Europe. When working on the Distance Selling Directive,¹⁴⁸ consumer associations argued strongly in favour of ensuring that consumers were not charged return shipping fees if they decided to withdraw from the contract. A political compromise was reached which involved the introduction of an obligation for traders to inform consumers in advance if they intend to pass return-related costs on to them. When working on the "Modernisation Directive", the European Commission proposed adding a sub-point in the form of letter (n) to Article 16 of the Consumer Rights Directive¹⁴⁹ which would set out an exception from the right of withdrawal if the consumer had used the goods in question during the withdrawal period to an extent which was not necessary in order to establish the nature, characteristics and functioning of the goods.¹⁵⁰ However, this proposal was unanimously rejected by the European Council and the European Parliament.

The policy continues to concentrate on developing and expanding consumer rights to ensure unencumbered consumption. Sustainability aspects still do not seem to come into play, and, instead, the interests at stake in the two-sided relationship continue to be the main focus. Any deviation from this position would more or less equate to a tectonic paradigm shift in consumer-related matters, as it would involve consumer associations' actively addressing the issue and considering whether and to what extent consumers should and must take responsibility themselves. One option could be to increase consumers' awareness of the consequences of their actions, i.e. of withdrawing from a contract, on the environment or to encourage them to try to move away from ordering single items and instead group several items into one order which would also be more cost-effective for them (known as nudging/boosting). As a result, consumers would be encouraged, rather than forced, to act responsibly. Cost-related provisions to the detriment of consumers have another downside, as they typically affect vulnerable consumers. In any case, it would be a good idea to ask consumers themselves whether and to what extent they would be prepared to actively as-

¹⁴⁵ Returns Management Research Group, 2019a.

¹⁴⁶ According to the authors of the study, a minimal fee should be comparatively low, i.e. between EUR 2 and EUR 3, in order to ensure that neither consumers nor e-commerce as a sales channel are put at an unreasonable disadvantage.

¹⁴⁷ Returns Management Research Group, 2019a.

¹⁴⁸ Directive 97/7/EC.

¹⁴⁹ Directive 2011/83/EU.

¹⁵⁰ European Commission, Proposal for a Directive of the European Parliament and of the Council, 2018.

sume responsibility if it were to have an impact on their pockets. According to a representative survey conducted by the North Rhine-Westphalia Consumer Organisation (VZ NRW) in 2018, consumers would rather be positively encouraged by traders to reduce the number of returns that they make than be hit with additional costs.¹⁵¹

b) Pros and cons of technological solutions

The main issue with distance selling is consumers' inability to visually inspect a product with their own eyes, hold it in their hands and fully familiarise themselves with it. The legislature is attempting to compensate for this shortcoming with a broad range of obligations to provide information, but no obligation to provide information can make up for the non-existent shopping experience. Obligations to provide information are often second-best solutions. As such, even the industry's own attempts to encourage traders to provide better and more accurate product descriptions are not the solution. Even if it were possible to provide a product description which, in the case of textiles for example, enabled consumers to find out whether the product would possibly fit by means of their taking their own body measurements, a key issue would still need to be resolved: how can e-commerce provide customers with a more realistic shopping experience, enabling them to find out in a matter of seconds if an item of clothing suits them by trying it on or if a smartphone fits nicely in the palm of their hand?

It is hardly surprising that companies are keen to replace the real-life shopping experience with a virtual one. In recent years, more and more innovative technological solutions have been invented to reduce the number of returns. They are, in particular, designed to make up for the fact that consumers are unable to try products on or visually inspect them with their own eyes when purchasing online by describing and presenting the products as accurately as possible and helping consumers determine which size would fit best. One such example is a three-dimensional scanning app.¹⁵² Other companies

still rely on providing step-by-step instructions for consumers to take their own body measurements or look at their order history in order to make size-related suggestions that are as accurate as possible, though they are somewhat behind the times.¹⁵³ Innovative new solutions are expected to be unveiled soon. A situation where a manufacturer's software scans the customer's entire body and determines their measurements no longer sounds like the stuff of science fiction.

Whether consumers have to continue to take their own body measurements themselves and input these details or simply be scanned by the manufacturer's technology, either way this will create a whole new problem. Companies will receive a whole range of potentially valuable data which could be exploited by other sectors of the economy. How can consumers ensure that such highly sensitive personal data are not misused and do not fall into the wrong hands? Technological solutions designed to promote sustainable consumption will quickly find themselves at odds with legal regulations on data protection.

Another technological solution involves making it easier for consumers to find sustainable products and obtain the information they need and avoid purchasing the wrong things. The responsibility of online platforms is a key concern here. The Advisory Council for Consumer Affairs addressed this issue in its recently published opinion entitled "Fundamental requirements for consumer-oriented regulation of interactional platform functionalities". Corresponding approaches can also be found in the list of requirements set out by the Federation of German Consumer Organisations.¹⁵⁴

c) Pros and cons of a voluntary commitment designed to reduce the free-shipping effect

Another option for trying to reduce return rates is to use the latest research findings on the free-shipping effect and, with the involvement of various different relevant

151 North Rhine-Westphalia Consumer Organisation (Verbraucherzentrale Nordrhein-Westfalen), *Umweltfreundlicher Versand: Verbraucher sehen Händler in der Pflicht* [Consumers feel that traders are responsible for environmentally-friendly shipping], 2018.

152 TextilWirtschaft, *Nike Fit: Per Smartphone-Scan zum passenden Schuh* [Nike Fit: smartphone scanning helps users get the right-sized trainers], 2019.

153 Further augmented reality and virtual reality approaches were outlined in 2013: New Atlas, *IKEA catalog uses augmented reality to give a virtual preview of furniture in a room*, 2013.

154 Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband, vzbv), *Online-Plattformen und Vergleichsplattformen in die Verantwortung nehmen* [Ensuring that online platforms and comparison portals assume their responsibilities], 2020.

associations and, where applicable, the supervisory authorities, obtain a voluntary commitment from businesses. The main crux of the voluntary commitment could be to agree not to aggressively advertise free shipping.¹⁵⁵ A recent study by Shehu et al. (2020) shows that, in this case, a significant, albeit incremental, reduction in return rates of 0.3 percentage points could be achieved. As this reduction would also have a demonstrably positive effect on the profitability of the companies in question and would also not diminish the legal standing of consumers, this approach could be introduced comparatively swiftly with the consent of all parties.

However, the disadvantages would be its limited effectiveness and the need to incorporate international companies in particular. The question would also arise as to whether start-ups would fall into line or conversely see it as an opportunity to enter the market.

d) Technological approaches for a more sustainable product range in online stores

Alongside specialist online marketplaces which explicitly advertise the fact that they place particular importance on having sustainable products, an increasing number of conventional online stores, such as Zalando¹⁵⁶ and ASOS¹⁵⁷, are enabling their customers to use a sustainability filter when searching for products. This is designed to make it easier for customers to find sustainable products in amongst the huge range of items available. The issue at the moment with these sustainability filters is that the criteria they use vary from store to store and, despite the explanations provided on individual stores' websites, are still rather vague. Many stores, for example, use existing labels and align themselves with standards. However, as a result, consumers first need to research these in more depth in order to find out what each filter actually implies. Nevertheless, this type of optional setting provides at least a bit of general guidance and is an approach which has the potential to be gradually improved.

