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Green marketing as an environmental practice: The impact on green satisfaction and green loyalty in a business-to-business context

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Abstract

Many companies have developed a green marketing strategy, aimed at promoting and selling green environmental products. While the majority of articles on this topic report on studies in a business-to-consumer setting, this research focusses on the impact of green marketing strategies on the satisfaction and loyalty of professional buyers in a business-to-business setting. Hypotheses were tested with survey data from 148 Dutch professional purchasers in the cleaning industry. The results emphasize the impact and importance of product quality, product price and corporate image. The most notable and strong impact on satisfaction and loyalty was found for the salesperson expertise.

KEYWORDS

environmental practice, green customer loyalty, green customer satisfaction, green marketing strategy, marketing strategy elements

1 | INTRODUCTION

For most companies, sustainability has become a business imperative, rather than a matter of choice (Ghosh, 2019). Environmental and social issues are high on the strategic agenda of many organizations. This study focusses on the environmental dimension of sustainability. New strategies are required to stay competitive in the marketplace and to achieve business sustainability (Suki, 2016). Quality of life of the future generations depends on the efforts of current generations to protect the environment. Professional purchasers are expected to buy green environmentally friendly products to contribute to a sustainable world and also to gain a green competitive advantage (Konuk, Rahman, & Salo, 2015).

Many industries have included green products to complete their product range or as an alternative to other 'non-green' products. Compared to other products, the business of green products is steadily increasing in the consumer market around the globe (Chan, He, & Wang, 2012). Companies have adopted a green marketing strategy as 'a set of marketing tools and elements, which allows firms to serve the target market (…) without harming the natural environment' (Eneizan & Wahab, 2016, p. 1). The majority of research on sustainability focusses on business-to-consumer (B2C) markets while largely ignoring business-to-business (B2B) markets. Sharma (2020) examined prior research in this area but found limited articles on sustainability in B2B markets. Surprisingly, limited research was found on elements and outcomes of the overall marketing strategy for sustainable products and services. Sharma (2020, p. 329) put out 'a strong call for further research into sustainable business-to-business marketing'.

Green marketing is an example of an environmental management practice, aimed at reducing or preventing negative impacts on the environment (González-Benito & González-Benito, 2005) and ideally oriented towards delivering the (green) product (or service) at the right price, place and time, regardless of the market (i.e. B2C; B2B;

business-to-retailer [B2R]; or business-to-government [B2G], as described by Rivera-Camino, 2007; Charter, Elvins, & Adams, 2004). Although critical questions have been posed regarding the concept of green marketing, and the lack of genuine contribution of this field to sustainability transitions (cf. Peattie & Crane, 2005), many recent studies have reported empirical evidence for the positive impact of environmental practices on business performance and corporate image (e.g. Hang, Geyer-Klingeberg, & Rathgeber, 2019; Mukonza & Swarts, 2020; Zubeltzu-Jaka, Erauskin-Tolosa, & Heras-Saizarbitoria, 2018). A meta-analysis of Tsai, Huang and Chen (2020) revealed that environmental practices are positively associated with firm performance, whereas the degree of association depends on contextual factors. In a related study, Hartmann and Vachon (2018) investigated the role of the industry context on the relationship between environmental management and performance. However, differences between consumer and business markets remain underexplored.

Suki (2016) investigated the influence of green brand knowledge, attitude towards green brand and green brand positioning on green product purchase intentions, in a B2C context. Also within a B2C setting, Suki (2017) investigated product quality, corporate image, store image and price as antecedents for customer satisfaction and loyalty. More in general, studies tend to focus on green buying behaviour in B2C markets, especially fast moving consumer goods (Konuk, Rahman, & Salo, 2015; Suki, 2017) and green services (Martinez, 2015). There seems to be a lack of focus on research investigating whether B2C findings also apply to the B2B context (Lim, 2016). One of the notable exceptions of green marketing studies in B2B context appears to be the study of Fraj, Martínez and Matute (2013), reporting on the role of environmental values and organizational culture in developing green marketing strategies.

