



Role of customers in circular business models

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ABSTRACT

The retailing sector is evolving, not only as a result of technological advances, but also because of concerns about climate change and new demands from governments and customers for ethical and sustainable products. Customers' purchase intentions are crucial for the successful implementation of circular business models. However, few studies focus on the role of customers in enabling circular business models. This study fills this research gap by identifying the critical factors that impact customers' ethical purchase intentions for circular business models in the retail sector. Based on macro-theories of human behaviour, this study proposes a theoretical model that can holistically consider the critical factors and variables that determine customers' ethical purchase intentions towards the circular business model. The paper contributes to the body of literature on circular business models in the retail sector by exploring the issue from the customers' perspective.

1. Introduction

The rapid growth of the global population and rapid urbanisation are considerably increasing consumption, while natural resources remain finite and scarce (De Angelis, 2018). One estimate is that the world population will reach about 9 billion by 2050, and that it will consume resources at more than thrice the current rate (Planing, 2015). The current linear economy, characterised by 'take-make-dispose', accelerates the depletion of resources and energy (Bocken, Ritala, & Huotari, 2017). It has been estimated that within less than six months of being discarded, almost 99% of manufactured consumer goods turns into waste (Planing, 2015). These facts, along with the global heat wave faced by the northern hemisphere in the summer of 2018 that killed hundreds (The Economist, 2018), have encouraged individuals, governments (Taherdangkoo, Ghasemi, & Beikpour, 2017), environmental organisations, researchers, and consumers worldwide to find alternative solutions to problems arising from the finite nature of the world's resources (Singh and Ordoñez, 2016).

The circular economy (CE) concept, inspired by nature and introduced in the late 1970s, is where nothing is wasted and all outputs are inputs for other processes (Ellen MacArthur, 2018). The CE is a *strategy that emerges to oppose the traditional open-ended system, aiming to face the challenge of resource scarcity and waste disposal in a win-win approach with economic and value perspective* [sic] (Homrich, Galvao, Abadia, & Carvalho, 2018, p.534). According to Zucchella and Previtali (2018), the

circular ecosystem transcends organisational boundaries, encompassing suppliers, customers, universities, research centres, and public authorities, in which each actor/stakeholder plays a specific role based on effective interorganisational relationships. Recently, the Swedish government has decided on a national strategy for a CE, realising that the pace of work on the transition to a CE needs to increase to achieve environmental and climate goals (Regeringskansliet, 2020).

One way to explore, map, and analyse the value creation process in an ecosystem is by business modelling (Chesbrough, 2015), which is considered a key precursor to the shift from a linear economy to a CE (Henry, Bauwens, Hekkert, & Kirchherr, 2020). A business model describes the rationale of how an organisation creates, delivers, and captures value (Osterwalder & Pigneur, 2010). The concept of business models has been applied in many different contexts, including the CE, where circular business models (CBMs) are defined as *the rationale of how an organisation creates, delivers, and captures value with and within closed material loops* (Mentink, 2014, p.24). Thus, the CBM is recognised as a solution for the scarcity of natural resources and energy—but it can also improve a firm's performance (Lewandowski, 2017). CBMs can be expected to reduce firms' consumption of energy and resources by as much as 80% by reusing, recycling, and reducing their use of materials (Planing, 2015).

A successful CBM requires the commitment of all stakeholders in the ecosystem (Hankammer, Brenk, Fabry, Nordemann, & Piller, 2019) and a value network, allowing for mutual adjustment, based on a complex

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mixture of resources, collaboration forms, and governance mechanisms (Zucchella & Previtali, 2018).

Many researchers have emphasised, in particular, the role of customers/users when moving towards a CBM (Calvo-Porrall & Levy-Mangin, 2020; Camacho-Otero, Boks, & Pettersen, 2018; Chen, Hung, & Ma, 2020; Frishammar & Parida, 2019; Kahraman & Kazançoğlu, 2019; Wastling, Charnley, & Moreno, 2018). For example, Mentink (2014) stressed that customers need to be interested and involved in resource recirculation, and that customer attitudes are vital to the achievement of a CBM. Customers need to be prepared to pay more for the environmental benefits of sustainable products, but they will experience a moral satisfaction when they make their purchases (Kazeminia, Hultman, & Mostaghel, 2016).

However, achieving a CE within a traditional business environment is a complex task. The transformation from linear business models to CBMs is not free from challenges; it requires the wholehearted cooperation of many participants, who need to engage in a systematic value co-creation process from the outset (Parida & Wincent, 2019; Urbinati, Chiaroni, & Chiesa, 2017; Zucchella & Previtali, 2018). Retailers are no exception; many such as IKEA, H&M, Marks and Spencer, TheRealReal, Apple, Coca Cola, Cisco, Nike, Philips, Walmart, Unilever, Target, C&A, Bridgestone, and Procter & Gamble are members of Ellen MacArthur's Circular Economy (MacArthur, 2019). According to Lewandowski (2016), companies need to make three main matches to enable smooth transition from a linear business model to a CBM. These are matches between 1) the value proposition and customer segments, 2) the cost structure and revenue streams, which must be balanced, and 3) the changes a company implements to realise a more circular business model and adaptation factors.

Currently, the customer acceptance and recognition of the enhanced value of sustainable offerings are increasing annually. In 2014, only 50% of customers were willing to pay more for sustainable products, whereas in 2015, that proportion rose to 66%, according to the Nielsen Global Corporate Sustainability Report (2015). Companies in Europe also increased their socially responsible investments from €59.0 million in 2013 to €145.2 million in 2015 (Statista, 2018). In Sweden, a study of 1000 customers between the ages of 17 and 70 revealed that 66% considered sustainability to be an extremely important factor, and 29% considered it to be an important factor, when purchasing services and products (Insight Intelligence, 2019).