Possible environmental impacts of the ongoing digitisation of the economy and society are also of particular significance for sustainable consumption. The study conducted by the German Federal Environment Agency into consumption 4.0 already highlights rising energy intensity and increasing consumption of resources. It is more difficult to predict whether the new opportunities provided by the digital economy will encourage consumers to think harder about the decisions and choices they make.¹⁵⁸

3. Approaches for the sustainable development of consumer contract law

Efforts could also be made to ensure that existing consumer contract law focuses more heavily on sustainability aspects in the future. Proposals have been on the table and schools of thought have been around for 20 years and are worth briefly outlining.

A possible approach could, for example, be to explicitly enshrine sustainability in the sale of goods law-related definition of defect in Section 434 of the Civil Code. As such, a sentence which states "The usual quality of a thing also includes characteristics which concern the sustainability of the thing, in particular its energy efficiency, reparability and minimum service life" could be added to Section 434 (1), second sentence, no. (2) of the Civil Code.¹⁵⁹ The specific minimum service life could result from Section 8 of the German Product Safety Act (*Produktsicherheitsgesetz*, ProdSG) in conjunction with a product-related ordinance and, possibly, in conjunction with private standards. After all, these days, not only is the health and safety of people seen as a legit-

155 For example, Zalando's 100-day return policy.

156 Zalando, zalando.de/nachhaltigkeit.

157 ASOS, Responsible edit.

158 German Federal Environment Agency (Umweltbundesamt, UBA), *Die Zukunft im Blick, Konsum 4.0: Wie die Digitalisierung den Konsum verändert – Trendbericht zur Abschätzung der Umweltwirkungen [A glimpse into the future, Consumption 4.0: How digitisation is changing consumption – Trend report on estimating environmental impacts]*, 2018, pp. 77–78.

159 Regarding these proposals: Schlacke, S., Tonner, K., Gawel, E., et al., *Stärkung eines nachhaltigen Konsums im Bereich Produktnutzung durch Anpassungen im Zivil- und öffentlichen Recht [Strengthening sustainable consumption in terms of product usage by amending civil and public law]*, Federal German Environment Agency (UBA) Texts 72/2015, 2015.

imate aim of ordinances but environmental protection too. The advantage here would be that taking account of technical progress would not require a legislative amendment to be made in each individual case but would simply require the ordinance or private standard to be modified.

Alternatively or in addition, it is worth considering introducing an obligation to provide a manufacturer's guarantee which should be set out in Section 443 of the Civil Code. The timeframe and contents of the declaration of guarantee could also be chosen by manufacturers at their discretion and hence even be zero.¹⁶⁰ The obligation to provide a declaration of guarantee could result in corresponding competition between manufacturers, meaning that probably none of them would state that they would not offer a guarantee at least for a short time frame. The advantage of introducing such an obligation would be that technical guarantees are already commonplace and could be seamlessly incorporated into existing practice. Such a solution would be much easier to enforce than the clarification initially described regarding rights with regard to warranties for defects, as no damage needs to be proven for claims under a declaration of guarantee.

It would also be a sensible idea to expand existing obligations to provide information with obligations to provide details regarding the product's minimum service life, reparability and energy efficiency. The aforementioned sustainability standards could be incorporated as essential characteristics in Article 246 (1) (1) of the Introductory Act to the Civil Code and Article 246a Section 1 (1) (1) of the same Act. Incorporating them in Section 5a (3) (1) of the Act Against Unfair Competition may also sound like a good idea but would, in fact, contravene EU law, as the underlying Unfair Commercial Practices Directive¹⁶¹ fully harmonises fair trading law. As a result, any such addition would probably have to take place at the level of EU law.

4. Approaches outside of consumer contract law

a) Supply chain legislation

Outside of contract law, the move both at national level¹⁶² and at European level¹⁶³ is towards binding regulations for companies to monitor human rights standards and environmental standards throughout supply chains. Since, as borne out in the recent findings of the second NAP monitoring process, German companies are not sufficiently monitoring their supply chains and are therefore not voluntarily fulfilling the due diligence measures, the introduction of binding legal regulations seems inevitable. This is supported by the fact that the responsibility cannot continue to rest solely on the shoulders of consumers. Consumers usually cannot obtain sufficient information regarding the sustainability of products and cannot themselves make responsible, considered decisions in favour of or against a certain company or product. The introduction of such supply chain legislation should clearly be endorsed for the benefit of consumers; however, numerous companies have also recently spoken out in favour of binding regulations.¹⁶⁴

In future, regulations should increasingly apply to the supply side. It is important for the requirements not to fall short of those set out in the UN Guiding Principles. Fulfilment of human rights standards and environmental standards should be mandatory. As adverse environmental impacts often go hand in hand with human rights abuses, both issues should no longer be tackled separately but jointly together in comprehensive supply chain legislation.¹⁶⁵ Standards, which to date have been fulfilled by companies on a voluntary basis, such as those of the Green Button (Grüner Knopf) initiative, could in future be enshrined in law as minimum standards. What is more, supply chain legislation should con-

160 Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRU), *Produktkennzeichnungsstelle zur Förderung der Ressourceneffizienz und Kreislauffähigkeit von Produkten [Product Labelling Body for the promotion of product resource efficiency and recyclability]*, 2017.

161 Directive 2005/29/EC.

162 Joint press release of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the German Federal Ministry of Labour and Social Affairs (BMAS) from 14 July 2020.

163 European Commission, *Study on directors' duties and sustainable corporate governance*, 2020.

164 Business & Human Rights Resource Centre, *Our responsibility in a globalised world*, 2020.

165 German Council for Sustainable Development (Rat für nachhaltige Entwicklung, RNE), *Sustainable supply chains*, 2020.

tain an obligation for companies to carry out analyses, execute measures and draw up reports and should set out provisions for imposing penalties for infringements. Regulations at European level would be beneficial so as to ensure a level playing field for all European companies. However, as a European solution of this nature does not seem like a realistic option in the foreseeable future due to the sheer number of stakeholders and conflicting interests involved, it seems necessary for Germany to adopt national regulations as quickly as possible.

b) Manufacturers' contribution towards the costs of recycling

Shorter and shorter product life cycles are leading to increased disposal and reprocessing costs. The growing trend for hybrid products, such as clothing which incorporates electronics or electrical devices, in which metals and plastics can no longer be separated, is presenting the entire waste management and reprocessing system with brand new problems. More and more fires are, for example, breaking out at disposal companies' facilities, often triggered by the growing use of lithium batteries in small electronic devices and textiles which cannot be disposed of separately even if consumers wanted to.¹⁶⁶ The growing costs involved have so far largely been covered by local authorities.

