



International Journal of Electronic Trade

ISSN online: 1742-7533 - ISSN print: 1742-7525 https://www.inderscience.com/ijetrade

The future of online marketing strategies and digital tools: new challenges and contributions to RACE framework

Andrea Sestino, Maria Irene Prete, Luigi Piper, Gianluigi Guido

DOI: 10.1504/IJETRADE.2021.10042594

Article History:

Received:	20 February 2021
Last revised:	23 April 2021
Accepted:	11 May 2021
Published online:	12 September 2023

The future of online marketing strategies and digital tools: new challenges and contributions to RACE framework

Andrea Sestino*

Ionian Department of Law, Economics and Environment, University of Bari Aldo Moro, Italy Email: andrea.sestino@uniba.it *Corresponding author

Maria Irene Prete, Luigi Piper and Gianluigi Guido

Department of Management and Economics, University of Salento, Italy Email: mariairene.prete@unisalento.it Email: luigi.piper@unisalento.it Email: gianluigi.guido@unisalento.it

Abstract: The purpose of this study is to examine the opportunities resulting from online interactions, by shedding light on the most prominent topic in the field of online marketing. A systematic review of academic studies published in the past 15 years (2005–2020). Results systematised according to the RACE (reach > act > convert > engage), revealed useful insights, challenges and opportunities in terms of digital strategies, online business approaches, knowledge exploitation, product customisation and differences in online product purchasing (low-touch, high-touch and 'embarrassing' products'). Moreover, the study also highlights how consumers' engagement strategies should consider recent threats such as web effects (pathological internet usage sometimes falling into the category of internet addiction) by managing consumers' online presence, ethical and privacy concerns, and finally online behaviour monitoring in terms of expected response time in customer services, and negative word-of-mouth containment.

Keywords: business strategies; digital marketing; e-commerce; online consumer behaviour; online product purchase; web effects; word-of-mouth.

Reference to this paper should be made as follows: Sestino, A., Prete, M.I., Piper, L. and Guido, G. (2023) 'The future of online marketing strategies and digital tools: new challenges and contributions to RACE framework', *Int. J. Electronic Trade*, Vol. 1, No. 1, pp.4–27.

Biographical notes: Andrea Sestino is a PhD candidate in Management and Marketing at the University of Bari (Italy), and an assistant researcher at University of Salento, Lecce (Italy); he holds an MSc in Business Management at the Sapienza University, Rome (Italy). Additionally, he is also R&D Specialist for an Italian consulting company in the field of Applied Research to Digital Business, involved in private and national research projects. He has published scientific articles in international peer-reviewed journal, such as

Technovation, Technology Analysis and Strategic Management, British Food Journal, Int. Journal of Learning and Intellectual Capital, and a member of the editorial board of International Journal of Electronic Trade.

Maria Irene Prete is an Assistant Professor of Business Management at the University of Salento, Lecce (Italy), where she teaches digital marketing and digital management. She also teaches at the Libera Università Maria Santissima Assunta (LUMSA), Rome (Italy). She holds a PhD (University of Salento), and MSc, Paris XII, (Paris, France). She has been a visiting scholar at Queen Mary – University of London (London, UK). She has held seminars at many international universities, has been involved in international projects and has produced about 80 publications and participated in numerous national and international conferences on the topics of consumer behaviour and strategic marketing.

Luigi Piper is an Adjunct Professor of Business Management at the University of Bari (Italy), where he taught analytical marketing. He was a Research Fellow at the Department of Humanities of the University of Salento, Lecce (Italy) where he received his PhD in Economics and Mathematics Statistics. He also works in the economic and financial field with various companies and banking institutions and collaborates in national and international research projects. He is the author of numerous publications in national and international journals and has participated in various conferences on the topics of marketing, applied mathematics, and biomedical engineering.

Gianluigi Guido is a Full Professor of Marketing at the University of Salento, Lecce (Italy). His research is about consumer behaviour and marketing strategies. He has published 20 books and more than 200 papers in scholarly journals.

1 Introduction

In recent years, digital technologies have generated pervasive effects on companies' business models (Chesbrough, 2007), products and services (Taylor, 2010), market structure (Kumar and Siddharthan, 2013), and consumer behaviour (Erevelles et al., 2016; Gretzel et al., 2006). This phenomenon has improved the revitalisation of relationships among companies, markets, and consumers, thus affecting the different marketing mix components (Constantinides, 2006; Pantano et al., 2019), and their methods of interaction and management within company strategy (Brooksbank et al., 2019; Sestino and De Mauro, 2021; Zhu and Gao, 2019). The evolution of the digital world has led firms and consumers to face radical changes in the marketing paradigm: Indeed, digital stands out as the main source of information for both consumers and businesses, given its ease of use, widespread access, richness of information and opportunity to increase proximity to consumers. The proliferation of media challenges, digital technologies and interactions has added complexity to the understanding, prioritising and management of new digital communication techniques, enriching both the digital and the online world. In current academic and business articles dealing with digital marketing, terms such as digital, virtual, and online are ubiquitous and sometimes used as synonymous. Indeed, while the term digital includes various facets that make the number of channels and tools used to develop strategies and activities wider, the term

online is narrower and less flexible, as it mainly refers to transactions generated through interactions via the internet (Almeida, 2017). Online – as a channel – is a way to implement digital strategies (Chaffey and Ellis-Chadwick, 2019). Thus, to clarify, the digital business applications usually refer to how businesses apply digital technology and media to improve the competitiveness of their organisation – through optimising internal processes – and the interaction with stakeholders and consumers – by exploiting online and traditional channels. For the term virtual, a definition could be suggested in terms of 'synchronous, persistent network of people, represented as avatars, facilitated by networked computers' [Bell, (2008), p.2]. The virtual environment is made of the online interactions activated by the wide range of online tools related to digital opportunities.

Among the online channels, consumers regularly use digital tools such as wiki, blogs or corporate blogs, social media and e-commerce platforms, as a part of their daily lives (Leeflang et al., 2014). Engaging consumers is a challenge and companies must take advantage of these interaction opportunities, observing and adapting business strategies to their everchanging online behaviour.

Focusing on the online digital tools considered enablers for increasing and enriching information and knowledge, this paper investigates new challenges and opportunities through a literature review to better implement consumer-oriented digital strategies, based on a deeper consumer comprehension. The RACE framework (Chaffey and Smith, 2013), as a five-step process - (plan), reach, act, convert, engage - could help integrate all marketing communications into one easy-to-understand campaign plan. The RACE marketing planning model (or pRACE, when also explicitly the planning phase) provides a simple structure for companies to develop a digital marketing or omnichannel communications plan which meets the challenges of reaching and engaging online audiences to prompt conversion to online or offline sales, as highlighted by Chaffey and Patron (2012). Moreover, the RACE framework is a consumer-oriented paradigm because it follows the established customer lifecycle of relationship building or a marketing funnel from creating awareness, generating leads from new prospects, converting prospects to sales online or offline, encouraging loyalty, and manage sales and advocacy such as social sharing. Thus, this paper aims to answer the following research question:

RQ1 What are the fundamental topics in the field of digital marketing, and the most promising strands of research for further investigation in the field?

By considering these premises the present paper aims to fill this gap by qualitatively shedding light on the most relevant topic in the field of digital marketing tools. A literature review has been carried out by systematising the emerging relevant insights in terms of recent challenges and issues – according to the RACE framework (Chaffey and Smith, 2013) – for the management of digital marketing strategies for marketers and managers. The article is organising as follow: In the next section we discuss some literature about online consumer's behaviour and digital transformation, and then we present the implement methodology. In the further section we describe the obtained results in terms of:

- 1 digital marketing strategies and transformation plans
- 2 increased awareness
- 3 data profiling

- 4 personalisation
- 5 customer service and social media marketing systematised according the RACE framework.

Thus, we contribute to increasing knowledge in literature from four perspectives. First, we contribute to the electronic trade literature by shedding light on how some products may be more successful online, and how the online transactions enable new marketing strategies (e.g., customised, low-touch, high-touch and 'embarrassing' products). Moreover, the study also contribute in literature about online addiction, by shedding light both on the pathological internet usage, and on how such involvement - as a sense of flow – could be exploited in providing online products and services. Secondarily, we contribute to marketing literature because our insight reveals how some online consumption choices have differentiated effects depending on certain consumers' characteristics, also by managing consumers' online presence, ethical and privacy concerns. Thirdly our findings contribute in perfectionating online marketing strategies and e-trade practices by shedding light on the revel change of expected response time in customer services monitoring, and negative word-of-mouth containment. Fourthly, our results, systemised according to the RACE framework contribute in enriching that framework to drive future online future marketing strategies. Finally, our work carries managerial implications for digital marketers and managers interested in enriching their customers' experiences via the online tools.