Despite increasing consumer concern and government policies supporting sustainability and environmentally friendly options, some studies, along with anecdotal evidence, emphasize resistance from certain types of customers (Mostaghel, Oghazi, Haftor, Parida, & Vincent, 2017). At a deeper level, the shift from a linear business model to a CBM still needs to satisfy the specific needs of customers, rather than merely make circular-driven products available (Hankammer et al., 2019). Such a shift requires major changes in the nature and intensity of firms' relationships with customers (Urbinati et al., 2017). Moreover, several factors affect customer acceptance of CE. For instance, the positive image of circular products and their perceived safety are the most important drivers of consumers' acceptance (Calvo-Porrall & Levy-Mangin, 2020). Based on a literature review, Camacho-Otero et al. (2018) found that the main factors influencing the perception and acceptance of circular solutions fall into one of seven major themes: personal characteristics, product and service offering, knowledge and understanding, experience and social aspects, risks and uncertainty, benefits, and other psychological factors. Other major issues are related to customers' ownership concerns, specifically in the business-to-consumer sector, and customers' indifference when they lease, rather than purchase, products (Tukker, 2004).

Although firms strive to meet the needs of customers, the fact is that not all customers value sustainable offerings (Oghazi & Mostaghel, 2018), nor are willing to pay a premium for ethical offerings (Laroche, Bergeron, & Barbaro-Forleo, 2001; Zhou, 2018). Persuasive communication does have a positive impact on customers' behavioural attitudes

(Muranko, Andrews, Chaer, & Newton, 2019); however, customers' doubts about firms' reports on their activities regarding sustainability constitute another challenge to firms (Berglund & Sandström, 2013; Lewandowska, Witzczak, & Kurczewski, 2017). One study finds that 77% of customers think that it is difficult to find reliable information about the circularity of firms' activities (Insight Intelligence, 2019). Clear standards for the value propositions of the CBM have not yet emerged (Stål & Corvellec, 2018); thus, customers' expectations vary widely. Hence, there is a need for a theoretical model to holistically understand how customers' purchase intentions and behaviours are affected by various critical factors or variables. Considering such perspectives and measuring these inter-linking factors or variables could help the analysis of different customer types and their expectations, making it possible to learn how to influence their intentions and behaviour towards CBMs.

In such a context, this study's purpose is to identify the critical factors that could determine customers' ethical purchase intentions relating to CBMs, with a specific focus on the retail sector. A better understanding of customers' ethical purchase intentions (e.g., Arli, Tan, Tjiptono, & Yang, 2018; Deng, 2013; Oh & Yoon, 2014; Hwang, 2016; Diddi & Niehm, 2016; Muranko et al., 2019; Lieder, Asif, Rashid, Mihelić, & Kotnik, 2018) could help companies to frame their business models within customers' acceptance zone and, thus, influence their purchasing behaviour. The retail sector was chosen for this study owing to (1) the complexity of its having to deal with several business models simultaneously, which makes it particularly relevant, and (2) the fact that online customers have been found to consider sustainability a more important factor when they shop for apparel and shoes than when they consider other products and services (Statista, 2020). With that focus, this study makes three contributions. First, the study adds the customers' perspective to the body of literature examining CBMs in a retailers' context. Until now, the major focus of the literature has been on firms and their transition to a CBM (e.g., Oghazi & Mostaghel, 2018) rather than on the critical factors that determine customers' acceptance of the CBM and their purchase intentions. Second, this study proposes a comprehensive theoretical model to consider the many aspects of customers' behaviour, which is important when aiming to succeed with a CBM. Third, this study improves the understanding of the basis of ethical purchase intentions and customers' attitude towards CBMs. The results will be valuable for both researchers and practitioners as they shed light on the customers' perspective of the CBM through the lens of ethical purchase intentions.

The remainder of this paper is structured as follows. Section 2 presents the theoretical background of key concepts, i.e., ethical offerings, CBMs, and ethical purchase intentions. Section 3 discusses the review process and analysis of literature review. Section 4 presents the results of the study in terms of propositions, the theoretical model, description of variables, and the operation of the model. Section 5 discusses the theoretical and practical implications of the study. The final section provides concluding remarks and discusses this study's limitations and opportunities for future research.

2. Key concepts

Given that the focus of this study is on identifying the critical factors that could help determine customers' ethical purchase intentions in relation to CBMs, three key concepts need to be discussed: the ethical offerings, CBMs, and the ethical purchase intention. The theoretical background of these three concepts is briefly presented below.

2.1. Ethical offerings

The rise of ethical consumerism (e.g., Nicholls, 2002; Harrison, Newholm, & Shaw, 2005) is obliging companies to follow ethical principles and integrate them into their products, which are then referred to as 'ethical products' (Bezençon & Blili, 2010). The traditional marketing strategy consists of *decisions and actions focused on building a sustainable*

differential advantage, relative to competitors, in the minds of customers, to create value for stakeholders (Palmatier & Sridhar, 2017, p.5). In the CBM, the marketing strategy is the same, except that environmental and social values are considered as additional stakeholders (Stubbs & Cocklin, 2008). Ethical offerings are products and/or services that embody one or several social or environmental principles that might affect consumer purchase decisions (Bezençon & Blili, 2010), or that embody a set of issues or considerations that might affect a purchase decision, such as product safety, consumer privacy, employee welfare, fair pricing, community action, and charitable donations (Crane, 2001). In this study, any offering that considers environmental and social values will be termed an ethical offering (cf. Yadav & Pathak, 2016).

2.2. Circular business models

The most comprehensive definition of the CBM is given by Frish-ammam and Parida (2019, p.8): a *circular business model is one in which a focal company, together with partners, uses innovation to create, capture, and deliver value to improve resource efficiency by extending the lifespan of products and parts, thereby realising environmental, social, and economic benefits.*

Bocken, De Pauw, Bakker, and Van Der Grinten (2016) suggested three fundamental strategies for achieving CBM. First, reducing resource use, or improving resource efficiency, by reducing the number of components or materials required to make each product. Second, slowing resource consumption by improving the quality of products and extending their life. All aspects of the product, from its design to its repair and remanufacture, need to be considered from the perspective of a longer life and the reduced use of resources. Third, closing the loop by recycling. This also needs to be considered from the very beginning of a product's design and production. Many firms motivate customers to recycle in different ways, which requires customers' knowledge of, and interest in, the firms' ethical products.