However, manufacturers absolutely must be made to discharge their duties. The difficulties involved when products are manufactured in global value chains are evident. Who should bear responsibility: the manufacturer in Asia, the importer, the trader or the seller? It could also be worth considering a fund into which several of the parties potentially responsible contribute. The most important thing is to initiate a debate which focuses on the consequences of shorter product life cycles and the hybrid use of materials.

c) Reduction in the consumption of primary raw materials

Another approach outside of consumer contract law and extending far beyond the confines of e-commerce would be to establish regulations designed to reduce consumption of primary raw materials. The introduction of a resource tax on primary raw materials has been debated for several years now.¹⁶⁷ Resource taxes encourage companies to increase efficiency and consistently and systematically recycle, ensuring that, as a consequence, overall demand for primary raw materials falls and overall demand for high-quality secondary raw materials increases. At the same time, the additional tax revenue could be used to reduce the negative environmental impacts of the extraction of raw materials. Another proposal goes even further in that it would seek not only to reduce the extraction of raw materials but also to pave the way for a smooth transition to a circular economy. Instead of finished products, this would be levelled at basic materials, i. e. raw materials, which should be continuously recycled for production purposes.¹⁶⁸ In order for this to be achieved, the companies which initially introduce the raw materials into the production cycle should remain the owners of the materials and simply rent them out to manufacturing companies.¹⁶⁹ In order to be permitted to place the materials on the market at all in the first place, they would have to either prove that the material is able to achieve a certain recyclability percentage or provide evidence of the existence of a long-term plan for increasing the rates at which recycled materials are used in their products over the next 15 to 25 years.¹⁷⁰ In return, the parties renting out the raw materials could, for example, receive proportional recovery rights.

166 Frankfurter Allgemeine Zeitung (FAZ.net), *Batterien verursachen jede Woche einen Brand [Batteries cause a fire every single week]*, article from 14 September 2019.

167 With regard to the taxation of primary building materials, see: Bahn-Walkowiak, B., Bleischwitz, R., and Sanden, J., *Einführung einer Baustoffsteuer zur Erhöhung der Ressourceneffizienz im Baubereich [Introduction of a tax on building materials designed to increase resource efficiency in the construction industry]*, 2010; German Federal Environment Agency (Umweltbundesamt, UBA), *Positionspapier zur Primärbaustoffsteuer [Position paper on the taxation of primary building materials]*, 2019.

168 Liedtke, C., Buhl, J., and Ameli, N., *Designing value through less by integrating sustainability strategies into lifestyles*, International Journal of Sustainable Design, 2013, Volume 2 (2), pp. 167–180; Bringezu, S., and Bleischwitz, R., *Sustainable Resource Management. Trends, Visions and Policies for Europe and the World*, 2009; Schmidt-Bleek, F., *Wieviel Umwelt braucht der Mensch? MIPS, das Maß für ökologisches Wirtschaften [How much environment do people need? MIPS, the measurement for ecological economic activity]*, 1994.

169 Stahel, W.R., *The Circular Economy: A User's Guide*, 2019; Stahel, W.R., *The Performance Economy*, 2006.

170 Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRÜ), *Substitutionsquote: Ein realistischer Erfolgsmaßstab für die Kreislaufwirtschaft [Substitution rate: A realistic measure of success for the circular economy]*, 2019.

V. Concluding remarks

The basic example of returns in e-commerce clearly demonstrates that the need for sustainability cannot be met with hasty regulatory responses. Whatever solution is envisaged, whether it involves Germany's going it alone with solo efforts at national level, whether it involves reallocating responsibilities amongst traders, manufacturers and consumers, or whether it involves deploying technological solutions, each one has its own pros and cons. One of the main obstacles is rooted in the full harmonisation of consumer law, which was passed in 2000 at the Lisbon Summit by the EU Heads of State or Government in order to increase the EU's competitiveness in the age of globalisation. It is quite right to question whether the full harmonisation approved by those Heads of State or Government and driven forward by the EU over the following two decades in consultation with the Member States can even cope with sustainability, i. e. whether the EU is the only competent legislative body for sustainable consumption within the framework of the fully harmonised status quo.

What is needed and required is a broad and open socio-political debate leading to a growing willingness to accept and embrace change. This debate must take place within the parliaments and within society, both nationally and within the EU bodies. The transformation of the economy with a view to sustainable consumption and sustainable production remains a societal and therefore also a political challenge, which requires a broad range of initiatives at multiple levels. Even if the EU is able to act as a significant driving force through its use of centralised legislation, further measures should also and, in fact, in particular, be implemented by the Federal Republic of Germany.

References

- ASOS, Responsible edit, last consulted on 9 September 2020 at: <https://www.asos.com/women/the-responsible-edit/cat/?cid=28981&xaffid=17294&r=1>.
- Backhaus, K., and Bonus, H., *Die Beschleunigungsfalle oder der Triumph der Schildkröte [The pitfalls of moving too quickly and the tortoise's triumph]*, Schäffer-Poeschel, 1998.
- Bahn-Walkowiak, B., Bleischwitz, R., and Sanden, J., *Einführung einer Baustoffsteuer zur Erhöhung der Ressourceneffizienz im Baubereich*, Paper zu Arbeitspaket 3 des Projekts „Materialeffizienz und Ressourcenschonung“ [Introduction of a tax on building materials designed to increase resource efficiency in the construction industry, Paper regarding work package 3 of the project entitled “Material Efficiency and Resource Conservation”], 2010, last consulted on 9 September 2020 at: https://epub.wupperinst.org/frontdoor/deliver/index/docId/3616/file/MaRess_AP3_7.pdf.
- Barbarossa, C., and Pastore, A., Why environmentally conscious consumers do not purchase green products: A cognitive mapping approach, 2015, last consulted on 22 September 2020 at: https://www.researchgate.net/publication/273874612_Why_environmentally_conscious_consumers_do_not_purchase_green_products_A_cognitive_mapping_approach.
- Bartl, A., *Recycling und Wiederverwendung von Fasern aus Abfällen [Recycling and reuse of waste fibres]*, Österreichische Wasser- und Abfallwirtschaft [Austrian Water and Waste Management], 2009.
- Beck Online Commentary on the German Civil Code [Beck'scher Online Großkommentar, BGB], version as at 1 July 2020.
- Beck Online Commentary on the German Introductory Act to the Civil Code [Beck'scher Online Großkommentar, EGBGB], version as at 15 July 2020.
- Beck Online Commentary on German Environmental Law [Beck'scher Online-Kommentar zum Umweltrecht], 55th edition, April 2019.
- Bichler, S., Gorny, S., and Stamminger, R., *Are German consumers using their dishwashers in an energy efficient way? An online study of German households*, EEDAL, 7th International Conference, 2013.
- Boos, A., Brönneke, T., and Wechsler, A. (eds.), *Konsum und nachhaltige Entwicklung: Verbraucherpolitik neu denken [Consumption and sustainable development: Rethinking consumer policy]*, Nomos, 2019.
- Bringezu, S., and Bleischwitz, R., *Sustainable Resource Management: Global Trends, Visions and Policies*, Routledge, 2009.
- Brönnecke, T., and Wechsler, A., *Obsoleszenz interdisziplinär: Vorzeitiger Verschleiß aus Sicht von Wissenschaft und Praxis [An interdisciplinary approach to obsolescence: Premature wear from a theoretical and practical point of view]*, Nomos, 2015.
- Bulwiengesa, *Auswirkungen des Shutdown auf die Einzelhandelsmieten [The effects of lockdown on rent prices for retail spaces]*, 2020, last consulted on 9 September 2020 at: https://www.bulwiengesa.de/sites/default/files/marktwissen_eh-mieten.pdf.
- Business & Human Rights Resource Centre, Business Statement, Our responsibility in a globalised world: A call for mandatory human rights and environmental due diligence legislation, 2020, last consulted on 16 September 2020 at: https://media.business-human-rights.org/media/documents/files/BusinessStatement_Update_25052020.pdf.
- Capgemini Research Institute, *Consumer Products and Retail: How sustainability is fundamentally changing consumer preferences*, 2020, last consulted on 16 September 2020 at: <https://www.capgemini.com/de-de/wp-content/uploads/sites/5/2020/07/Final-Web-Report-Sustainability-In-CPRD.pdf>.