2 Literature review

2.1 Online behaviour and digital transformation

Books, radio, and newspapers have given way to the internet as a privileged source of information: current consumption choices in pre-purchase and post-purchase phases mainly occur online (Song and Yoo, 2016). Additionally, also consumption, especially in the service field (i.e., training, online courses), can be provided online when sustained by flexible digital structures. Previous studies have identified four variables as a part of the online environment: structure, content effectiveness, information level, and entertainment aspect. The rise of a fairer system than in the past due to the spreading of consumers' opinions has been revealed (Wan et al., 2018). Furthermore, most of the purchases made currently in traditional markets are also consequences of online-made choices (Haridasan and Fernando, 2018). These changes have not come about without incurring costs or encountering problems. The near total freedom and widespread access have led to the problem of crowding the internet (Taeuscher, 2019), with an objective impossibility of keeping track of what billions of people do and communicate. Within this digital evolution, an inexorable decline of traditional means has occurred (Ma and Du, 2018). The internet evolution, the social media explosion, and the traditional offline media decline, together with the changes in consumer behaviour, have all played a decisive role in bringing out a new system of values (Kim et al., 2019; Yoo and Park, 2016). Digital technologies allow for the creation of online content and information to publish access and consume quickly and simply. Consequently, the scope of available opinions and information for consumers has become wider and deeper (Erevelles et al., 2016; Phir et al., 2018; Santoro et al., 2018). Knowledge is a new 'power' and digital technology is

shifting its balance in the consumers' favour. Traditional marketing models and techniques are now nearly outdated (Todor, 2016). Marketers and managers must mainly think about how to become information suppliers and must be aware that they have a new type of consumer in front of them, extremely individuals in the consumption behaviour process. Digital characteristics and opportunities have generated a complete reversal of marketing approaches which are no longer selective, but rather attractive (Hunt and Madhavaram, 2019). Consumers are placed at the centre of attention before, during and after the purchase phases (Spottke et al., 2016). It is crucial to establish a sincere and loyal dialogue in which selling is not the only goal, but the natural consequence of the established relationship (Jackson and Ahuja, 2016). Furthermore, thanks to digital, it is easier to intervene on product perception or design, based on deeper market knowledge, collecting new ideas, working on emotion, thus improving new digital marketing strategies (Éthier et al., 2006; Koo and Ju, 2010). Therefore, it is necessary to discard a limited only quantitative logic in favour of newer qualitative dimensions (Petrescu and Lauer, 2017).

2.2 Digital tools and marketing strategies

The diffusion of digital technologies has unlocked enormous opportunities for strengthening relations and deeply mining markets in terms of new ways to achieve segmentation and online targeting (Kotler et al., 2016; Müller et al., 2018; Urban, 2003); new opportunities for defining offers and improving customer management systems (James et al., 2017); the development of new marketing and communication models (wiki, social networks, blogs and corporate blogs, e-commerce), created through the combined use of tools such as the internet, mobile devices and digital TV (Nguyen and Simkin, 2017; Taylor et al., 2018; Sestino et al., 2020). In the past, strategic approaches moved from traditional media-based unidirectional messages and transmission of mono-medial analogical content to unidirectional communication flows (top-down), by which contents are processed upstream by marketer broadcasters (Girchenko and Ovsiannikova, 2016; Xu et al., 2016). Nowadays, the digital nature of online messages makes them editable and customisable, involving radical changes in the communication flow and information diffusion (Mulhern, 2009). Furthermore, content interactivity allows consumers to participate in the creation of the most suitable content, spreading new cultural forms typical of technologies (Parsons and Lepkowska-White, 2018; Valaei et al., 2016). Thus, management and marketing strategies have acquired a new meaning and new approaches that consider the radical change in consumer behaviour and attitudes that, thanks to digital technologies, have broken down the barriers to the access of desired information (Mani and Chouk, 2018). The internet is neither a new marketing paradigm, nor a simple tool, but a complex system of people and technologies, demonstrating that businesses can use transversal devices able to understand demand-need, satisfying expectations in a more precise, direct and immediate way (Chaffey and Ellis-Chadwick, 2019; Pitt and Kietzmann, 2019).

2.2.1 Wiki

The Wiki is a system for managing content produced by several people, whose peculiarity is the possibility, guaranteed to each user, to add, check, modify or delete content present in a 'wiki' (Hazari et al., 2019). It is like a virtual company bulletin board

which, unlike paper ones, adds typical functions of the IT environment such as the chance to insert links, be updated in real-time and with the possibility to do a widespread search by keywords as well (Chan et al. 2018a). In this way, shared energy could be promoted

by keywords as well (Chen et al., 2018a). In this way, shared spaces could be promoted among different users, often belonging to different corporate functions, in order to manage complex common projects. The mechanism could also be extended to consumers strengthening the relationship among companies (Chen et al., 2018b).

2.2.2 Social networks

Social Networks are widely known as groups of people connected to each other through online platforms sharing ties, from casual knowledge, to working relationships, to family relations (Jiang et al., 2019). The procedures for accessing the social network are similar: they are based on registering a profile (generally for free) and on the opportunity of adding contacts, inviting them to participate by selecting them from those who are already part of it, both in the professional sphere such as in Linkedin (Davis et al., 2020), and for personal purposes such as in Facebook, Instagram, Twitter, Whatsapp (Waterloo et al., 2018). An interesting factor for marketers should be recognised in the ability of virtual communities to act as an amplifier, through word-of-mouth news, trends and styles, thus allowing for the development of different forms of viral marketing (Huang et al., 2019). Given the growing volume of data, strong requirements for IT systems and knowledge organisation are fundamental to limiting the dispersion of information as much as possible, thus facilitating the possibility to filter the information sought (Zhang et al., 2019). Today, the consumer should no longer be understood exclusively in terms of a business earnings and profits 'generator', but as an element with whom to communicate directly without necessarily having to bear the very high costs typical of traditional media (Kamboj et al., 2018). The importance of the social media marketing phenomenon must be rediscovered in its origin (Shareef et al., 2019).

2.3 Blogs and corporate blogs

Blogs are self-managed websites where all kinds of news, information, opinions or stories are published in real time, displayed in chronological order and widely accessible. The blog is a tool of free expression, a middle ground between the personal homepage and the discussion forum that keeps track of the participants' interventions. It could be used for personal purposes as a constantly updated online diary or virtual aggregation tool between people who share a certain interest with increasing interactions (Chen and Chen, 2019), thanks to the ability to create and share content in text format, audio, images and video, in a dynamic way (Hussain and Abbas, 2018; Van Esch et al., 2018). Its potential should be identified in the simplicity of content insertion that does not require any special technical knowledge (Ahuja and Medury, 2010; Kerr et al., 2012). Additionally, participants could be easily updated in real-time by subscribing to the RSS feed (Barman, 2020). Differently, corporate blogs are blogs managed for businesses by marketers either individually or with third party collaborators, including storytellers and similar specialists (Thakur and AlSaleh, 2018). Corporate blogs provide the opportunity to promote different and better communication of the company's image and values and, alongside the other traditional marketing tools, they could contribute to increasing the interest of consumers concerning issues, products and brands thereby stimulating attitudes (Colton, 2018) and influencing their behaviours.

2.4 E-commerce

E-commerce was the first online tool through which companies were able to communicate with their consumers, offering and selling products, and providing information without any physical contact with them, though reducing physical distance (Mohapatra and Sahu, 2018). E-commerce has changed in meaning over time. First approaches qualified e-commerce platforms as a tool to support commercial transactions in electronic form generally by resorting to a technology called electronic data interchange (EDI), supporting the sending of commercial documents (orders, invoices, returns) (Wong, 2006). Subsequently, the growing availability of technological resources has allowed for the strengthening of platforms, enabling new functions to purchase goods, benefitting from secure servers where electronic shopping carts and protected online payment services are provided (Weisberg et al., 2011). The current use of e-commerce goes from the creation of an IT site and online catalogue, to the management of logistics affairs, orders and financial transactions (Petre et al., 2006). Results imply greater accessibility for users, reduction of transaction costs, improvement for consumer's transaction and online experiences, greater awareness of the choice made between a wide range of comparable alternatives (Tsalgatidou and Pitoura, 2001). Today, an online passive presence, only through websites, is insufficient to develop new business opportunities and take advantages of the digital world. Instead, it is necessary to plan projects and business strategies aimed at the market, involving a wide use of dedicated technological tools, thus diversifying strategies into business-to-business (B2B) and business-to-consumer (B2C) relationships also including new forms such as consumer-to-consumer (C2) through the development of online auctions (Tsai and Chen, 2018). Leisure is the field that is most affected by digital development, as the dominant sector of online consumer spending, followed by tourism, insurance and electronics Whereas, the remaining percentage is distributed among shopping centres intended as large online stores (Ahuja et al., 2003).