Accordingly, Bocken et al. (2016) proposed four business models to slow down the resource loop. The first is the *classic long-life model* used by, for instance, luxury brands that produce high quality products that are not subject to fashion or cannibalisation. Brands such as Rolex claim that their products last beyond a person's lifetime, while Miele guarantees that its appliances have a 20-year functional life span (Bocken et al., 2016). This type of business model requires firms to invest in high quality materials and designs that allow for the possibility of repair and remanufacture. This does lead to higher product prices but, for well-known brands with strong brand equity, this business model has proved consistently successful. An important question is whether customers are willing to pay premium prices for completely new brands or products that apply the same model. The literature shows that there is some customer resistance to paying premium prices for ethical offerings (Laroche et al., 2001; Zhou, 2018).

A second business model that could slow the resource loop is the *access and performance model*. This model tries to satisfy customers by removing the need for ownership. It applies to, for example, car or bicycle sharing, the document management system of Xerox (Bocken et al., 2016), and the merino wool, next-to-skin, garments intended for use by the British Ministry of Defence (Bech et al., 2019). Customer involvement is extensive here and, while information would help customers aware of the offerings' reduced use of resources, their ethical benefits do need to be emphasised to make customers fully appreciate them (Villarino & Font, 2015).

Extending product value is the third business model that strives to exploit products' residual value. A company that applies this business model is H&M, which incentivises return of its clothes (Bocken et al., 2016). Ethical offerings do not refer only to the way that a product is produced but also to all the activities it embodies. For instance, the environmental friendliness of a supply chain should be communicated to customers (Smith & Brower, 2012). This CBM requires customers' knowledge of, and concern for, the environmental impacts of their

choice.

The final business model that could slow resource loops is one that *encourages sufficiency* by actively reducing the consumption of the end user through upgradeability, reparability, disassembly, durability, service, re-use, and warranties (Bocken et al., 2016). Two praiseworthy followers of such a CBM are Vitsoe, a furniture manufacturer, and Patagonia, a producer of clothing and equipment for sports (Bocken et al., 2016). These firms both motivate customers not to buy new products from them, but rather to repair or upgrade the ones they already own. They endeavour to reduce unnecessary consumption and believe that recycling should be a last resort (Besustainable, 2014). The more the value of materials can be saved, the slower will be the resource loop. This CBM requires a huge amount of trust from customers, whose loyalty is key to its success (Baldassarre & Campo, 2016). Unfortunately, the literature shows that consumers lack trust in firms' communications about their ethical offerings (Berglund & Sandström, 2013; Lewandowska et al., 2017).

To illustrate the various CBMs, some examples from the fast fashion part of the retail sector, drawn from information on firms' websites, sustainability reports, and other sources, are summarised in Table 1. Fast fashion is a major issue for customers who have concerns about sustainability when shopping for apparel (Statista, 2020). All the five examples, which are Swedish fast fashion retailers, have webpages describing the sustainability of their activities and future plans. However, the levels of their activities and achievements vary. Most have already implemented (or will in the near future) the *extending product value* and *closing the loop* business models, except Gina Tricot that has introduced *access and performance business model*, by launching a service called *rent your party outfit*.

2.3. Ethical purchase intention

All the actors in the ecosystem should collaborate to create a successful CE (Oghazi & Mostaghel, 2018), and that includes end users or customers. Customers' shopping behaviours are changing more rapidly than ever owing to technological advances, which have also enabled companies to provide their customers with more customised services and products as they now have more information about their customers. This makes for a more volatile retail environment, with a range of business models depending on the type of product or offer. An empirical study by Diddi and Niehm (2016), of 407 consumers in the United States, revealed that consumers' personal and normative behaviours positively and significantly influence their intentions to patronise those retail brands of apparel that emphasise the sustainability of their supply chain.

Table 2 illustrates some important empirical studies of customers' ethical purchase intention. Most studies in this area have employed the theory of planned behaviour or the theory of reasoned action (TRA), with some adjustments to make them more compatible with ethical issues. Their findings do not support each other, which could be because of contextual factors related to the specific industries, or because some important factors and moderators are neglected.

3. Methodology

This study follows a systematic method for its literature review (e.g., Tranfield, Denyer, & Smart, 2003), which involves the five-step process suggested by Denyer and Tranfield (2009). It comprises 1) formulating the research focus and purpose, 2) locating studies, 3) study selection and evaluation, 4) analysis and synthesis, and 5) reporting the results.

In the first step, we conducted an exploratory background search for CBMs and purchase intention to determine the research scope and purpose (Denyer & Tranfield, 2009) and, moreover, to understand the various concepts involved and their relationships with each other. Our first search, using the keywords 'purchase intention' and 'circular' in EBSCO yielded only five peer-reviewed academic journal articles. In the

Table 1
Examples of CBMs from retail fast fashion, adapted from Stål and Corvellec (2018).