Cologne Institute of Trade Research (Institut für Handelsforschung, IFH Köln), *Online-Anteil am Gesamtumsatz nach Warengruppen [Online share of total revenue by product group]*, 2018.

Der Spiegel, *Altkleidermarkt vor dem Kollaps: Die Fast-Fashion-Flut (Video) [Second-hand clothing market on the brink of collapse: The fast-fashion flood (video)]*, 16 August 2020, last consulted on 17 August 2020 at: <https://www.spiegel.de/wirtschaft/service/altkleidermarkt-vor-dem-kollaps-zu-viel-muell-zu-viel-fast-fashion-a-1dde7378-8788-49a1-8a4c-cf1f0661cd60>.

Durand, P., *A longer lifetime for products: benefits for consumers and companies*, Committee on the Internal Market and Consumer Protection, 2017, last consulted on 22 September 2020 at: https://www.europarl.europa.eu/doceo/document/A-8-2017-0214_EN.html.

European Commission, *Misleading green claims: Extract of the Guidance for the implementation/application of Directive 2005/29/EC on unfair commercial practices*, last consulted on 9 September 2020 at: https://ec.europa.eu/environment/eussd/pdf/green_claims/en.pdf.

European Commission, communication from the Commission: *Action Plan for sustainable consumption, production and industry*, 2008, last consulted on 22 September 2020 at: https://ec.europa.eu/commission/presscorner/detail/en/MEMO_08_507.

European Commission, communication from the Commission: *Ecodesign Working Plan 2016–2019*, 2016, last consulted on 9 September 2020 at: https://ec.europa.eu/energy/sites/ener/files/documents/com_2016_773_en_.pdf

European Commission, *Study on directors' duties and sustainable corporate governance*, 2020, last consulted on 9 September 2020 at: <https://op.europa.eu/en/publication-detail/-/publication/e47928a2-d20b-11ea-adf7-01aa75ed71a1/language-en>.

European Commission, *Study on due diligence requirements through the supply chain*, 2020, last consulted on 15 September 2020 at: <https://op.europa.eu/en/publication-detail/-/publication/8ba0a8fd-4c83-11ea-b8b7-01aa75ed71a1/language-en>.

European Commission, Proposal for a Directive of the European Parliament and of the Council amending Council Directive 93/13/EEC of 5 April 1993, Directive 98/6/EC of the European Parliament and of the Council, Directive 2005/29/EC of the European Parliament and of the Council and Directive 2011/83/EU of the European Parliament and of the Council as regards better enforcement and modernisation of EU consumer protection rules, last consulted on 14 September 2020 at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018PC0185&from=EN>.

European Environment Agency, *Circular economy in Europe*, EEA Report No 2/2016, 2016, last consulted on 15.09.2020 at: <https://www.eea.europa.eu/publications/circular-economy-in-europe>.

Federal Consumer Initiative Association (Verbraucher Initiative), *Wirkung von Siegeln auf das Verbraucherverhalten [The effect of labels on consumer behaviour]*, 2016, last consulted on 15 September 2020 at: https://verbraucher.org/media/file/1151.VI_Wirkung_Label_auf_Verbraucherverhalten_Ergebnisbericht__2016.pdf.

Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband, vzbv), *Online-Plattformen und Vergleichsplattformen in die Verantwortung nehmen [Ensuring that online platforms and comparison portals assume their responsibilities]*, 2020, last consulted on 14 September 2020 at: <https://www.vzbv.de/dokument/online-plattformen-und-vergleichsplattformen-die-verantwortung-nehmen>.

Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband, vzbv), press release from 6 June 2017, *Elektroschrott verhindern – Reparaturen fördern [Preventing e-waste by encouraging repairs]*, last consulted on 15 September 2020 at: <https://www.vzbv.de/pressemitteilung/elektroschrott-verhindern-reparaturen-foerdern>.

Föhlisch, C., and Stariradef, T., *Zahlungsmittel und Vertragsschluss im Internet [Payment method and contract conclusion online]*, Neue Juristische Wochenschrift (NJW), 2016, p. 353.

Forti, V., et al., *The Global E-waste Monitor 2020: Quantities, flows, and the circular economy potential*, 2020, last consulted on 14 September 2020 at: http://ewastemonitor.info/wp-content/uploads/2020/07/GEM_2020_def_july1_low.pdf.

Frankfurter Allgemeine Zeitung (FAZ.net), *Batterien verursachen jede Woche einen Brand [Batteries cause a fire every single week]*, article from 14 September 2019, last consulted on 15 September 2020 at: <https://www.faz.net/aktuell/wirtschaft/muellbranche-will-pfandpflicht-fuer-batterien-16340952.html>.

French Agency for Ecological Transition, formerly the French Environment and Energy Management Agency (Agence de la Transition Écologique, formerly the Agence de l'Environnement et de la Maîtrise de l'Énergie, ADEME), *Evaluation économique de l'allongement de la durée d'usage de produits de consommation et biens d'équipement [Economic evaluation of extending the service life of consumer goods and items of equipment]*, 2020, last consulted on 9 September 2020 at: <https://www.ademe.fr/sites/default/files/assets/documents/evaluation-economique-allongement-duree-equipement.pdf>.