3 Method

Similar to Guido et al. (2020), the database mining began by defining a list of 15 keywords, (i.e., digital marketing, marketing platform, technology, e-commerce, digital knowledge management, knowledge marketing, digital consumers, online consumption, online purchase, online advertising, digital management, digital transformation, technology clustering, technology transfer, technology evaluation), which are the most recurrent in scholarly articles, published in the most important management journals. Using these keywords, articles published in journals that had the words 'marketing', 'consumer', or 'advertising' in their title has been searched, by considering three main business databases (i.e., Business Source Premiere and EconLit, hosted by EBSCO and ABI/INFORM Complete from ProQuest). Moreover, further important management journals that featured research areas related to marketing and consumption aimed at the elderly has been considered (i.e., retailing, communication, market research, services). To provide a critical review of academic studies in this domain (either theoretical or experimental studies), only scholarly marketing articles that were published in international peer-reviewed journals between January 1, 2005 and February 28, 2019 have been examined. Such contributions' results have been reviewed and synthesised in a

coherent integrated manner (according to Bal and Nijkamp, 2001) in order to describe and identify the main trends in digital strategies and approaches in which knowledge insight could have been discovered, in the contexts in which they were examined. After identifying articles according to these criteria, each manuscript has been thoroughly read to verify its congruity with the research objectives, manually reviewing each article's reference list in order to find other relevant articles to be subjected to the same screening process (Tranfield et al., 2003), according to human judgement to discover the most readable topics (Delen and Crossland, 2008). A sample list of considered journals is provided in Appendix (Table A1.) Given this methodology, which was based on Bal and Nijkamp's (2001) approach, the final sample of articles have been grouped in an integrated manner, and thus according to four main factors that describe digital opportunities and consumer challenges considering their attitudes, social pressure, sense of control, and behaviour. Following the proposed methodology, the first output produced 1,126 total documents from 2005 until 2020, deriving from different combinations of our keywords. After analysing the results, discarding contributions due to their uncongruity with our goal, and after eliminating the duplicates, the purification process narrowed the list to 142 unique publications. Ultimately, according to the RACE framework, this process shed light on several topics about managing key activities in integrated digital marketing strategies, across the consumer lifecycle (Chaffey and Smith, 2013; Chaffey and Ellis-Chadwick, 2019) such as: digital marketing strategies and transformation plans; increasing awareness; data profiling; personalisation; and customer service and social media marketing. The RACE framework has been considered the most consumer-centric framework because its marketing activities are designed to help brands engage their consumers throughout their lifecycle. Moreover, it is widely recognised as the most omnichannel-oriented framework (Chaffey and Patron, 2012).

4 Generalisation of the main statements

4.1 Results overview

According to Chaffey and Smith (2013), the RACE framework proposes to implement a coordinated and integrated approach to digital marketing, integrating online and offline channels, due to its consumer-oriented and omnichannel nature. Particularly, our classification deriving from observed insights from the literature review process sheds light on challenges and issues in digital marketing techniques to be harnessed to reach, interact with, convert and engage online consumers during their lifecycle, from generating awareness, conversion to sale and retention and growth, through plan, reach, act, convert and engage (Table 1). Several components of the marketing mix are being affected by changes in digital technologies, including digital marketing strategies (Chaffey and Ellis-Chadwick, 2019; Jackson and Ahuja, 2016). Digital marketing strategies in improving management related processes include planning the digital resource benefits in order to positively contribute to business activities: increasing adoption of digital tools implies significant change in programs to manage new objectives, segments, products, markets, consumers' deep knowledge, and staff developments. These new programs affect planning digital marketing strategies in business communication and knowledge exploitation and reaching increasing awareness in managing online phenomena such as the web effect. In terms of action plans, activities

such as data profiling should consider issues deriving from ethical and privacy concerns. Finally, in converting activities, the correct mix of products should be proposed online considering intrinsic and extrinsic goods features (low-touch, high-touch, and 'embarrassing products') or business (increases or decreases in online purchase due to market conditions). Finally, engaging activities should consider challenges deriving from the correct management of time and monitoring of negative online consumer behaviour (such as negative word-of-mouth).

RACE framework (activities)	Activities-related strategies to the most prominent topics	I	Review insights: challenges and issues	
Plan	Digital marketing strategies and transformation plans	1	Online business strategies	
		2	Knowledge exploitation and purchase experience customisation	
Reach	Increase awareness	3	'Web effect'	
Act	Data profiling	4	Ethical and privacy concerns in online interaction	
Convert	Personalisation	5	Online shopping customisation	
		6	Focused strategies for online product offers (low-touch, high-touch and embarrassing goods)	
Engage	Customer service and social media marketing	7	Response time in customer service activities	
		8	Negative word-of-mouth monitoring	

Table 1	Emerging insights for managing digital marketing activities classified according to the
	RACE framework

4.2 Online business strategies

New digital technologies offer enormous manoeuvre room for marketers and potential pressure on margins deriving from demand aggregation, thus conferring greater bargaining power on customers, while also reducing information asymmetries (Friedmann, 2019; Reisman et al., 2019). Communication strategies based on informed information represent the fundamental way for marketers and managers to build contact with the market, playing an important role in the process of creating value, also considered online multisensory opportunities (Petit et al., 2019). However, the greatest share of potential for communication on three levels is revealed on the internet. On the first hypothetical level, the internet represents a technical means to implement traditional forms of communication with considerable implications in terms of efficiency (Woodside and Bernal Mir, 2019). On the second level, it is possible to grasp the innovative elements guaranteed by links to other sites, such as digital offers, and generate a network of virtual links that can lead to the development of collaborative cross-marketing actions (Hallem et al., 2019; Todri et al., 2019). The highest level refers to the chance of monitoring users' online behaviour, establishing an interaction relationship between the company and the user (or groups of them), in order to obtain real-time customer feedback on an innovative product, by monitoring consumer behaviour on the net, in a group or on the basis of cross characteristics (Ahmed et al., 2014; Vila and González, 2020; Zhou et al., 2019). The effects influence both cost and differentiation of potential dimensions,

considerably affecting the opportunities for companies to generate and sustain competitive advantages (Chaffey and Patron, 2012). Thus, significant effects are generated on the price management methods, granting more flexibility, allowing for greater degrees of transparency, less information asymmetry, and greater price competition (Leeflang et al., 2014); new levels of communication and more efficient and effective information feedback processes, improved knowledge-based relationships (Fu et al., 2020; Islam et al., 2017; Izogo and Jayawardhena, 2018); creation of value and definition of new standards of efficiency and effectiveness by requiring a reorganisation of the distribution chain (Büyüközkan and Göçer, 2018; Ivanov et al., 2019). Thus, consumers may acquire a new role, requiring new business attention.

4.3 Knowledge exploitation and purchase experience customisation

More consumers use digital technology to simplify their choices, purchases and consumption processes, starting from the best knowledge and identification of needs, up to the search for solutions, then purchase of products or services, and finally contributing to word-of-mouth (Barton and Kang, 2005; Broilo et al., 2016; Ha, 2002). Sustained by digital technology, consumers have greater power than in the past, countless access to sources of information, a greater variety of products and services and act as a part of a bigger virtual world (Grant et al., 2007; Peterson and Merino, 2003). Through blogs, wikis, social bookmarking, online discussions, social networks, e-commerce and blogs, marketing companies have the opportunity to cultivate a more productive and meaningful relationship with customers, investigating, from a powerful perspective, their perceptions toward products, services, and brands, contributing to business development in an unthinkable way compared to the past (Bickart and Schindler, 2001; Brown et al., 2007). Consumers are not particularly concerned with how marketers define their business strategies (excepted for privacy, ethical, social responsibility issues): the only thing they care about is their experience, and thus how marketing strategies can contribute to helping them make more informed decisions, inspired by instant gratification and hassle-free experience (Khalifa and Liu, 2007; Schmitt and Zarantonello, 2013; Schmid and Axhausen, 2019). Marketing efforts should be directed at ensuring these experiences. New online behaviour also includes exploratory behaviour and the level of involvement (Balabanis and Chatzopoulou, 2019; Gursoy, 2019). Those who spend more time on a site accumulate and process more information through exploratory behaviour, showing greater positive attitudes towards digital platforms (Chen et al., 2019; MacKenzie and Lutz, 1989; Ramkumar and Jin, 2019). Interesting considerations emerge considering the gender variable as well: consistent with traditional channels where women spend more time shopping than men, they are also more likely to use websites more for personal pleasure and for gathering information. Businesses should exploit consumer knowledge, driving marketing strategies based on providing rich and customised content.

4.4 Web effect

A widespread trend among new consumers, which is still solid today, is the web effect phenomenon (Windham et al., 1999): once access to the web is obtained, consumers quickly get used to the new environment and begin to quickly perceive it as something familiar and pleasant (Mukundan et al., 2019). The web effect develops, identifying preferences, which are transformed into demand levels that guide the selection criteria,

including basic requests. Once requests are satisfied, the most important criteria become the characteristics that can differentiate the chosen solution from the others. Consumers could be differentiated into market segments according to the benefits to which they give importance in their relationship with the web, which identifies the sites they visit towards which they should be loyal. As more people connect to the network, other segments emerge; mainly motivated by the convenience of prices and the offers they then buy from the best bidder. However, the excessive transfer of a wide range of individuals to digital channels living in a 'virtual life', could damage their lives, resulting in compulsive behaviour in which the benefits associated with presence and interaction on the web can be transformed into self-isolation and therefore in behavioural disorders such as a pathological internet usage or in the internet addiction (Li and Chung, 2006; Young, 2017).

4.5 Ethical and privacy concern in online interactions

Privacy concern in the online digital world is the 'black sheep'. The digital world collects countless amounts of personal information through websites and consumer data, sometimes without their permission, thus increasing their concern about the treatment of their information (Choi et al., 2018). As a result, consumers themselves perceive spamming by proponents of aggressive direct marketing as unwanted attention (Ahmad et al., 2019). Many of them are increasingly afraid to use the web because they are uncertain of the use of their information. Silent technologies, such as cookies and sniffers, collect personal information while browsing and how they are managed, reinforces the belief that privacy is now non-existent and that everything is lawful in the world of e-marketing (Bhandari and Dhanawade, 2020; Matic and Vojvodic, 2014). Marketers should reassure consumers by spreading information and values their customers to prevent the abandonment of web technologies and the creation of cyber-ghost towns. Online consumers want to perceive a kind of control of their online experiences: thus, their satisfaction must also include part of the control of their activities, making them feel safe and masters of their movements, putting this power at the service of both parties (Farronato et al., 2020).