Company	Turnover/Scope/Employees	Sustainability activities	Type of CBM	Secondary data*
H&M	Turnover was SEK 233 million in 2019.About 5000 stores in 74 countries.	Social, environmental, and economic impact spans the entire value chain.In 2019: <ul style="list-style-type: none"> customers returned 29,005 tonnes of textiles for re-use and recycling, 96% renewable electricity in their own operations. 	1. Extending product value 2. Closing the loop	<ul style="list-style-type: none"> https://www2.hm.com/sv_se/hm-sustainability/lets-change.html H&M Hennes & Mauritz Sustainability Report 2019 In-store observation, two times each 25 min. https://www.allabolag.se/ https://www.kappahl.com/sv-SE/om-kappahl/hallbarhet/ In-store observation, one time for 20 min KappAhl Annual Report 2018–2019 https://www.allabolag.se/ https://about.lindex.com/sv/hallbarhet/rapporter-policyer-och-ataganden/ataganden/2020-circular-fashion/ In store observation, two times for 25 min. https://www.allabolag.se/ https://www.ginatricot.com/se In-store observation, one time for 20 min Sustainability report 2019 https://www.allabolag.se/ https://www.indiska.com/se/hallbarhet/hallbara-material https://www.allabolag.se/ In-store observation, one time for 20 min.
KappAhl	Turnover was SEK 4.9 million in 2019.There are 4000 employees in 400 stores.	Try to impact social, environmental, and economic values.In 2019, 58% of their fashion is marked 'sustainable'.	1. Extending product value 2. Closing the loop	<ul style="list-style-type: none"> https://www.allabolag.se/ https://www.kappahl.com/sv-SE/om-kappahl/hallbarhet/ In-store observation, one time for 20 min KappAhl Annual Report 2018–2019 https://www.allabolag.se/ https://about.lindex.com/sv/hallbarhet/rapporter-policyer-och-ataganden/ataganden/2020-circular-fashion/ In store observation, two times for 25 min. https://www.allabolag.se/ https://www.ginatricot.com/se In-store observation, one time for 20 min Sustainability report 2019 https://www.allabolag.se/ https://www.indiska.com/se/hallbarhet/hallbara-material https://www.allabolag.se/ In-store observation, one time for 20 min.
Lindex	Turnover was SEK 3.3 million in 2019.	Several aims are set for 2020: 1) To reach sustainable products up to 10%, 2) To install stations for gathering textiles.	Will implement in 2020: 1. Extending product value 2. Closing the loop	<ul style="list-style-type: none"> https://www.allabolag.se/ https://www.ginatricot.com/se In-store observation, one time for 20 min Sustainability report 2019 https://www.allabolag.se/ https://www.indiska.com/se/hallbarhet/hallbara-material https://www.allabolag.se/ In-store observation, one time for 20 min.
GinaTricot	Turnover was SEK 1.1 million in 2019.About 1900 employees in 30 countries.	In 2019: 1. 57% of the products were manufactured from more sustainable materials 2. Launch of RENT your party outfit	1. Extending product value 2. Access and performance	<ul style="list-style-type: none"> https://www.allabolag.se/ https://www.ginatricot.com/se In-store observation, one time for 20 min Sustainability report 2019 https://www.allabolag.se/ https://www.indiska.com/se/hallbarhet/hallbara-material https://www.allabolag.se/ In-store observation, one time for 20 min.
Indiska	Turnover was SEK 0.764 million in 2018.	Work more towards social and environmental goals.	1. Extending product value	<ul style="list-style-type: none"> https://www.allabolag.se/ https://www.indiska.com/se/hallbarhet/hallbara-material https://www.allabolag.se/ In-store observation, one time for 20 min.

* All online information was retrieved on 27 August 2020.

Table 2
Compendium list of studies of ethical purchase intention.

Study	Citations	Theories	Variables	Sample	Method	Major findings
Hwang, 2016	80	Theory of planned behaviour (TPB)	Self-presentation, Food safety concerns, Environmental concerns, Ethical consumer-identity.	USA, 183 responses from the elderly and 153 from young respondents	SEM	The results showed a clear distinction between the elderly and younger respondents' intention to purchase organic food.
Oh & Yoon, 2014	53	Theory of reasoned action (TRA)	Ethical obligation, Self-identify, Altruism, Attitude, Subjective norm, Positive affection.	South Korea, 343 responses	PLS	Neither subjective norm nor self-identify has a direct impact on ethical consumption intention.
Didi & Niehm, 2016	26	TRA, Schwartz value theory	Universalistic values, Moral norms, Expectations of ethical behaviour, Knowledge of environmental issues in the apparel industry, Attitude.	USA, 407 customers of apparel at retail	SEM	All the mentioned variables have a positive and significant impact on patronage intentions.
Deng, 2013	22	Persuasion theory, Cognitive dissonance theory, TPB	Face consciousness, Group consensus Behavioural attitude, Control faith, Convenience perception	China, 358 responses	SEM	Both subjective norms and perceived behavioural control impact ethical purchase intention.
Lieder et al., 2018	20	CE value propositions from market acceptance point of view	Attributes price, Payment scheme, Environmental friendliness, Service level	Stockholm, Sweden, 141 respondents	Choice-based conjoint analysis	Customers are more willing to pay for access instead of ownership if they know that choice reduces CO ₂ emissions.
Muranko et al., 2019	14	TPB	Use of persuasive communication influences behavioural attitude, product perceptions, and behavioural intentions towards the purchase intention	Four engineers and 22 academic experts in retail refrigeration equipment	Descriptive and inferential statistical analysis	'The Persuasive Communication had a positive and statistically significant impact on the participants' Behavioural Intentions towards the purchase of remanufactured RDCs'

Note: SEM: Structural Equation Modelling and PLS: Partial Least Squares.

*: Google scholar citations retrieved on 28 August 2020.

second step, we utilised the SCOPUS database with the keywords 'purchase intention' and 'circular', which resulted in 242 documents.

In the third step, our selection of suitable articles was supported by five defined inclusion criteria (Denyer & Tranfield, 2009); namely: 1) the paper should be in English; 2) its full text should be available; 3) the paper should be published in an academic, peer-reviewed journal; 4) the paper discusses either ethical products or offerings, or ethical purchase intentions in the context of the CE and related business models; and 5) the paper must fall into one of these categories: social sciences; economics, econometrics, and finance; or business, management, or accounting. Applying these criteria reduced the number of articles to 167. To contextualise the knowledge base for our study, we added another keyword, 'retail', which reduced the number of articles to 61. Examining

the titles of all these articles showed that fewer than ten focused on circularity, CE, or CBMs. Thus, following a snowballing approach, we included other studies from green economy and, as a result, 14 peer-reviewed academic articles were included in the final list of papers receiving a full reading and undergoing the review process. Rest of articles from the literature review are listed in Table 3.

In the fourth step, we used data extraction forms to collect targeted information relating to the study's focus (Tranfield et al., 2003). Initially, all identified variables were entered into an Excel spreadsheet, along with any relevant descriptions and definitions. Then, all identified variables were clustered and combined, based on their similarities, into critical factors. For instance, three variables such as environmental awareness, ethical product awareness, and brand awareness are

Table 3
List of articles in the literature review.