Friege, H., *Leitfaden zur Wiederverwendung und Verwertung von Alttextilien [Guidelines for the reuse and recovery of used textiles]*, 2020, last consulted on 14 September 2020 at: https://www.bavweb.de/media/custom/2886_1406_1.PDF?1587474053.

Geppert, J., and Stamminger, R., *Do consumers act in a sustainable way using their refrigerator? The influence of consumer real life behaviour on the energy consumption of cooling appliances*, International Journal of Consumer Studies, 34 (2) 2010, pp. 219–227.

German Association for Secondary Raw Materials and Waste Disposal (Bundesverband Sekundärrohstoffe und Entsorgung, bvse), *Textilstudie 2020: Bedarf, Konsum, und Wiederverwendung von Bekleidung und Textilien in Deutschland [Textiles study 2020: Demand, consumption and recycling of clothing and textiles in Germany]*, 2020, last consulted on 7 September 2020 at: https://www.bvse.de/dateien2020/1-Bilder/03-Themen_Ereignisse/06-Textil/2020/studie2020/bvse%20Alttextilstudie%202020.pdf.

German Council for Sustainable Development (Rat für nachhaltige Entwicklung, RNE), *Sustainable supply chains, Recommendation of the German Council for Sustainable Development (RNE) for effectively embedding sustainability and human rights in global supply chains*, 2020, last consulted on 9 September 2020 at: https://www.nachhaltigkeitsrat.de/wp-content/uploads/2020/05/20200525_RNE_Recommendation_Sustainable_supply_chains.pdf.

German E-Commerce and Mail Order Association (Bundesverband E-Commerce und Versandhandel Deutschland, bevh), press release from 21 January 2020: *Vielbesteller treiben E-Commerce-Umsatz in 2019 auf neuen Höchststand [Consumers who order a lot online drove e-commerce revenue to record levels in 2019]*, last consulted on 16 September 2020 at: <https://www.bevh.org/presse/pressemitteilungen/details/vielbesteller-treiben-e-commerce-umsatz-in-2019-auf-neuen-hoehchststand.html>.

German Economic Institute (Institut der deutschen Wirtschaft), Report 33/19: *Lage und Trends im deutschen Online-Handel [Situation and trends in German e-commerce]*, 2019, last consulted on 16 September 2020 at: https://www.iwkoeln.de/fileadmin/user_upload/Studien/Report/PDF/2019/IW-Report_2019_Lage_und_Trends_im_Onlinehandel.pdf.

German Federal Environment Agency (Umweltbundesamt, UBA), *Die Zukunft im Blick, Konsum 4.0: Wie die Digitalisierung den Konsum verändert – Trendbericht zur Abschätzung der Umweltwirkungen [A glimpse into the future, Consumption 4.0: How digitisation is changing consumption – Trend report on estimating environmental impacts]*, 2018.

German Federal Environment Agency (Umweltbundesamt, UBA), Elektroaltgeräte [Electrical and electronic waste], 2020, last consulted on 14 September 2020 at: <https://www.umweltbundesamt.de/en/topics/waste-resources/product-stewardship-waste-management/electrical-electronic-waste#electrical-and-electronic-waste-in-germany>.

German Federal Environment Agency (Umweltbundesamt, UBA), *Nudge-Ansätze beim nachhaltigen Konsum: Ermittlung und Entwicklung von Maßnahmen zum „Anstoßen“ nachhaltiger Konsummuster [Nudging in the case of sustainable consumption: Identification and development of measures designed to “encourage” sustainable consumption patterns]*, 2017, last consulted on 17 September 2020 at: https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2017-08-22_texte_69-2017_nudgeansaeetze_nach-konsum_0.pdf.

German Federal Environment Agency (Umweltbundesamt, UBA), *Positionspapier zur Primärbaustoffsteuer [Position paper on the taxation of primary building materials]*, 2019, last consulted on 9 September 2020 at: https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/190819_uba_pos_primarbaustoffsteuer_bf.pdf.

German Federal Environment Agency (Umweltbundesamt, UBA), *Umweltbezogene und menschenrechtliche Sorgfaltspflichten als Ansatz zur Stärkung einer nachhaltigen Unternehmensführung, Zwischenbericht Arbeitspaket 1 – Analyse der Genese und des Status quo [Environmental and human rights due diligence as a means to strengthen sustainable business conduct, Interim report work package 1 – Analysis of the original emergence and the status quo]*, 2019, last consulted on 20 September 2020 at: https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2019-09-03_texte_102-2019_ap_1-unternehmerische-sorgfaltspflichten.pdf.

German Federal Environment Agency (Umweltbundesamt, UBA), *Verantwortungsvolle Rohstoffgewinnung? Herausforderungen, Perspektiven, Lösungsansätze [Responsible mining? Challenges, perspectives and approaches]; Zusammenfassung der Ergebnisse des Forschungsvorhabens „Ansätze zur Reduzierung von Umweltbelastung und negativen sozialen Auswirkungen bei der Gewinnung von Metallrohstoffen (UmSoRess)“ [Summary of the findings of the research project “Approaches to reducing negative environmental and social impacts in the production of raw materials (UmSoRess)”]*, 2017, last consulted on 14 September 2020 at: https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2017-08-18_texte_66-2017_umsorress_summary.pdf.

German Federal Government, *Monitoring des Umsetzungsstandes der im Nationalen Aktionsplan Wirtschaft und Menschenrecht 2016–2020 beschriebenen menschenrechtlichen Sorgfaltspflicht von Unternehmen, Zwischenbericht Erhebungsphase 2019 [Monitoring of the status of the implementation of companies’ human rights due diligence described in the National Action Plan for Business and Human Rights 2016–2020, Interim report regarding the 2019 survey phase]*.

German Federal Government, *Monitoring des Umsetzungsstandes der im Nationalen Aktionsplan Wirtschaft und Menschenrecht 2016–2020 beschriebenen menschenrechtlichen Sorgfaltspflicht von Unternehmen, Zwischenbericht Erhebungsphase 2020 [Monitoring of the status of the implementation of companies’ human rights due diligence described in the National Action Plan for Business and Human Rights 2016–2020, Interim report regarding the 2020 survey phase]*.

German Federal Ministry for Economic Affairs and Energy (Bundesministerium für Wirtschaft und Energie, BMWi), press release from 12 June 2020, last consulted on 9 September 2020 at: <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2020/20200612-overcoming-the-coronavirus-crisis-federal-minister-altmaier-place-the-economy-back-on-a-path-of-sustainable-growth-as-soon-as-possible.html>.