4.6 Online shopping customisation

Consumers could benefit from access to IT systems using standard profiled access platforms, (i.e., with personal access code) to obtain news and information about the company, statistical data and personalised reports concerning products or services (Bhandari and Dhanawade, 2020). From an order management perspective, users can view the products in the collections, using a simple 'point-and-click' technique to insert the desired products in their personal cart (Qin et al., 2019). In this way, generated data allow marketers to monitor the online behaviour, responses to new collections, the browsing degree (how and how much they 'browse'), preferred products, and abandonment rates, thereby allowing for segmentation analysis and even new opportunities offered by geolocation services (Kirmond, 2020).

4.7 Strategies for online products

Our analysis shows that there are no limits regarding the type of goods and services that could be placed on the online markets, only cultural barriers, following the differences between 'low-touch' and 'high-touch' products. Low-touch goods are standardised goods, with low emotional involvement in which purchasing decisions do not involve the touching or testing of them (Klatzky and Peck, 2011). Hence, online shopping could be convenient both for consumer shopping and for business revenue expectations. High-touch products represent a category of personal products (i.e., clothes, shoes, perfumes) for which consumers prefer direct contact with the item to make their choice (Lee et al., 1996). For high-touch products, additional senses intervene, often involving touch and smell, for which a digital placement shows its limits (González-Benito et al., 2015; Pino et al., 2019). Most online goods sold are attributable to three main categories:

- intangible assets, such as software (Chen et al., 2017), airline tickets (Bukhari et al., 2013), banks and insurance financial products (Pikkarainen et al., 2004; Riley et al., 2009)
- 2 repeated purchase goods, such as food or delivery services (Heng et al., 2018)
- 3 rare and scarcely available goods (Rohm and Swaminathan, 2004).

Additionally, purchasing choices are often influenced by shipping and transportation costs: online purchases are not considered convenient when the shipping cost greatly affects the total purchase price (Frischmann et al., 2012). Other relevant categories of online purchases are represented by those goods that create 'embarrassment' through the traditional shopping channels (Nichols et al., 2015), due to some taboo or personal psychological blocks (i.e., condoms) (Moore et al., 2008), or goods having larger dimension or weight characteristics, which stimulate the purchase by consumers far from large cities and shopping centres (Jiang et al., 2013). Sometimes, market conditions trigger greater online buying impulses (Dawson and Kim, 2009). In particular historical moments in which human interaction is reduced as in the COVID-19 health emergency (Bai et al., 2020), trends show disproportionate increases in online purchases of daily need products as well for groceries or food delivery services, increasing repeat purchase goods (i.e., food) and supporting the online shift of traditional activities (Aull et al., 2020). In this sense, e-commerce also 'preserves' daily consumption habits, supporting people in extremely complex situations.

4.8 Response time and customer service

In online contexts, time reference standards and consumer expectations change profoundly: response time must be linked to the expected performance of the technology used (Klein and Gilbert, 2019). The use of emails has accustomed consumers to receive messages in a short time (Qabbaah et al., 2019). This consequently translates into a generalised consumer expectation to receive a quick reply to an e-mail sent or required assistance. Frequently a company that has developed its own website and presence on the network, investing a considerable amount of resources, has not yet developed the operational mechanisms and business processes capable of managing this situation (Ye et al., 2019). Thus, consumers who do not receive a response in a short time could easily become dissatisfied consumers (defection), and the company's presence on the

web could be affected by a 'boomerang' effect (Calabrese and Zhang, 2019). Nonetheless, there are frequent spreads of chat boxes and virtual assistants that support traditional operators in dealing with the customer (Pantano and Pizzi, 2020).

4.9 Negative word-of-mouth monitoring

Digital and related social media marketing opportunities amplify the relevance of word-of-mouth (Fulgoni and Lipsman, 2015; Gruen et al., 2006; Ismagilova et al., 2020), but digital marketers should also be able to moderate negative effects deriving from online interactions. One of the most relevant aspects of digital technology is to offer consumers the opportunity to create discussion forums or social interactions on the web, which can collect negative testimonials on a very popular site regarding a product (Craciun and Moore, 2019). The presence of some negative experiences on a popular site could create a reverberation effect with very dangerous consequences for that product and for the entire brand. The challenge for companies is in the constant and attentive monitoring of this type of phenomena in order to take action aimed at containing the damage or preventing the occurrence of the damage as much as possible (He et al., 2019). Marketing efforts should be directed at monitoring negative online word-of-mouth deriving from unsatisfied consumers, either to prevent retentions and managing outages aimed at maintaining a good online reputation, strengthening leadership, organisational readiness and public relations management (Williams and Buttle, 2014). Additionally, companies should act on the best management of their brand reputation, especially in digital channels, leveraging on one hand the guarantee of security, and on the other hand on more emotional storytelling. A fundamental rule is not to give the impression of wanting to take advantage of the situation: many brands could seem 'opportunistic' with their communication campaigns, their corporate messages, their advertisements. Marketers and managers must try to understand the uncomfortable situation being experienced by consumers, trying to get closer to them, not by using humorous tones, but rather by expressing their social role. As demonstrated by the crises previously faced, the companies that maintained a constant dialogue in these phases with their consumers were then the first to start again, with increases in terms of market share and loyalty (Abimbola et al., 2010; Balmer and Greyser, 2009). Communicating the business presence to the consumers, even through non-traditional channels such as online and in difficult situations - such as in the recent pandemic emergency - is a positive message to convey, which can help to increase brand perceptions.

5 General discussions and conclusions

Effective digital strategies should involve a deep understanding of a more complex and competitive environment in which challenges increase everyday due to continuous interactive and online behaviour, involving many different forms of digital presence. Indeed in the e-trade scenario the continuous convergence of online and offline channel according the omnichannel paradigm is increasing urgent (Amatulli et al., 2021). The internet is the 'network of networks', as a set of computer systems scattered all over the world and connected to each other, which can be accessed by thousands of users to exchange binary information of various types, enabling a virtual life based on the online channel provided by digital technologies. Such transformation expands internet

opportunities as part of them, together with new emerging technologies, providing online tools, platforms and systems. The ease of access is extremely simple, and for the consumers, it embodies a sense of maximum power and freedom to search for information and move his/her life online, as a sort of a virtual alter-ego. Digital transformation promotes freedom: Everyone can say what he or she wants, without any censorship, and no regime can block thought. Online users can manage everything, from reservations to purchases, without moving from home, without queuing, limiting any waste of time, which, in a society where time is increasingly precious, is a priceless achievement. Technology has evolved by removing filters and brakes on publication. Importantly, in digital marketing activities, the entire executive committee of a company must be involved. In an era of constant change, a proactive and adaptable culture is an important corporate asset and chief information officers (CIOs) play a central role together with marketers and managers in establishing the right mindset and practices to be adopted (Pigni et al., 2002). The creation of economic value has shifted over the last few decades, from individual contributions of individual companies and corporate roles to the co-creation of value in complex service ecosystems (Skålén et al., 2015). The interactions are not circumscribed among the figures directly involved in the management of platforms and online tools (managers, marketers, CIOs). Indeed, considering the topics that emerged from our literature review, further efforts in practical terms must be oriented towards the paradigm of co-creation, allowing companies and their consumers to create value through mutual interaction in a joint, collaborative, concurrent, peer-like process of producing new value (Galvagno and Dalli, 2014). In this scenario, digital technologies might become a fundamental activating factor providing instruments able to sustain co-creating value processes: The new value propositions must be evaluated from the point of view of creating consumer value, by recognising their centrality and their evergrowing new roles and behaviours as emerging from the provided insight. Moreover, the current world is information-intensive, and therefore the ability to generate, manage and spread knowledge deriving from collected information is the real discriminant. The information has become the commodity 'par excellence' which allows systems to support accumulation processes: consumers, directly and indirectly, determine the production, establish the success and vitality of the online communities that brings thousands of people around a certain topic or interests, thus inspiring marketers actions. Digital technologies may be useful in guiding and increasing knowledge management, making it useful to transform it into appropriate strategic decisions. Classifying the emerging opportunities and problems according to the activities suggested by the RACE framework (and its consumer-centric orientation), allowed for the correlation of them to strategies generally adopted by digital marketers in order to shed light on elements that are probably not always considered. Thus, new strategic management and marketing trends emerge, which will be increasingly important in the future, letting companies concentrate more and more on online experiences. Additionally, companies will be increasingly interested in encouraging the creation of new knowledge, through communication, exchange, and integration of skills. Companies can choose to approach these new phenomena, reading, understanding, and interpreting them, thus researching, and identifying new advantages and opportunities to adapt the organisation to a model that can fully exploit these phenomena. The provided insights suggest considering further

variables in traditional digital marketing strategies and activities to be implemented. For instance, knowledge about consumers could be increased by an attentive data analysis aimed to sage their online behaviour in order to provide hyper-customised product in the online world too. However, as for the collected data increase, marketers and managers could not act without consider the increasing ethical and privacy concerns' in online interaction, despite consumers seems to be more proness in accepting the sharing of personal data and privacy concerns being less voiced than in the past, because aware that this is a prerogative to access modern services (e.g., in Gutierrez et al., 2019). Interestingly, about personalisation, our research could lead future marketing research and practice by suggesting how the online contents could be more receptive in proposing and trading some products difficult to place in traditional offline markets, as for the embarrassing products (Dahl et al., 2001) that could not be mitigated by more-anonymous packaging (e.g., for condoms, some acne cream, hemorrhoid cream, and lice shampoo). Finally, the online presence transition allows – due to the technology usefulness - a constant monitoring of online negative word-of-mouth, (e.g., on social media) through penetrating social media marketing activities, (e.g., Yan et al., 2016), and improved customer services activities thank to technological advances in terms of artificial intelligence for shopping, (e.g., Nagy and Hajdú, 2021; Sestino and De Mauro, 2021), chat-bot, (e.g., De Cosmo et al., 2021), or through the pervasive introduction of smart object in reducing the gap between the online and offline world (e.g., Sestino et al., 2020; Verhoef et al., 2015).