Study	Citations *	Title	Journal
Kim, Borges, and Chon (2006)	315	Impacts of environmental values on tourism motivation: The case of FICA, Brazil.	Tourism Management
Wang and Hazen (2016)	168	Consumer product knowledge and intention to purchase remanufactured products	International Journal of Production Economics
Mohd Suki (2016)	112	Consumer environmental concern and green product purchase in Malaysia: structural effects of consumption values.	Journal of Cleaner Production
Huang, Yang, and Wang (2014)	80	Effects of green brand on green purchase intention.	Marketing Intelligence and Planning
Wei, Chiang, Kou, and Lee (2017)	53	Toward sustainable livelihoods: Investigating the drivers of purchase behaviour for green products	Business Strategy and the Environment
Kazeminia et al. (2016)	29	Why pay more for sustainable services? The case of ecotourism	Journal of Business Research
Diddi and Niehm (2016)	26	Corporate social responsibility in the retail apparel context: exploring consumers' personal and normative influences on patronage intentions	Journal of Marketing Channels
Malik et al. (2017)	1	Antecedents of consumer environmental attitude and intention to purchase green products: moderating role of perceived product necessity	International Journal of Environmental Technology and Management

* : Google scholar citations retrieved on 28 August 2020.

categorised as *Awareness*.

For each variable representing a combination of critical factors, the measuring items were identified to operationalise these factors related to the ethical purchase intention and the CBM. The measuring items for each variable are listed in Table 4. For instance, the variable 'willingness to pay a premium' (WPP) is defined as 'the extent to which a customer is willing to pay more for an offering by a retailer with a CBM'. Moreover, four items were identified for this variable, namely, 1) How willing would you be to buy a more expensive product to reduce pollution?; 2) How willing would you be to buy a product if you knew the added cost paid for a better environment?; 3) How willing would you be to buy a 'regular' product, at some cost to a possibly better future environment?; and 4) How willing would you be to pay more for an eco-product as opposed to a 'regular' product? After identifying the variables, their measuring items, and final factors, the correlations between these factors were established based on theoretical reasoning.

These relationships between the five critical factors led us to formulate nine propositions and a theoretical model of ethical purchase intention and behaviour towards retailers' CBMs, along the timelines of t_0 and t_1 , as shown in Fig. 1. The timelines emphasise the fact that the actual behaviour occurs at a time following all the other critical factors in this study.

In the fifth and final step, based on the analysis and synthesis, the results are formulated and elaborated in relation to the defined scope and purpose of the study (Denyer & Tranfield, 2009).

4. Results: Critical factors that could determine customers' ethical purchase intention for CBMs

4.1. Propositions and theoretical model

To understand attitudes towards CBMs, it is necessary to understand the basis of the ethical purchase intention. Most studies (such as Arli et al., 2018) do not give a clear definition of ethical purchase intention. This study, therefore, based on the extant literature, suggests the following definition: *Ethical purchase intention refers to the intention to purchase those services and/or products that cause minimal or no damage to society and the environment.*

The very well established TRA proposed by Ajzen and Fishbein (1975) has been widely used in the marketing and psychology disciplines. The relationship between attitude and behaviour has been investigated in various contexts; however, every such study has focused on one specific aspect of attitude, attitude's antecedents, and the moderators of the relationship between attitude and behaviour.

Chaiken and Maheswaran (1994) presents dual-processing models, which explain that rational and experiential systems are the major processing systems that shape human attitudes. In the context of circular business, the rational process determines attitudes based on cognitive evaluations of cost-benefit and ethical beliefs. These bases differ from experiential processes, whereby an attitude is based on previous experience, which could be affective or heuristic. Thus, two major antecedents of customers' attitude are recognised, namely, customers' perceived value (based on beliefs) and customers' awareness (based on customers' knowledge and experience).

Based on the extant literature and our discussion above, *Attitude* is considered to have two dimensions, namely, willingness to pay a premium and attitude towards a CBM. Thus, the first proposition is formulated as follows:

P₁: Customers' a) attitude towards CBMs and b) willingness to pay a premium have a positive, direct effect on their ethical purchase intention towards CBM.

The value that ethical products have for customers has several dimensions, such as social value, functional value, and epistemic value. Social value is defined as the *perceived utility acquired from [a product's] association with one or more specific social groups* (Sheth, Newman, & Gross, 1991, p.162). A customer's purchase of ethical products would motivate others in the same social network to buy the same product (Mohd Suki, 2016). Research has shown that brand positioning based on values rather than attributes strengthens a firm's competitive advantage, because social values impact the customers' beliefs and, consequently, their behaviour (Vriens & Hofstede, 2000). Thus, social value plays a primary role in forming the customer's attitude (Chen & Lee, 2015). Functional value has two dimensions: quality and price. The functional value-quality is associated with the *perceived utility acquired from [a product's] capacity for functional, utilitarian, or physical performance and [is] thought to be generated by a product's salient attributes.* (Sheth et al., 1991, p.162).

Many customers nowadays not only evaluate the price, quality, and functionality of a product but also the sources of its ingredients, its production process, and even the effectiveness of its supply chain, to decide whether to purchase an ethical product or service (Mohd Suki, 2016). Epistemic value is defined as the *perceived utility acquired from [a product's] to arouse curiosity, provide novelty, or satisfy a desire for knowledge* (Sheth et al., 1991, p.162). Knowledgeable and aware customers would like to test different, new, ethical products (Mohd Suki, 2016). Therefore, the following proposition is posited:

P₂: Customers' a) social value, b) functional value quality, c) and epistemic value have a positive direct effect on their ethical purchase intention towards CBM.

Table 4
Operationalisation of the critical factors and variables in the proposed theoretical model.