- German Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, BMZ)/ German Federal Ministry of Labour and Social Affairs (Bundesministerium für Arbeit und Soziales, BMAS), joint press release from both ministries from 14 July 2020, last consulted on 9 September 2020 at: http://www.bmz.de/de/presse/aktuelleMeldungen/2020/juli/200714_pm_21_Bundesminister-Heil-und-Mueller_Jetzt-greift-der-Koalitionsvertrag-fuer-ein-Lieferketten-Gesetz_Ziel-ist-ein-Abschluss-noch-in-dieser-Legislaturperiode/index.html.
- German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit, BMU), *Referentenentwurf eines Gesetzes zur Umsetzung der Abfallrahmenrichtlinie der Europäischen Union [Ministerial draft bill for legislation transposing the European Union's Waste Framework Directive]*, 5 August 2019, last consulted on 21 September 2020 at: <https://www.bmu.de/gesetz/referentenentwurf-eines-gesetzes-zur-umsetzung-der-abfallrahmenrichtlinie-der-europaeischen-union>.
- German Federal Ministry of Food and Agriculture (Bundesministerium für Ernährung und Landwirtschaft, BMEL), *Leitlinien der Bundesregierung zur Förderung von entwaldungsfreien Lieferketten von Agrarrohstoffen [Federal Government guidelines for promoting deforestation-free agricultural commodity supply chains]*, last consulted on 9 September 2020 at: https://www.bmel.de/SharedDocs/Downloads/DE/_Wald/leitlinien-entwaldungsfreie-lieferketten.pdf?__blob=publicationFile&v=2.
- German Federal Ministry of Justice and Consumer Protection (Bundesministerium der Justiz und für Verbraucherschutz, BMJV), *Ressortbericht Nachhaltigkeit: Bericht zum Stand der Integration der Rechts- und Verbraucherpolitik in die Agenda 2030 [Ministerial report on sustainability: Report on the status of the integration of legal policy and consumer policy in the 2030 Agenda]*, 2020.
- German Parcel & Express Logistics Association (Bundesverband Paket & Express Logistik, BIEK), *Kurier-Express-Paketdienste-Studie (KEP-Studie) [Courier, express and parcel services study (CEP study)]*, 2019, last consulted on 9 September 2020 at: <https://www.biek.de/publikationen/studien.html>.
- German Retail Federation (Handelsverband Deutschland, HDE), *Online Monitor 2020*, 2020, last consulted on 9 September 2020 at: https://einzelhandel.de/index.php?option=com_attachments&task=download&id=10433.
- Gillingham, K., et al., *The rebound effect is overplayed*, *Nature*, Vol. 493, 2013, pp. 475–476.
- Global Compact Network Germany, *Die zehn Prinzipien des Global Compact [The 10 Principles of the Global Compact]*, last consulted on 14 September 2020 at: <https://www.globalcompact.de/de/ueber-uns/Dokumente-Ueber-uns/DIE-ZEHN-PRINZIPIEN-1.pdf>.
- Global Compact Network Germany, *Leitprinzipien für Wirtschaft und Menschenrechte: Umsetzung des Rahmens der VN „Schutz, Achtung und Abhilfe“ [Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework]*, 2020, last consulted on 14 September 2020 at: https://www.globalcompact.de/wAssets/docs/Menschenrechte/Publikationen/leitprinzipien_fuer_wirtschaft_und_menschenrechte.pdf.
- Halfmeier, A., *Nachhaltiges Privatrecht [Sustainable Private Law]*, *Archiv für die civilistische Praxis (AcP)*, Vol. 215, 2016, p. 717.
- Händlerbund (German association of online retailers and service providers), *E-Commerce Weltweit: Recht & Steuern [E-commerce around the world: Law & taxes]*, 2019, last consulted on 14 September 2020 at: <https://www.haendlerbund.de/de/downloads/e-commerce-weltweit-recht-steuern.pdf>.
- Händlerbund (German association of online retailers and service providers), *Studie Teil 2: Coronavirus 2020 – Auswirkungen im Online-Handel [Study part 2: Coronavirus 2020 – Effects on e-commerce]*, last consulted on 9 September 2020 at: <https://www.haendlerbund.de/de/downloads/2020-corona-studie-teil-2.pdf>.

- Harris, L.C., *Fraudulent Return Proclivity: An Empirical Analysis*, *Journal of Retailing* 84, 2008, pp. 461–476.
- Herr, H., et al., *Wirtschaftliche Entwicklung und Arbeitsbedingungen in globalen Wertschöpfungsketten [Economic development and working conditions in global value chains]*, 2020, last consulted on 14 September 2020 at: https://www.boeckler.de/de/faust-detail.htm?sync_id=8840.
- Institute for Applied Ecology (Öko-Institut), Working Paper 3/2018, *Umweltschutz wahrt Menschenrechte! Deutsche Unternehmen in der globalen Verantwortung [Environmental protection safeguards human rights! German companies and their global responsibility]*, 2018, last consulted on 14 September 2020 at: <https://www.oeko.de/fileadmin/oekodoc/WP-Umweltschutz-wahrt-Menschenrechte.pdf>.
- International Labour Organization (ILO), last consulted on 14 September 2020 at: <https://www.ilo.org/global/lang--en/index.htm>.
- International Resource Panel, *Global Resources Outlook 2019: Natural Resources for the Future We Want*, 2019, last consulted on 16 September 2020 at: <https://www.resourcepanel.org/file/1172/download?token=muaePxOQ>.
- Jaeger-Erben, M., and Hipp, T., Junior Research Group: *Obsolescence as a challenge for sustainability (eds.), Letzter Schrei oder langer Atem? Erwartungen und Erfahrungen im Kontext von Langlebigkeit bei Elektronikgeräten [The latest craze or products with staying power? Expectations and experiences with regard to the durability of electronic equipment]*, 2017.
- Keirsbilck, B., and Terryn, E. (eds.), *Consumer Protection in a Circular Economy*, Intersentia, 2019.
- Kemna, R., Wierda, L., and Aarts, S., Van Holsteijn en Kemna B.V. (VHK), *Ecodesign Impact Accounting – Overview Report 2016*, prepared for the European Commission, 2016, last consulted on 21 September 2020 at: https://ec.europa.eu/energy/sites/ener/files/documents/eia_ii_-_overview_report_2016_rev20170314.pdf.
- Köhler, H., Bornkamm, J., and Feddersen, J., *Gesetz gegen den unlauteren Wettbewerb: UWG [German Act Against Unfair Competition]*, *Neue Zeitschrift für Arbeitsrecht (NZA)*, 38th edition, C.H. Beck, 2020.
- Kopp, R., and Sokoll, K., *Wearables am Arbeitsplatz – Einfallstore für Alltagsüberwachung? [Wearables in the workplace – gateways to daily monitoring?]*, *Neue Zeitschrift für Arbeitsrecht (NZA)*, 2015, p. 1,352.
- Krämer, L., Micklitz, H. W., and Tonner, K., *Law and Diffuse Interests in the European Legal Order*, *Liber Amicorum Norbert Reich*, 1997.
- Lemm, J., *Der Versandhausberater* no. 22/2020, pp. 4 et seq.
- Liedtke, C., Baur, N., Dehmel, S., et al., *Nachhaltigen Konsum und nachhaltige Produktion ermöglichen – Empfehlungen für die Verbraucherpolitik [Enabling sustainable consumption and sustainable production – recommendations for consumer policy]*, 2020.
- Liedtke, C., Buhl, J., and Ameli, N., *Designing value through less by integrating sustainability strategies into lifestyles*, *International Journal of Sustainable Design*, 2013, Volume 2 (2), pp. 167–180.
- Max Planck Institute (MPI) for Human Development, *Stärkung von Entscheidungskompetenzen („Boosting“) [Boosting Decision Making]*, last consulted on 17 September 2020 at: <https://www.mpib-berlin.mpg.de/research/research-centers/adaptive-rationality/research-areas/boosting-decision-making>.
- Micklitz, H. W., *Squaring the Circle? Reconciling Consumer Law and the Circular Economy*, in: Keirsbilck, B., and Terryn, E. (eds.): *Consumer Protection in a Circular Economy*, Intersentia, 2019, p. 321.
- MISEREOR, the German Catholic Bishops' Organisation for Development Cooperation, *Fairer Abbau, gerechte Teilhabe [Fair extraction and equitable participation]*, 2013, last consulted on 9 September 2020 at: <https://www.misereor.de/fileadmin/publikationen/dokumentation-konferenz-rohstoffe-sicher-fair.pdf>.