Marketers and manager could consider our increased knowledge about the RACE framework, to discover new possible strategies to be undertaken. Indeed, we also contribute to digital marketing, e-trade commerce, and online consumer behaviour literature by shedding light on new promising topics that could led future research. Future marketing and management strategies based on digital-made knowledge should be focused on usability, accessibility, sustainability, and responsibility, considering quality content, maximum subsidiarity, evaluations, and alliances designed for consumers in strengthening online digital relationships.

References

- Abimbola, T., Lim, M., Raithel, S., Wilczynski, P., Schloderer, M.P. and Schwaiger, M. (2010) 'The value-relevance of corporate reputation during the financial crisis', *Journal of Product* and Brand Management, Vol. 19, No. 6, pp.389–400.
- Ahmad, W., Attiq, S., Ahmad, A., Ilyas, A. and Kulsoom, K. (2019) 'Investigating the impact of consumer's involvement, risk-taking personality, internet self-efficacy, life style and privacy concern on online purchase intention and shopping adoption', *Pakistan Business Review*, Vol. 20, No. 3, pp.582–599.
- Ahmed, B.S., Maati, M.L. and Mohajir, B.A. (2014) 'The intelligence of E-CRM applications and approaches on online shopping industry', *International Journal of Innovation and Scientific Research*, Vol. 12, pp.213–216.
- Ahuja, M., Gupta, B. and Raman, P. (2003) 'An empirical investigation of online consumer purchasing behavior', *Communications of the ACM*, Vol. 46, No. 12, pp.145–151.
- Ahuja, V. and Medury, Y. (2010) 'Corporate blogs as e-CRM tools building consumer engagement through content management', *Journal of Database Marketing and Customer Strategy Management*, Vol. 17, No. 2, pp.91–105.
- Almeida, F.L. (2017)' Concept and dimensions of Web 4.0', *International Journal of Computers* and Technology, Vol. 16, No. 7, pp.7040–7046.
- Aull, B., Kuijpers, D., Sawaya, A. and Vallöf, R. (2020) What Food Retailers Should do During the Coronavirus Crisis, McKinsey Report [online] https://www.mckinsey.com/industries/retail/ our-insights/what-food-retailers-should-do-during-the-coronavirus-crisis (accessed 15 April 2020).

- Bai, Y., Yao, L., Wei, T., Tian, F., Jin, D.Y., Chen, L. and Wang, M. (2020) 'Presumed asymptomatic carrier transmission of COVID-19', *Jama*, Vol. 323, No. 14, pp.1406–1407, https://dx.doi.org/10.1001/jama.2020.2565
- Balabanis, G. and Chatzopoulou, E. (2019) 'Under the influence of a blogger: the role of information-seeking goals and issue involvement', *Psychology and Marketing*, Vol. 36, No. 4, pp.342–353, https://doi.org/10.1002/mar.21182.
- Balmer, J.M. and Greyser, S.A. (2009) 'Corporate brand reputation and brand crisis management', *Management Decision*, Vol. 47, No. 4, pp.590–602.
- Barman, B. (2020) 'Changing the ways the libraries reach to the user: RSS and its applications in libraries with special reference to feedburner', *Library Philosophy and Practice*, pp.1–11.
- Barton, L. and Kang, J. (2005) 'The role of online browsing and prior knowledge on pre-purchase search and purchase behavior', *Advances in Consumer Research*, Vol. 32, No. 1.
- Bell, M.W. (2008) 'Toward a definition of 'virtual worlds'', *Journal for Virtual Worlds Research*, Vol. 1, No. 1, pp.1–5.
- Bhandari, J. and Dhanawade, S. (2020) 'Influence of perceived risk and trust on online shopping behavior', *Our Heritage*, Vol. 68, No. 65, pp.284–291.
- Bickart, B. and Schindler, R.M. (2001) 'Internet forums as influential sources of consumer information', *Journal of Interactive Marketing*, Vol. 15, No. 3, pp.31–40.
- Broilo, P.L., Espartel, L.B. and Basso, K. (2016) 'Pre-purchase information search: too many sources to choose', *Journal of Research in Interactive marketing*, Vol. 10, No. 3, pp.193–211.
- Brooksbank, R., Fullerton, S. and Miller, S. (2019) 'Technology-based marketing strategies through the consumer lens: how might perceptions of ethicality and effectiveness interrelate?', *International Journal of Technology Marketing*, Vol. 13, Nos. 3–4, pp.428–451.
- Brown, J., Broderick, A.J. and Lee, N. (2007) 'Word of mouth communication within online communities: conceptualizing the online social network', *Journal of Interactive Marketing*, Vol. 21, No. 3, pp.2–20.
- Bukhari, S.M.F., Ghoneim, A., Dennis, C. and Jamjoom, B. (2013) 'The antecedents of travellers'e-satisfaction and intention to buy airline tickets online: a conceptual model', *Journal of Enterprise Information Management*, Vol. 26, No. 6, pp.624–641.
- Büyüközkan, G. and Göçer, F. (2018) 'Digital supply chain: literature review and a proposed framework for future research', *Computers in Industry*, Vol. 97, pp.157–177.
- Calabrese, C. and Zhang, J. (2019) 'Inferring norms from numbers: boomerang effects of online virality metrics on normative perceptions and behavioral intention', *Telematics and Informatics*, Vol. 45, p.101279.
- Chaffey, D. and Ellis-Chadwick, F. (2019) Digital Marketing, Pearson, London.
- Chaffey, D. and Patron, M. (2012) 'From web analytics to digital marketing optimization: increasing the commercial value of digital analytics', *Journal of Direct, Data and Digital Marketing Practice*, Vol. 14, No. 1, pp.30–45.
- Chaffey, D. and Smith, P.R. (2013) *eMarketing Excellence: Planning and Optimizing your Digital Marketing*, Routledge, London.
- Chen, H., Duan, W. and Zhou, W. (2017) 'The interplay between free sampling and word of mouth in the online software market', *Decision Support Systems*, Vol. 95, pp.82–90.
- Chen, J., Wang, H. and Gao, W. (2019) 'How do goal and product knowledge specificity influence online channel choice? A polynomial regression analysis', *Electronic Commerce Research and Applications*, Vol. 35, 100846.
- Chen, M.Y. and Chen, T.H. (2019) 'Modeling public mood and emotion: blog and news sentiment and socio-economic phenomena', *Future Generation Computer Systems*, Vol. 96, Nos. 692–699.
- Chen, P., Song, J., Zhao, M. and Song, L. (2018a) 'Building discipline knowledge repository based on Wiki technology', in 2018 9th International Conference on Information Technology in Medicine and Education. IEEE, pp. 407–410.