Critical factors	Variables	Items	Definition	Adapted from	
Attitude	Willingness to pay premium (WPP)	WPP1) How willing would you be to buy a more expensive product to reduce pollution?	The extent to which a customer is willing to pay more for an offering by a retailer with a CBM.	Kazeminia et al. (2016)	
		WPP2) How willing would you be to buy a product if you knew the added cost paid for a better environment?			
		WPP3) How willing would you be to buy a 'regular' product at some cost to a possibly better future environment?			
		WPP4) How willing would you be to pay more for an eco-product as opposed to a 'regular' product?			
	Attitude towards CBMs (ATT)	ATT1) I believe that my use of sustainable products will benefit society, environment, and the economy. ATT2) I feel good about myself when I use sustainable products. ATT3) I think sustainability is a meaningful exercise. ATT4) I feel sad when I see how much the natural environment is spoiled. ATT5) I believe that my use of sustainable products will help reduce pollution and improve the environment, society, and the economy.	The extent to which the customer considers the offerings from a retailer with a CBM.	Malik et al. (2017)	
Perceived Value	Social value (SV)	SV1) Buying the sustainable product would help me to feel acceptable.	'perceived utility acquired from [a product's] association with one or more specific social groups' (Sheth et al., 1991, p.162).	Mohd Suki (2016)	
		SV2) Buying the sustainable product would improve the way that I am perceived.			
		SV3) Buying the sustainable product would make a good impression on other people.			
		SV4) Buying the sustainable product would give its owner social approval.			
	Functional value (FV)	<i>Functional value-quality</i>		Functional value-quality is the 'perceived utility acquired from [a product's] capacity for functional, utilitarian or physical performance and was thought to be generated by a product's salient attributes' (Sheth et al., 1991, p.162). Functional value-price is the extent to which a customer considers the reasonability of the price of the sustainable offering from the retailer with a CBM.	Mohd Suki (2016)
		FVQ1) The sustainable product has consistent quality.			
		FVQ2) The sustainable product is well made.			
		FVQ3) The sustainable product has an acceptable standard of quality.			
		FVQ4) The sustainable product would perform consistently.			
		<i>Functional value-price</i>			
Epistemic value (EV)	FVP1) The sustainable product is reasonably priced.	'perceived utility acquired from [a product's] capacity to arouse curiosity, provide novelty, or satisfy a desire for knowledge' (Sheth et al., 1991p.162)	Mohd Suki (2016)		
	FVP2) The sustainable product offers value for money.				
	FVP3) The sustainable product is a good product for the price.				
	FVP4) The sustainable product would be economical.				
Awareness	Environmental awareness (EA)	EV1) Before buying the product, I would obtain substantial information about the different makes and models of products	The extent to which the customer is aware of the environmental impacts of producing the offering by the retailer with a CBM.	Diddi and Niehm (2016)	
		EV2) I would acquire a great deal of information about the different makes and models before buying the product.			
		EV3) I am willing to seek out novel information.			
		EV4) I like to search for the new and different products			
		EA1) Chemical pollutants are produced during manufacturing of synthetic or manufactured fibres such as polyester.			
		EA2) Air pollution can occur during some common textile dyeing processes.			
		EA3) Textile dyeing and finishing processes use a lot of water.			
		EA4) Phosphate-containing laundry detergents can be a source of water pollution.			
		EA5) Plants and animals have as much right as humans to exist.			
		EA6) We are approaching the limit of the number of people that the Earth can support. EA7) Humankind is severely abusing the environment.			
EA8) The earth is like a spaceship with only limited room and resources.					
EA9) When humans interfere with nature, it often produces disastrous consequences.					
EA10) The balance of nature is very delicate and can easily be upset.					

(continued on next page)

Table 4 (continued)

Critical factors	Variables	Items	Definition	Adapted from
	Ethical product awareness (EPA)	EPA1) Use of child labour is practiced by manufacturers.	The extent to which the customer is aware of the ethical impacts of producing the offering by the retailer with CBM.	Diddi and Niehm (2016)
		EPA2) Manufacturers generally do not pay their employees at least the local minimum wage.		
		EPA3) Manufacturers generally have their employees work more than 40 h per week.		
		EPA4) Manufacturers generally provide hazardous workplaces for their employees.		
	Brand awareness (BA)	BA1) I have heard of the brand	The extent to which the customer recognises a brand of a retailer with a CBM.	Huang et al. (2014)
		BA2) I know the brand's related environmental information.		
		BA3) The brand is the first to come to mind when talking about sustainability.		
		BA4) The brand has a good reputation.		
Ethical purchase intention towards CBM		EPI1) I would prefer to purchase a sustainable product over a non-sustainable product.	The extent to which customer has ethical purchase intention towards CBM	Malik et al. (2017)
		EPI2) I am willing to purchase a sustainable product to benefit the environment, society, and the economy.		
		EPI3) I would actively seek out a sustainable product in a store to purchase it.		
Ethical purchase behaviour towards CBM		EPB1) I make a special effort to buy products in sustainable packages;	The extent to which the customer has made a purchase from the retailer with a CBM.	Wei et al. (2017)
		EPB2) I would switch from my usual brands and buy sustainable products, even if I had to give up some effectiveness.		
		EPB3) I have switched products for sustainable reasons.		
		EPB4) When I have a choice between two identical products, I purchase the one less harmful to the environment and society.		

Customers' awareness and knowledge determine their attitude. Specifically, environmental awareness, brand awareness (Chen & Lee, 2015), and ethical product awareness will impact customers' attitudes towards sustainable offerings (Ko, Hwang, & Kim, 2013). For instance, in Stockholm, Sweden, customers showed more interest in paying for access rather than ownership for washing machines with reduced CO₂ emissions (Lieder et al., 2018). Thus, the following proposition is formulated:

P₃: Customers' a) environmental awareness, b) ethical product awareness, and c) brand awareness have positive, direct effect on their ethical purchase intention.

Antecedents of attitude are identified as awareness and value, based on the dual-processing models (Chaiken & Maheswaran, 1994). Many customers have complained that it is difficult to find information about the sustainability aspects of a product (Statista, 2020). The type of information that communicates with customers affects their attitude (Lieder et al., 2018). Consequently, the following propositions are presented:

P₄: Customers' awareness has a positive, direct effect on their attitude.

P₅: Customers' perceived value of ethical offerings has a positive, direct effect on their attitude.

The empirical study of Hwang (2016) showed that, while income was not a moderator for ethical purchase intention, there was a clear distinction between young and older participants. Customers with a higher education level showed a greater inclination to make green purchases, according to a study by Chekima, Wafa, Igau, Chekima, and Sondoh (2016). Personal characteristics (age, gender, and education) have not only been considered as moderators (Chekima et al., 2016; Hwang, 2016), but also as control variables (Michaelidou & Christodoulides, 2011). Various findings from the extant literature motivate the following propositions:

P₆: Customers' personal characteristics moderate the relationship between customers' attitude and ethical purchase intention towards CBM.