- Munich Commentary on the German Civil Code (Münchener Kommentar zum BGB, MüKoBGB), 8th edition, C.H. Beck, 2018.
- Munich Commentary on German Fair Trading Law (Münchener Kommentar zum Lauterkeitsrecht), 3rd edition, C.H. Beck, 2020.
- Munich Environmental Institute (Umweltinstitut München), *Anbau von Baumwolle [Cultivation of cotton]*, last consulted on 9 September 2020 at: <http://www.umweltinstitut.org/fragen-und-antworten/bekleidung/anbau-von-baumwolle.html>.
- New Atlas, *IKEA catalog uses augmented reality to give a virtual preview of furniture in a room*, 2013, last consulted on 25 September 2020 at: <https://newatlas.com/ikea-augmented-reality-catalog-app/28703>.
- North Rhine-Westphalia Consumer Organisation (Verbraucherzentrale Nordrhein-Westfalen), *Umweltfreundlicher Versand: Verbraucher sehen Händler in der Pflicht [Consumers feel that traders are responsible for environmentally-friendly shipping]*, 2018, last consulted on 15 September 2020 at: <https://www.mehrwert.nrw/projekt-mehrwertkonsum/umfrage-versand>.
- North Rhine-Westphalia Consumer Organisation (Verbraucherzentrale Nordrhein-Westfalen), *Unsportlich: Datenschutz-Mängel bei Wearables und Fitness-Apps [Unsporting behaviour: data protection shortcomings with wearables and fitness apps]*, 2017.
- Ohly, A., and Sosnitza, O., *Gesetz gegen den unlauteren Wettbewerb [German Act Against Unfair Competition]*, 7th edition, C.H. Beck, 2016.
- Organisation for Economic Co-operation and Development (OECD), *OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector*, 2020, last consulted on 14 September 2020 at: https://www.oecd-ilibrary.org/governance/oecd-due-diligence-guidance-for-responsible-supply-chains-in-the-garment-and-footwear-sector_9789264290587-en.
- Organisation for Economic Co-operation and Development (OECD), *OECD Guidelines for Multinational Enterprises*, 2011, last consulted on 14 September 2020 at: https://www.oecd-ilibrary.org/governance/oecd-guidelines-for-multinational-enterprises_9789264115415-en.
- Pietikäinen, S., *Resource efficiency: moving towards a circular economy*, 2014/2208 (INI), Committee on the Environment, Public Health and Food Safety, 2015, last consulted on 22 September 2020 at: https://www.europarl.europa.eu/doceo/document/A-8-2015-0215_EN.html.
- PricewaterhouseCoopers (PwC), *Surviving the Retail Apocalypse, What to learn from "Clicks-to-bricks"*, 2019, last consulted on 16 September 2020 at: <https://www.pwc.de/de/human-resources/studie-surviving-the-retail-apocalypse.pdf>.
- Pur, S., Weinfurter, S., Wittmann, M., et al., *Retourenmanagement im Online-Handel – Das Beste daraus machen [Returns management in e-commerce – How to make the best out of a bad situation]*, 2012.
- Purnhagen, K., and Schebesta, H., *The behaviour of the average consumer: A little less normativity and a little more reality in [the] CJEU's case law? Reflections on Teekanne*, ELR 2016, p. 590.
- Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRU), last consulted on 22 September 2020 at: <https://www.umweltbundesamt.de/themen/abfall-ressourcen/ressourcenkommission-am-umweltbundesamt-kru>.
- Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRU), Product Labelling Body for the promotion of product resource efficiency and recyclability, 2017, last consulted on 22 September 2020 at: https://www.umweltbundesamt.de/sites/default/files/medien/3521/publikationen/kru_product_labelling_body.pdf.