- Chen, Y., Farzan, R., Kraut, R., Zhang, A.F. and YeckehZaare, I. (2018b) *Motivating Contributions* to *Public Information Goods: A Personalized Field Experiment at Wikipedia* [online] https://economics.indiana.edu/documents/motivating-contributions-to-public-Informationgoods-a-personalized-field-experiment-on-wikipedia.pdf (accessed 12 March 2020).
- Chesbrough, H. (2007) 'Business model innovation: it's not just about technology anymore', *Strategy and Leadership*, Vol. 35, No. 6, pp.12–17.
- Choi, H., Park, J. and Jung, Y. (2018) 'The role of privacy fatigue in online privacy behavior', *Computers in Human Behavior*, Vol. 81, pp.42–51.
- Colton, D.A. (2018) 'Antecedents of consumer attitudes' toward corporate blogs', Journal of Research in Interactive Marketing, Vol. 12 No. 2, pp.94–104, https://dx.doi.org/10.1108/ JRIM-08-2017-0075.
- Constantinides, E. (2006) 'The marketing mix revisited: towards the 21st century marketing', Journal of Marketing Management, Vol. 22, Nos. 3-4, pp.407-438.
- Craciun, G. and Moore, K. (2019) 'Credibility of negative online product reviews: reviewer gender, reputation and emotion effects', *Computers in Human Behavior*, Vol. 97, pp.104–115.
- Dahl, D.W., Manchanda, R.V. and Argo, J.J. (2001) 'Embarrassment in consumer purchase: the roles of social presence and purchase familiarity', *Journal of Consumer Research*, Vol. 28, No. 3, pp.473–481.
- Dai, B. (2007) The Impact of Online Shopping Experience on Risk Perceptions and Online Purchase Intentions: The Moderating Role of Product Category and Gender, Doctoral dissertation.
- Dai, H. and Salam, A.F. (2019) 'An empirical assessment of service quality, service consumption experience and relational exchange in electronic mediated environment (EME)', *Information Systems Frontiers*, pp.1–20.
- Davis, J., Wolff, H.G., Forret, M.L. and Sullivan, S.E. (2020) 'Networking via LinkedIn: an examination of usage and career benefits', *Journal of Vocational Behavior*, Vol. 118, p.103396.
- Dawson, S. and Kim, M. (2009) 'External and internal trigger cues of impulse buying online', Direct Marketing: An International Journal, Vol. 3, No. 1, pp.20–34.
- De Cosmo, L.M., Piper, L. and Di Vittorio, A. (2021) 'The role of attitude toward chatbots and privacy concern on the relationship between attitude toward mobile advertising and behavioral intent to use chatbots', *Italian Journal of Marketing*, pp.1–20.
- Delen, D. and Crossland, M.D. (2008) 'Seeding the survey and analysis of research literature with text mining', *Expert Systems with Applications*, Vol. 34, No. 3, pp.1707–1720.
- Erevelles, S., Fukawa, N. and Swayne, L. (2016) 'Big data consumer analytics and the transformation of marketing', *Journal of Business Research*, Vol. 69, No. 2, pp.897–904.
- Éthier, J., Hadaya, P., Talbot, J. and Cadieux, J. (2006) 'B2C web site quality and emotions during online shopping episodes: an empirical study', *Information and Management*, Vol. 43, No. 5, pp.627–639.
- Farronato, C., Fradkin, A., Larsen, B. and Brynjolfsson, E. (2020) Consumer Protection in an Online World: An Analysis of Occupational Licensing, National Bureau of Economic Research.
- Friedmann, D. (2019) 'Correcting information asymmetry via deep consumer information; compelling companies to let the sunshine', in Mathis, K. and Tor, A. (Eds.): *Consumer Law and Economics*, Springer, New York.
- Frischmann, T., Hinz, O. and Skiera, B. (2012) 'Retailers' use of shipping cost strategies: free shipping or partitioned prices?', *International Journal of Electronic Commerce*, Vol. 16, No. 3, pp.65–88.
- Fu, H., Manogaran, G., Wu, K., Cao, M., Jiang, S. and Yang, A. (2020) 'Intelligent decisionmaking of online shopping behavior based on internet of things', *International Journal of Information Management*, Vol. 50, pp.515–525.

- Fulgoni, G.M. and Lipsman, A. (2015) 'Digital word of mouth and its offline amplification: a holistic approach to leveraging and amplifying all forms of WOM', *Journal of Advertising Research*, Vol. 55, No. 1, pp.18–21.
- Galvagno, M. and Dalli, D. (2014) 'Theory of value co-creation: a systematic literature review', *Managing Service Quality*, Vol. 24, No. 6, pp.643–683.
- Girchenko, T. and Ovsiannikova, Y. (2016) 'Digital marketing and its role in the modern business processes', *European Cooperation*, Vol. 11, No. 18, pp.24–33.
- González-Benito, Ó., Martos-Partal, M. and San Martín, S. (2015) 'Brands as substitutes for the need for touch in online shopping', *Journal of Retailing and Consumer Services*, Vol. 27, pp.121–125.
- Grant, R., Clarke, R.J. and Kyriazis, E. (2007) 'A review of factors affecting online consumer search behaviour from an information value perspective', *Journal of Marketing Management*, Vol. 23, Nos. 5–6, pp.519–533.
- Gretzel, U., Fesenmaier, D.R. and O'leary, J.T. (2006) 'The transformation of consumer behaviour', *Tourism Business Frontiers: Consumers, Products and Industry*, Vol. 9, p.18.
- Gruen, T.W., Osmonbekov, T. and Czaplewski, A.J. (2006) 'eWOM: the impact of customer-to-customer online know-how exchange on customer value and loyalty', *Journal of Business Research*, Vol. 59, No. 4, pp.449–456.
- Guido, G., Amatulli, C. and Sestino, A. (2020) 'Elderly consumers and financial choices: a systematic review', *Journal of Financial Services Marketing*, pp.1–10.
- Gursoy, D. (2019) 'A critical review of determinants of information search behavior and utilization of online reviews in decision making process', *International Journal of Hospitality Management*, Vol. 76, pp.53–60.
- Ha, H.Y. (2002) 'The effects of consumer risk perception on pre-purchase information in online auctions: brand, word-of-mouth, and customized information', *Journal of Computer-Mediated Communication*, Vol. 8, No. 1, JCMC813.
- Hallem, Y., Ben Arfi, W. and Teulon, F. (2019) 'Exploring consumer attitudes to online collaborative consumption: a typology of collaborative consumer profiles', *Canadian Journal* of Administrative Sciences/Revue Canadienne des Sciences de l'Administration, Vol. 37, No. 1, pp.82–94.
- Haridasan, A.C. and Fernando, A.G. (2018) Online or in-store: Unravelling consumer's channel choice motives. *Journal of Research in Interactive Marketing*, Vol. 12 No. 2, pp. 1–16.
- Hazari, S., North, A. and Moreland, D. (2019) 'Investigating pedagogical value of wiki technology', *Journal of Information Systems Education*, Vol. 20, No. 2, p.8.
- He, Y., Ju, I., Chen, Q., Alden, D.L., Zhu, H. and Xi, K. (2019) 'Managing negative word-of-mouth: the interplay between locus of causality and social presence', *Journal of Services Marketing*, Vol. 34, No. 2, pp.137–148.
- Heng, Y., Gao, Z., Jiang, Y. and Chen, X. (2018) 'Exploring hidden factors behind online food shopping from Amazon reviews: a topic mining approach', *Journal of Retailing and Consumer Services*, Vol. 42, pp.161–168.
- Huang, H., Shen, H., Meng, Z., Chang, H. and He, H (2019) 'Community-based influence maximization for viral marketing', *Applied Intelligence*, Vol. 49, No. 6, pp.2137–2150.
- Hunt, S.D. and Madhavaram, S. (2019) 'Adaptive marketing capabilities, dynamic capabilities, and renewal competences: the 'outside vs. inside' and 'static vs. dynamic' controversies in strategy', *Industrial Marketing Management*, Vol. 89, No. 1, pp.129–136.
- Hussain, S.A. and Abbas, S. (2018) 'What works in blog marketing? Firm created, or user generated in 2.0 Web: evidence from a developing country', *Journal of Business Strategies*, Vol. 12, No. 2, p.145.
- Islam, J.U., Rahman, Z. and Hollebeek, L.D. (2017) 'Personality factors as predictors of online consumer engagement: an empirical investigation', *Marketing Intelligence and Planning*, Vol. 35, No. 4, pp.510–528.

- Ismagilova, E., Dwivedi, Y.K. and Slade, E. (2020) 'Perceived helpfulness of eWOM: emotions, fairness and rationality', *Journal of Retailing and Consumer Services*, Vol. 53, p.101748.
- Ivanov, D., Dolgui, A. and Sokolov, B. (2019) 'The impact of digital technology and Industry 4.0 on the ripple effect and supply chain risk analytics', *International Journal of Production Research*, Vol. 57, No. 3, pp.829–846.
- Izogo, E.E. and Jayawardhena, C. (2018) 'Online shopping experience in an emerging e-retailing market', *Journal of Research in Interactive Marketing*, Vol. 12, No. 2, pp.193–214.
- Jackson, G. and Ahuja, V. (2016) 'Dawn of the digital age and the evolution of the marketing mix', *Journal of Direct, Data and Digital Marketing Practice*, Vol. 17, No. 3, pp.170–186.
- James, J.P., Lee, K.K., Zhang, M. and Williams, J.D. (2017) 'Ethics and policy issues for internet advertising: targeting multicultural consumers in the digital marketing era', *Journal of Management Policy and Practice*, Vol. 18, No. 4, pp.93–106.
- Jiang, L.A., Yang, Z. and Jun, M. (2013) 'Measuring consumer perceptions of online shopping convenience', *Journal of Service Management*, Vol. 24, No. 2, pp.191–214.
- Jiang, Y., Li, Z. and Cutter, S.L. (2019) 'Social network, activity space, sentiment, and evacuation: what can social media tell us?', *Annals of the American Association of Geographers*, Vol. 109, No. 6, pp.1795–1810.
- Kamboj, S., Yadav, M. and Rahman, Z. (2018) 'Impact of social media and customer-centric technology on performance outcomes: the mediating role of social CRM capabilities', *International Journal of Electronic Marketing and Retailing*, Vol. 9, No. 2, pp.109–125.
- Kerr, G., Mortimer, K., Dickinson, S. and Waller, D.S. (2012) 'Buy, boycott or blog: exploring online consumer power to share, discuss and distribute controversial advertising messages', *European Journal of Marketing*, Vol. 46, Nos. 3–4, pp.387–405.
- Khalifa, M. and Liu, V. (2007) 'Online consumer retention: contingent effects of online shopping habit and online shopping experience', *European Journal of Information Systems*, Vol. 16, No. 6, pp.780–792.
- Kim, R.B., Matsui, T., Park, Y.J. and Okutani, T. (2019) 'Perceived consumer value of omni-channel service attributes in Japan and Korea', *Engineering Economics*, Vol. 30, No. 5, pp.621–630.
- Kirmond, L. (2020) 'Localization strategy for business-to-business digital marketing with a focus on industrial metrology', *in Digital and Social Media Marketing*, pp.293–297, Springer, Cham.
- Klatzky, R.L. and Peck, J. (2011) 'Please touch: object properties that invite touch', *IEEE Transactions on Haptics*, Vol. 5, No. 2, pp.139–147.
- Klein, R. and Gilbert, M.E. (2019) U.S. Patent No. 10,200,536, U.S. Patent and Trademark Office, Washington, DC.
- Koo, D.M. and Ju, S.H. (2010) 'The interactional effects of atmospherics and perceptual curiosity on emotions and online shopping intention', *Computers in Human Behavior*, Vol. 26, No. 3, pp.377–388.
- Kotler, P., Kartajaya, H. and Setiawan, I. (2016) *Marketing 4.0: Moving from Traditional to Digital*, John Wiley and Sons, Somerset.
- Kumar, N. and Siddharthan, N.S. (2013) *Technology, Market Structure and Internationalization: Issues and Policies for Developing Countries*, Routledge, New Jersey.
- Lee, M.W., Yun, M.H. and Lee, J.S. (1996) 'High touch: human factors in new product design. in proceedings of the human factors and ergonomics', *Society Annual Meeting*, SAGE Publications, Los Angeles, pp.401–405.
- Leeflang, P.S., Verhoef, P.C., Dahlström, P. and Freundt, T. (2014) 'Challenges and solutions for marketing in a digital era', *European Management Journal*, Vol. 32, No. 1, pp.1–12.
- Li, S.M. and Chung, T.M. (2006) 'Internet function and Internet addictive behavior', *Computers in Human Behavior*, Vol. 22, No. 6, pp.1067–1071.