P₇: Customers' personal characteristics moderate the relationship between customers' perceived value and ethical purchase intention towards CBM.

P₈: Customers' personal characteristics moderate the relationship between customers' awareness and ethical purchase intention towards CBM.

Finally, the aim of investigating customers' attitudes and intentions is to better understand their actual purchase behaviour. The time lag between a purchase intention and the actual purchase behaviour has made it more difficult for researchers to measure the actual purchase behaviour. However, there are different solutions for this problem. The final proposition is formulated as following:

P₉: Customers' ethical purchase intention towards retailers with a CBM has a significant and positive influence on customers' purchase behaviour towards CBM.

Fig. 1 illustrates the proposed theoretical model, showing all the critical factors, variables, moderators, and propositions.

4.2. Description of critical factors, variables, and operationalisation of the model

Table 4 illustrates the factors and variables employed in the proposed theoretical model, each accompanied by a clear definition. In addition, it shows the variables and relevant items, based on previous empirical studies of sustainability and ethical purchase intention. Thus, the suggested items have already met the quality criteria. This operationalisation sheds light on all details of the proposed theoretical model and facilitates future empirical tests of the model.

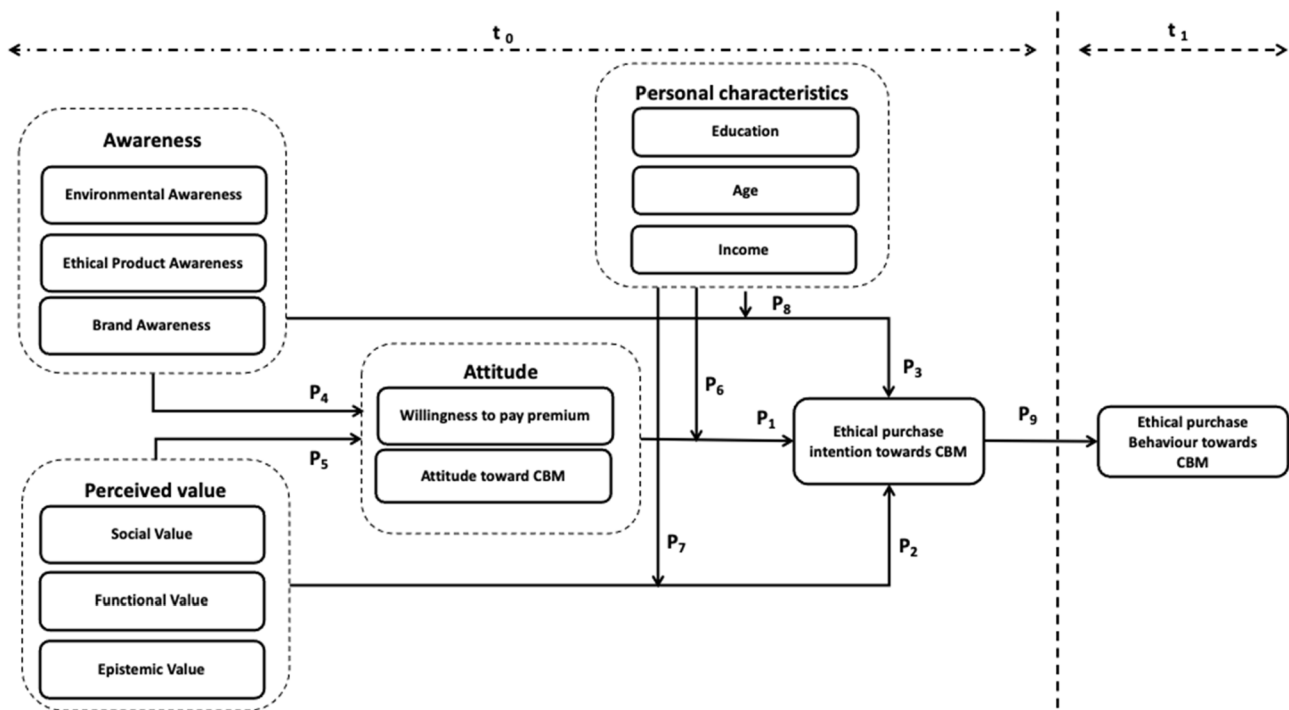


Fig. 1. Proposed theoretical model of ethical purchase intention and behaviour towards circular business models (CBMs), including the nine propositions, and different timelines of t_0 and t_1 .

5. Discussion

5.1. Theoretical implications

Research into CBMs is growing, and companies are taking steps towards this transition from the linear economy; however, the critical role of customers or consumers in this transition process has been underestimated (e.g., Camacho-Otero et al., 2018; Wastling et al., 2018; Mentink, 2014). In particular, there is a lack of a holistic understanding of various critical factors that could affect the customer's purchase intentions and behaviour. Using the ethical purchase intention as a central focus, this study aims to identify the critical factors that could determine customers' purchase intentions and behaviour towards CBMs. This has been done by specifically focusing on the retail sector which, because of its direct contact with customers, is unlike other businesses.

The study makes three important contributions to the existing theory of CBM transformation, and the value creation process. First, the study adds the customers' perspective to the body of literature about CBMs in the retail context. The major focus of the literature has been on the firm level and addressing the overall transformation to a CBM (e.g., Oghazi & Mostaghel, 2018; Frishammar & Parida, 2019) rather than considering the customers' perspective. Major studies acknowledge the critical role of customers as important stakeholders in the whole system (Camacho-Otero et al., 2018; Chen et al., 2020; Wastling et al., 2018), but limit their discussion of how customers can contribute to the whole system. The focus of previous studies has been limited either to specific products (e.g., the remanufacturing of refrigerators, by Muranko et al. (2019)), or to the customer perspective (e.g., washing machines by Lieder et al. (2018)), or to the processing and institutional level (e.g., Stål & Corvellec, 2018). Additionally, the literature classified different customer types according to their perception of, or concerns with CBM, such as trust, value of the circularity, and their resistance to paying a premium for ethical offerings (Camacho-Otero et al., 2018; Laroche et al., 2001; Zhou, 2018). In that regard, this study extends the view of the role of customers and explains how different factors can collectively affect customers' acceptance of, and purchase intentions towards, CBMs. Moreover, the study also extends the operationalisation of these critical

factors along with relevant variables. As there is a need to rethink the traditional marketing strategy (e.g., Palmatier & Sridhar, 2017) in the context of the CBM, this study, by considering the perspectives of customers, makes an important contribution.