- Resources Commission at the German Environment Agency (Ressourcenkommission am Umweltbundesamt, KRU), *Substitutionsquote: Ein realistischer Erfolgsmaßstab für die Kreislaufwirtschaft [Substitution rate: A realistic measure of success for the circular economy]*, 2019, last consulted on 17 September 2020 at: <https://www.umweltbundesamt.de/publikationen/substitutionsquote-ein-realistischer>.
- Returns Management Research Group at the University of Bamberg, *Präventives Retourenmanagement und Rücksendegebühren [Preventive returns management and return shipping fees]*, 2019a.
- Returns Management Research Group at the University of Bamberg, *Retourenentsorgung [Returns disposal]*, 2019b.
- Returns Management Research Group at the University of Bamberg, *Retourentacho 2018/19 [Returns speedometer 2018/2019]*, 2019c.
- Reuter, M.A., Hudson, C., Van Schaik, A., et al., United Nations Environment Programme (UNEP), *Metal Recycling: Opportunities, Limits, Infrastructure*. A Report of the Working Group on the Global Metal Flows to the International Resource Panel, 2013.
- Reuter, M.A., and Van Schaik, A., *Recycling Indices Visualizing the Performance of the Circular Economy*, World of Metallurgy – Erzmetall, 2016.
- Reuter, M.A., Van Schaik, A., and Ballester, M., *Limits of the Circular Economy: Fairphone Modular Design Pushing the Limits*, World of Metallurgy – Erzmetall, 2018.
- Ries, F., Report on the implementation of the Eco-design Directive (2009/125/EC), Committee on the Environment, Public Health and Food Safety, 2018.
- Rohnke, C., *Werbung mit Umweltschutz [Advertising and environmental protection]*, Journal of Intellectual Property Law (GRUR), 1988, p. 667.
- Salminen, J., and Rajavuori, M., *Transnational sustainability laws and the regulation of global value chains: comparison and a framework for analysis*, Maastricht Journal of European and Comparative Law, 2019 (26), p. 602.
- Sankari, S.E., *Collective valuation of the common good through consumption: What is (un)lawful in mandatory country-of-origin labelling of non-food products?*, in: Do Amaral Junior, A., Klein Vieira, L., and De Almeida, L. (eds.), *Sustainable Consumption: The Right to a Healthy Environment*, Springer, 2019, pp. 207–227.
- Schlacke, S., Tonner, K., Gawel, E., et al., *Nachhaltiger Konsum bei der Produktnutzung als Herausforderung rechtlicher Steuerung [Sustainable consumption in product usage as a challenge in terms of legal regulation]*, Zeitschrift für Umweltrecht (ZUR), 2016, p. 451.
- Schlacke, S., Tonner, K., Gawel, E., et al., *Stärkung eines nachhaltigen Konsums im Bereich Produktnutzung durch Anpassungen im Zivil- und öffentlichen Recht [Strengthening sustainable consumption in terms of product usage by amending civil and public law]*, Federal German Environment Agency (UBA) Texts 72/2015, 2015, last consulted on 9 September 2020 at: https://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/texte_72_2015_staerkung_eines_nachhaltigen_konsums_im_bereich_produktnutzung_0.pdf.
- Schmidt-Kessel, M., *Lehrbuch Verbraucherrecht [Consumer law manual]*, 2018, last consulted on 22 September 2020 at: <https://epub.uni-bayreuth.de/3811>.
- Schmidt-Bleek, F., *Wieviel Umwelt braucht der Mensch? MIPS, das Maß für ökologisches Wirtschaften [How much environment do people need? MIPS, the measurement for ecological economic activity]*, Birkhäuser, 1994.
- Schrader, U., Liedtke, C., Lamla, J., et al., *Verbraucherpolitik für nachhaltigen Konsum – Verbraucherpolitische Perspektiven für eine nachhaltige Transformation von Wirtschaft und Gesellschaft [Consumer policy for sustainable consumption – consumer policy perspectives for a sustainable transformation of the economy and society]*, 2013.
- Sendcloud, *Corona-Krise im E-Commerce: Die Auswirkungen auf den Onlinehandel und Onlinehändler [The coronavirus crisis and its impacts on e-commerce and online traders]*, last consulted on 9 September 2020 at: [Sendcloud.de/corona-krise-im-e-commerce](https://www.sendcloud.de/corona-krise-im-e-commerce).

- Shehu, E., Papies, D., and Neslin, S.A., *Free Shipping Promotions and Product Returns*, Journal of Marketing Research, 2020.
- Spindler, G., and Schuster, F., *Recht der elektronischen Medien [Legislation on electronic media]*, 4th edition, C.H. Beck, 2019.
- Stahel, W.R., *The Circular Economy: A User's Guide*, Routledge, 2019.
- Stahel, W.R., *The Performance Economy*, Routledge, 2006.
- Stamminger, R., and Geppert, J., *Energielabel – Fluch oder Segen für Verbraucher? [Are energy labels a curse or a blessing for consumers?]*, in: Bala, C., and Schuldzinski, W. (eds.), *Der verantwortungsvolle Verbraucher: Aspekte des ethischen, nachhaltigen und politischen Konsums [Responsible consumers: Aspects of ethical, sustainable and political consumption]*, 2015, pp. 109–121, last consulted on 22 September 2020 at: https://www.verbraucherforschung.nrw/sites/default/files/migration_files/media236591A.pdf.
- Sunstein, C.R., and Reisch, L.A., *Trusting Nudges: Toward a Bill of Rights for Nudging*, Routledge, 2019.
- Supply Chain Legislation Initiative (Initiative Lieferkettengesetz), „Ein starkes Zeichen“: Initiative Lieferkettengesetz zur Ankündigung eines EU-Lieferkettengesetzes von Justizkommissar Reynders [“A strong signal”: Supply Chain Legislation Initiative on the announcement of EU supply chain legislation by Commissioner for Justice, Didier Reynders], press statement from 30 April 2020, last consulted on 19 September 2020 at: <https://lieferkettengesetz.de/pressemitteilung/eine-regulierung-ohne-sanktionen-ist-keine-regulierung-eu-kommissar-reynders-kuendigt-entwurf-fuer-eu-lieferkettengesetz-an>.
- TextilWirtschaft, *Nike Fit: Per Smartphone-Scan zum passenden Schuh [Nike Fit: smartphone scanning helps users get the right-sized trainers]*, 2019, last consulted on 14 September 2020 at: <https://www.textilwirtschaft.de/business/sports/neues-tool-nike-fit-per-smartphone-scan-zum-passenden-schuh-215674>.
- Tonner, K., Gawel, E., Schlacke, S., et al., *Gewährleistung und Garantie als Instrumente zur Durchsetzung eines nachhaltigen Produktumgangs [Warranty and guarantee as instruments for ensuring sustainable handling of products]*, Verbraucher und Recht (VuR), 2017, p. 3.
- United Nations, Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework, 2011, last consulted on 14 September 2020 at: https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf.
- VDI Centre for Resource Efficiency (Zentrum Ressourceneffizienz, VDI ZRE), *Ressourceneffizienz – Bewertung des Rohstoffaufwands [Resource efficiency – Evaluation of raw material demand]*, VDI Standard 4800, Part 2, 2018.
- Von Hippel, E., Verbraucherschutz [Consumer protection], J.C.B. Mohr (Paul Siebeck), 1st edition 1976.
- World Commission on Environment and Development, *Our Common Future*, Brundtland Report, 1987.
- Zalando, last consulted on 14 September 2020 at: <https://en.zalando.de/sustainable-fashion>.
- Zalando, *About our 100-day return policy*, last consulted on 25 September 2020 at: [https://en.zalando.de/faq/Returns-and-Refunds/About-our-100-day-return-policy.html](https://en.zalando.de/faq>Returns-and-Refunds/About-our-100-day-return-policy.html).
- Zeit Online, article from 5 January 2020, *Grüne wollen Pfand auf Handys und Tablets einführen [The Greens want to introduce a deposit-refund system for mobile phones and tablets]*, last consulted on 22 September 2020 at: <https://www.zeit.de/politik/deutschland/2020-01/recycling-buendnis-90-die-gruenen-handys-pfand>.



ADVISORY COUNCIL FOR CONSUMER AFFAIRS

The Advisory Council for Consumer Affairs is an advisory body of the Federal Ministry of Justice and Consumer Protection. It was set up in November 2014.

The Advisory Council is tasked with providing the Federal Ministry of Justice and Consumer Protection with support, based on scientific evidence and practical experience, for shaping consumer policy.

The Advisory Council is independent and is based in Berlin.

The Chair of the Advisory Council is Prof. Dr. Peter Kenning.