- Ma, J. and Du, B. (2018) 'Digital advertising and company value: implications of reallocating advertising expenditures', *Journal of Advertising Research*, Vol. 58, No. 3, pp.326–337.
- Mani, Z. and Chouk, I. (2018) 'Consumer resistance to innovation in services: challenges and barriers in the internet of things era', *Journal of Product Innovation Management*, Vol. 35, No. 5, pp.780–807.s
- Matic, M. and Vojvodic, K. (2014) 'Customer-perceived insecurity of online shopping environment', *International Review of Management and Marketing*, Vol. 4, No. 1, pp.59–65.
- Mohapatra, S. and Sahu, K.C. (2018) 'Empirical research on the adoption and diffusion of e-commerce portals', *International Journal of Business Innovation and Research*, Vol. 15, No. 2, pp.137–151.
- Moore, S.G., Dahl, D.W., Gorn, G.J., Weinberg, C.B., Park, J. and Jiang, Y. (2008) 'Condom embarrassment: coping and consequences for condom use in three countries', *AIDS Care*, Vol. 20, No. 5, pp.553–559.
- Mukundan, C.R., Kamarajan, C. and Ajayan, P. (2019) 'Mind in the brain-creation of the greatest virtual world', *Journal of Psychology and Clinical Psychiatry*, Vol. 10, No. 2, pp.83–90.
- Mulhern, F. (2009) 'Integrated marketing communications: from media channels to digital connectivity', *Journal of Marketing Communications*, Vol. 15, Nos. 2–3, pp.85–101.
- Müller, J.M., Pommeranz, B., Weisser, J. and Voigt, K.I. (2018) 'Digital, social media, and mobile marketing in industrial buying: still in need of customer segmentation? Empirical evidence from Poland and Germany', *Industrial Marketing Management*, Vol. 73, pp.70–83.
- Nagy, S. and Hajdú, N. (2021) 'Consumer acceptance of the use of artificial intelligence in online shopping: evidence from Hungary', *Amfiteatru Economic*, Vol. 23, No. 56, pp.1–12.
- Nguyen, B. and Simkin, L. (2017) 'The internet of things (IoT) and marketing: the state of play, future trends and the implications for marketing', *Journal of Marketing Management*, Vol. 33, Nos. 1–2, pp.1–6.
- Nichols, B.S., Raska, D. and Flint, D.J. (2015) 'Effects of consumer embarrassment on shopping basket size and value: a study of the millennial consumer', *Journal of Consumer Behaviour*, Vol. 14, No. 1, pp.41–56, https://doi.org/10.1002/cb.1500.
- Pantano, E. and Pizzi, G. (2020) 'Forecasting artificial intelligence on online customer assistance: evidence from chatbot patents analysis', *Journal of Retailing and Consumer Services*, Vol. 55, p.102096.
- Pantano, E., Priporas, C.V. and Migliano, G. (2019) 'Reshaping traditional marketing mix to include social media participation', *European Business Review*, Vol. 31, No. 2, pp.162–178.
- Parsons, A.L. and Lepkowska-White, E. (2018) 'Social media marketing management: a conceptual framework', *Journal of Internet Commerce*, Vol. 17, No. 2, pp.81–95.
- Peterson, R.A. and Merino, M.C. (2003) 'Consumer information search behavior and the internet', *Psychology and Marketing*, Vol. 20, No. 2, pp.99–121.
- Petit, O., Velasco, C. and Spence, C. (2019) 'Digital sensory marketing: integrating new technologies into multisensory online experiences', *Journal of Interactive Marketing*, Vol. 45, pp.42–61.
- Petre, M., Minocha, S. and Roberts, D. (2006) 'Usability beyond the website: an empirically-grounded e-commerce evaluation instrument for the total customer experience', *Behaviour and Information Technology*, Vol. 25, No. 2, pp.189–203.
- Petrescu, M. and Lauer, B. (2017) 'Qualitative marketing research: the state of journal publications', *Qualitative Report*, Vol. 22, No. 9, pp.2248–2287.
- Pigni, F., Ravarini, A., Tagliavini, M., Moro, J. and Guimaraes, T. (2002) 'Using ICT to improve SMEs performance: does the CIO matter?', in *Proceedings of SCI 2002 Conference*.
- Pihir, I., Tomičić-Pupek, K. and Furjan, M.T. (2018) 'Digital transformation insights and trends', in Central European Conference on Information and Intelligent Systems, Faculty of Organization and Informatics Varazdin, pp.141–149.

- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahnila, S. (2004) 'Consumer acceptance of online banking: an extension of the technology acceptance model', *Internet Research*, Vol. 14, No. 3, pp.224–235.
- Pino, G., Amatulli, C., Nataraajan, R., De Angelis, M., Peluso, A.M. and Guido, G. (2019) 'Product touch in the real and digital world: how do consumers react?', *Journal of Business Research*, in press.
- Pitt, L. and Kietzmann, J. (2019) 'Emerging technologies and value creation in business and industrial marketing', *Journal of Business and Industrial Marketing*, Vol. 34, No. 7, pp.1401–1402.
- Qabbaah, H., Sammour, G., Vanhoof, K., Voronin, A., Ziatdinov, Y., Aslanyan, L. and Eremeev, A.P. (2019) 'Decision tree analysis to improve e-mail marketing campaigns', *International Journal of Information Theories and Applications*, Vol. 26, No. 4, pp.3–36.
- Qin, Z., Zhao, L. and Ni, Y. (2019) 'The influencing factors on consumers' purchase intention under the cross-border e-commerce platforms', in *Proceedings of the 19th International Conference on Electronic Business*, ICEB, Newcastle upon Tyne, UK, 8–12 December, pp.443–455.
- Ramkumar, B. and Jin, B.E. (2019) 'Examining pre-purchase intention and post-purchase consequences of international online outshopping (IOO), the moderating effect of e-tailer's country image', *Journal of Retailing and Consumer Services*, Vol. 49, pp.186–197.
- Reisman, R., Payne, A. and Frow, P. (2019) 'Pricing in consumer digital markets: a dynamic framework', *Australasian Marketing Journal*, Vol. 27, No. 3, pp.139–148.
- Riley, F.D.O., Scarpi, D. and Manaresi, A. (2009) 'Purchasing services online: a two-country generalization of possible influences', *Journal of Services Marketing*, Vol. 23, No. 2, pp.93–104.
- Rohm, A.J. and Swaminathan, V. (2004) A typology of online shoppers based on shopping motivations. *Journal of Business Research*, Vol. 57, No. 7, pp.748–757.
- Santoro, G., Vrontis, D., Thrassou, A. and Dezi, L. (2018) 'The internet of things: building a knowledge management system for open innovation and knowledge management capacity', *Technological Forecasting and Social Change*, Vol. 136, pp.347–354.
- Schmid, B. and Axhausen, K.W. (2019) 'In-store or online shopping of search and experience goods: a hybrid choice approach', *Journal of Choice Modelling*, Vol. 31, pp.156–180.
- Schmitt, B. and Zarantonello, L. (2013) 'Consumer experience and experiential marketing: a critical review', in Malhotra, N.K. (Ed.): *Review of Marketing Research*, Vol. 10, pp.25–61, Emerald Group Publishing Limited, Bingley.
- Sestino, A. and De Mauro, A. (2021) 'Leveraging artificial intelligence in business: implications, applications and methods', *Technology Analysis and Strategic Management*, pp.1–14.
- Sestino, A., Prete, M.I., Piper, L. and Guido, G. (2020) 'Internet of things and big data as enablers for business digitalization strategies', *Technovation*, p.102173.
- Shareef, M.A., Mukerji, B., Dwivedi, Y.K., Rana, N.P. and Islam, R. (2019) 'Social media marketing: comparative effect of advertisement sources', *Journal of Retailing and Consumer Services*, Vol. 46, pp.58–69.
- Skålén, P., Gummerus, J., Von Koskull, C. and Magnusson, P.R. (2015) 'Exploring value propositions and service innovation: a service-dominant logic study', *Journal of the Academy* of Marketing Science, Vol. 43, No. 2, pp.137–158.
- Song, S. and Yoo, M. (2016) 'The role of social media during the pre-purchasing stage', *Journal of Hospitality and Tourism Technology*, Vol. 7, No. 1, pp.84–99.
- Spottke, B., Eck, A. and Wulf, J. (2016) 'A socio-technical approach to study consumer-centric Information Systems', *ICIS*, pp.1–12.
- Taeuscher, K. (2019) 'Reputation and new venture performance in online markets: the moderating role of market crowding', *Journal of Business Venturing*, Vol. 34, No. 6, p.105944.
- Taylor, A. (2010) 'The next generation: technology adoption and integration through internal competition in new product development', *Organization Science*, Vol. 21, No. 1, pp.23–41.