Second, this study proposes a comprehensive theoretical model that considers the multiple aspects of customers' behaviour towards CBM. To become successful with a CBM, it is essential to consider all aspects of customers' behaviour. Previous studies focused only on specific factors (e.g., as shown in Table 3, Mohd Suki (2016) focused on value-related factors, Kazeminia et al. (2016) and Malik, Singhal, and Tiwari (2017) focused on attitude-related factors, and Diddi and Niehm (2016) focused on awareness-related factors). Instead of looking at a single product or a single CBM opportunity, the proposed theoretical model combines all possibilities from the company perspective and tries to connect them with the customer perspective. The model's identified critical factors, and its variables and items, could help establish and operationalise this missing link in the literature. The detailed description of dependent factors that can collectively affect and influence the customers' purchase intention for CBMs could support establishing such link. While, for example Kahraman and Kazançoğlu (2019) have explored consumers' purchase intentions towards personal care products, the model we present will add to the research in the retail sector which, unlike other sectors, currently lacks such a model.

Third, the study improves the understanding of the basis of the ethical purchase intention by seeking to understand the attitude towards CBMs. The results will be valuable for both researchers and practitioners, because they shed light on the customers' perspective on the CBM through the lens of the ethical purchase intention. The study defines the ethical purchase intention as the intention to purchase services and products that cause minimum or no damage to society and the environment. This understanding of the ethical purchase intention could extend discussion of key aspects and issues related to ethical products or offerings (e.g., Crane, 2001; Bezençon & Blili, 2010). Moreover, the detailed understanding of contextual factors that affects customers' ethical purchase intention (e.g., Deng, 2013; Oh & Yoon, 2014; Diddi & Niehm, 2016; Arli et al., 2018) could help companies and practitioners to frame their business models within the acceptance zone of customers.

5.2. Practical implications

Traditional retailers are currently trying, but finding it difficult, to find the best ways of making a smooth transition to CBMs. In the retail sector, brands are under constant pressure from policymakers and customers to achieve sustainability goals. At an ever-increasing rate, customers' attitudes towards sustainability and consumption are changing, and they are demanding more information about, and actions aiming at, sustainability and CE goals. Customers are even inquiring about issues that might occur further up the supply chain, relating to, for example, the procurement of materials, production conditions, and human rights violations. Considering such consumer concerns, companies need to find more practical ways of addressing them than simply asserting that 'we are a sustainable company and our brand supports the circular economy.' Without undertaking practical measures with a greater sense of urgency, companies are likely to lose customers and market share.

In that context, this study helps retailers and managers in the retail sector to understand the various factors that are critical in determining customers' ethical purchase intentions and behaviour. They can use the proposed model, as a basis for re-considering and reflecting on the various critical factors, variables and measuring items that influence ethical purchase intentions towards CBMs. Additionally, the model could help customers to explore and understand the various possible initiatives, such as that undertaken by Gina Tricot, which is providing a service called *Rent Your Party Outfits*.

It is acknowledged that the main factors influencing the perception and acceptance of circular solutions are customers' personal characteristics; their knowledge, understanding, and experience; social concerns; and other psychological factors. The proposed model, which considers the influences on customers' ethical purchase intention for CBMs in detail, addresses these characteristics holistically. Finally, managers can apply the CBM, as explained in this study, to their own business, adjusting for the type of their offerings and the customers they wish to target. The model, tested with some specific offerings, could help them better understand their customers' behaviour.

6. Conclusions, limitations, and future work

Customers' purchase intentions and behaviour are crucial enablers of the successful implementation of CBMs. Customers' different profiles and personal characteristics, and their changes over time, make it difficult for companies to understand the full range of their expectations and behaviour. This is even more important given the drastic changes necessary when shifting from a linear to a CE.

There is a lack of holistic models in the literature that address the diversity of customers' purchase intentions and behaviours. Moreover, there is an absence of detailed description of the factors that can collectively influence customers' purchase intentions for CBMs. Hence, using the ethical purchase intention as a central focus, this study aims to identify the critical factors that could determine customers' purchase intentions and behaviour towards CBMs. The paper focuses on the retail sector, because customers in that sector are more sensitive to the sustainability and ethical aspects of the offerings. Additionally, the retail sector features the largest range of business models. Based on the literature review, and on well-established theories such as TRA and dual-processing models, this paper proposes a theoretical model that can holistically consider all the factors and variables necessary to determine customers' ethical purchase intention towards CBMs in the retail sector. The proposed critical factors are awareness, perceived value, attitude, and personal characteristics.

The model suggests that awareness, perceived value, and attitude have a significant and direct impact on ethical purchase intention. It also suggested that attitude mediates both the relationship between perceived value and ethical purchase intention, and the relationship between awareness and ethical purchase intention. The model suggests that personal characteristics are a moderator of the three relationships

between awareness, perceived value, and attitude with ethical purchase intention. Finally, the paper also formulates a definition of ethical purchase intention that refers to customers' intention of purchasing those services and products that cause minimum or no damage to society and the environment.

The study has not conducted an empirical investigation. This limitation can be addressed by future studies in the following ways. First, future studies could empirically test the proposed model in specific retailing sub-sectors.

Second, although the model is developed specifically for the retail sector, future studies could test the model in other sectors to investigate possible contextual factors and their influence on the ethical purchase intentions towards CBMs.

Third, future studies could consider different demographic samples, with their different personal characteristics, and cross-compare the outcomes of the model with respect to their ethical purchase intentions.

Finally, the authors of this paper encourage researchers to elaborate on, and further improve, the theoretical understanding of ethical purchase intention by expanding our definitions and identifying the interactions between the model's influencing factors and variables.

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