- Taylor, M., Reilly, D., and Wren, C. (2018) 'Internet of things support for marketing activities', *Journal of Strategic Marketing*, Vol. 28, No. 2, pp.149–160.
- Thakur, R., and AlSaleh, D. (2018) 'A comparative study of corporate user-generated media behavior: cross-cultural B2B context', *Industrial Marketing Management*, Vol. 73, pp.125–136.
- Todri, V., Ghose, A. and Singh, P.V. (2019) 'Trade-offs in online advertising: advertising effectiveness and annoyance dynamics across the purchase funnel', *Information Systems Research*, Vol. 31, No. 1, pp.102–125.
- Tranfield, D., Denyer, D. and Smart, P. (2003) 'Towards a methodology for developing evidence-informed management knowledge by means of systematic review', *British Journal of Management*, Vol. 14, No. 3, pp.207–222.
- Tsai, M.L. and Chen, Y.Y. (2018) 'A novel group ownership proof and transfer scheme for B2B, B2C and C2C transactions', *International Journal of Ad Hoc and Ubiquitous Computing*, Vol. 29, Nos. 1–2, pp.28–40.
- Tsalgatidou, A. and Pitoura, E. (2001) 'Business models and transactions in mobile electronic commerce: requirements and properties', *Computer Networks*, Vol. 37, No. 2, pp.221–236.
- Urban, G. (2003) Digital Marketing Strategy: Text and Cases, Prentice-Hall, Inc., New York.
- Valaei, N., Rezaei, S., Ismail, W.K.W. and Oh, Y.M. (2016) 'The effect of culture on attitude towards online advertising and online brands: applying Hofstede's cultural factors to internet marketing', *International Journal of Internet Marketing and Advertising*, Vol. 10, No. 4, pp.270–301.
- Van Esch, P., Arli, D., Castner, J., Talukdar, N. and Northey, G. (2018) 'Consumer attitudes towards bloggers and paid blog advertisements: what's new?', *Marketing Intelligence and Planning*, Vol. 36, No. 7, pp.778–738.
- Verhoef, P.C., Kannan, P.K. and Inman, J.J. (2015) 'From multi-channel retailing to omni-channel retailing: introduction to the special issue on multi-channel retailing', *Journal of Retailing*, Vol. 91, No. 2, pp.174–181.
- Vila, T.D. and González, E.A. (2020) 'CRM as a key element in online commercialization: analysis of tourism search and metasearch engines', in *Advances in Tourism, Technology and Smart Systems*, pp.173–188, Springer, Singapore.
- Wan, Y., Ma, B. and Pan, Y. (2018) 'Opinion evolution of online consumer reviews in the e-commerce environment', *Electronic Commerce Research*, Vol. 18, No. 2, pp.291–311.
- Waterloo, S.F., Baumgartner, S.E., Peter, J. and Valkenburg, P.M. (2018) 'Norms of online expressions of emotion: comparing Facebook, Twitter, Instagram, and WhatsApp', New Media and Society, Vol. 20, No. 5, pp.1813–1831.
- Weisberg, J., Te'eni, D. and Arman, L. (2011) 'Past purchase and intention to purchase in e-commerce', *Internet Research*, Vol. 21, No. 2, pp.82–96.
- Williams, M. and Buttle, F. (2014) 'Managing negative word-of-mouth: an exploratory study', Journal of Marketing Management, Vol. 30, Nos. 13–14, pp.1423–1447.
- Windham, L., Samsei, J. and Orton, K.L. (1999) *Dead Aheah: The Web Dilemma and the News Rules of Business*, Allworth Press, New York.
- Wong, A. (2006) U.S. Patent Application No. 11/260,776.
- Woodside, A.G. and Bernal Mir, P. (2019) 'Clicks and purchase effects of an embedded, social media, platform endorsement in internet advertising', *Journal of Global Scholars of Marketing Science*, Vol. 29, No. 3, pp.343–357.
- Xu, Z., Frankwick, G.L. and Ramirez, E. (2016) 'Effects of big data analytics and traditional marketing analytics on new product success: a knowledge fusion perspective', *Journal of Business Research*, Vol. 69, No. 5, pp.1562–1566.
- Yan, Q., Wu, S., Wang, L., Wu, P., Chen, H. and Wei, G. (2016) 'E-WOM from e-commerce websites and social media: which will consumers adopt?', *Electronic Commerce Research and Applications*, Vol. 17, pp.62–73.

- Ye, S., Ying, T., Zhou, L. and Wang, T. (2019) 'Enhancing customer trust in peer-to-peer accommodation: a 'soft' strategy via social presence', *International Journal of Hospitality Management*, Vol. 79, pp.1–10.
- Yoo, J. and Park, M. (2016) 'The effects of e-mass customization on consumer perceived value, satisfaction, and loyalty toward luxury brands', *Journal of Business Research*, Vol. 69, No. 12, pp.5775–5784.
- Young, K. (2017) 'The evolution of internet addiction disorder', in Montag, C. and Reuter, M. (Eds.): Internet Addiction. Studies in Neuroscience, Psychology and Behavioral Economics. Springer, Cham.
- Zhang, T.W, Li, W.P., Wang, L. and Yang, J. (2019) 'Social recommendation algorithm based on stochastic gradient matrix decomposition in social network', *Journal of Ambient Intelligence* and Humanized Computing, Vol. 11, No. 2, pp.1–8.
- Zhou, Q., Xu, Z. and Yen, N.Y. (2019) 'User sentiment analysis based on social network information and its application in consumer reconstruction intention', Computers in Human Behavior, Vol. 100, pp.177–183.
- Zhu, G. and Gao, X. (2019) 'Precision retail marketing strategy based on digital marketing model', *Science Journal of Business and Management*, Vol. 7, No. 1, pp.33–37.

Appendix

Acronym	Extended journal name	Acronym	Extended journal name
AMSR	Academy of Marketing Science Review	IrMR	Irish Marketing Review
ACR	Advances in Consumer Research	JA	Journal of Advertising
AMPP	Advances in Marketing and Public Policy	JAR	Journal of Advertising Research
ACI	Advancing the Consumer Interest	JBM	Journal of Brand Management
AMACP	Amer. Marketing Ass. Conference Proceedings	JBIM	Journal of Business and Industrial Marketing
APACR	Asia-Pacific Advances in Consumer Research	JBE	Journal of Business Ethics
APJML	Asia-Pacific Journal of Marketing and Logistics	JBR	Journal of Business Research
AMJ	Australasian Marketing Journal	JCA	Journal of Consumer Affairs
CIRA	Current Issues and Research in Advertising	JCB	Journal of Consumer Behaviour
		JCC	Journal of Consumer Culture
DM	Decisions Marketing	JCHI	Journal of Consumer Health on the Internet
EACR	European Advances in Consumer Research	JCM	Journal of Consumer Marketing
EJM	European Journal of Marketing	JCP	Journal of Consumer Policy
HMQ	Health Marketing Quarterly	JCPs	Journal of Consumer Psychology

 Table A1
 List of the considered journals

Acronym	Extended journal name	Acronym	Extended journal name
IEEETCE	IEEE Transactions on Consumer Electronics	JCR	Journal of Consumer Research
IM	Innovative Marketing	JCSDCB	Journal of Consumer Satisfaction, Dissatisfaction, and Complaining Behavior
IJA	International Journal of Advertising	JCSHE	Journal of Consumer Studies and Home Economics
IJBM	International Journal of Bank Marketing	JCIRA	Journal of Current Issues and Research in Advertising
IJCS	International Journal of Consumer Studies	JDM	Journal of Direct Marketing
IJMR	International Journal of Market Research	JFMM	Journal of Fashion Marketing and Management
IJMM	International Journal of Medical Marketing	JFSM	Journal of Financial Service Marketing
IJNVSM	Int. J. of Non-profit and Voluntary Sector Marketing	JFPM	Journal of Food Products Marketing
IJPHM	International Journal of Pharmaceutical and Healthcare Marketing	JHCM	Journal of Health Care Marketing
IJRM	International Journal of Research in Marketing	JHRM	Journal of Historical Research in Marketing
IMR	International Marketing Review	JHLM	Journal of Hospitality and Leisure Marketing
IRRDCR	International Review of Retail, Distribution and Consumer Research	JHMM	Journal of Hospitality Marketing and Management

 Table A1
 List of the considered journals (continued)