Most studies on green procurement are grounded in the institutional theory (why firms engage in green buying) and the resource-based view (how firms gain competitive advantage through green buying) (cf. Blome, Hollos, & Paulraj, 2014). Literature has classified antecedents of green procurement into internal and external drivers (Ghosh, 2019). The adoption of green practices is often attributed to the need to gain societal legitimacy by complying with different external stakeholder pressures (e.g. Sarkis, Gonzalez-Torre, & Adenso-Diaz, 2010). The aim of our study is not to further investigate different pressures from different stakeholder groups, but to focus on the impact of green marketing strategies on the satisfaction and loyalty of business customers. Companies may adapt their strategy by employing green marketing elements aimed at the environmental needs and wants of customers (Cheema, Durrani, Khokhar, & Pasha, 2015). Little is known about the effectiveness of green marketing strategies in a B2B context, since most studies are positioned in a B2C context (e.g. Cheema, Durrani, Khokhar, & Pasha, 2015; Rakhsha & Majidazar, 2011; Ranaei Kordshouli, Ebrahimi, & Allahyari Bouzanjani, 2015; Suki, 2016). The focus on consumer goods seems odd considering that most of the environmental resources are used in the production and manufacturing of goods for B2B markets (Kapitan, Kennedy, & Berth, 2019).

The research question of this study is: What is the impact of green marketing on customer satisfaction and customer loyalty of professional buyers in a B2B setting? Based on a literature review, we developed a conceptual model with hypotheses that are tested with survey data collected from Dutch professional purchasers in the cleaning industry. The data analyses are done with partial least squares structural equation modelling (PLS-SEM).

2 | LITERATURE REVIEW

2.1 | Buying green products

Green products, also known as ecological and environmentally friendly products (Suki, 2017), aim at saving environmental resources, for example, by integrating recycled content or recycling in the production process (Chen & Chai, 2010). Today's global environmental problems (e.g. environmental degradation, global warming, resource depletion, air and water pollution and habitat destruction) trigger both consumers and professional purchasers to consider green alternatives in their purchasing behaviour (Hsieh, 2012; Martinez, 2015). Society has steadily increased its awareness of environmental issues, largely because of the high levels of environmental pollution caused by mass industrial manufacturing (Chen, 2011). Environmental concerns have become mainstream issues, urging companies to integrate sustainability into their (strategic) business activities (Molina-Azorín, Claver-Cortés, López-Gamero, & Tarí, 2009). At the same time, various stakeholders as government, media, citizen groups and other stakeholders pressure firms to act to these environmental issues while implementing their activities (Kang & Hur, 2012). People have become increasingly aware of the catastrophic ecological greenhouse gasses, resulting in global warming attributed partly to industrial activities (Chen, 2011). Therefore, more and more firms are prone to accept environmental protection as their social responsibility (Dwyer, 2009; Lee, 2009; Peattie, 1995). As a result, businesses started to adopt green marketing and procurement strategies (D'Souza, Taghian, Lamb, & Peretiatkos, 2006). Satisfying green customers with green products is at the heart of green marketing (Liu, Kasturiratne, & Moizer, 2012). Green product innovation has been recognized as an important issue for companies in both B2C and B2B markets.

Many studies have emphasized the critical role of supplier collaboration and supplier integration in green product innovation (e.g. Carballo-Penela, Mateo-Mantecón, Alvarez, & Castromán-Diz, 2018; Du, Zhang, & Feng, 2018; Melander, 2018). Within supply chain context, the integration of stakeholder pressure to become green or sustainable leads to further integrating practices of green supply chain management or sustainable supply chain management. Definitions and conceptualizations of green and sustainable supply chain management differ (e.g. Lambrechts, 2021); however, research has shown that environmental misconduct of supply chain partners negatively impacts the focal company's reputation (Veit, Lambrechts, Quintens, & Semeijn, 2018). It has also been shown that green supply

chain management has a positive impact on the environmental performance of companies (cf. Silva, Gomes, & Sarkis, 2019). Similar to the research regarding green marketing, the concept of green supply chain management remains understudied in B2B context (Hoejmose, Brammer, & Millington, 2012). Furthermore, aligning (green) marketing and (green) supply chain management, for example, through conceptualization of demand chain management is an important issue in enhancing green strategies (Brindley & Oxborrow, 2014), hence the importance to focus on buyer–supplier relations.

Green products are often perceived as low-value products that do not really deliver on their environmental promises (Chen & Chang, 2012). Professional buyers are unlikely to compromise on traditional product attributes such as, price, quality, value and performance. Green products should match up to the attributes from non-green products to be attractive to customers. Early research in this field, all incorporated a B2C context, recommend a wider range of sampling (other countries, other cultural values, other industries) and adding new variables/antecedents as possible drivers of green customer satisfaction (Chang & Fong, 2010; Martinez, 2015; Suki, 2017). The available research on the drivers of green B2B marketing focusses on a limited number of antecedents, that is, disasters, public opinion, legislation and scientific evidence, while only limited research exits on the impact of overall marketing strategy elements (cf. Sharma, 2020). This study focusses on the satisfaction and loyalty of professional buyers with green product offerings. More specifically, we will investigate the linkages between antecedents, green customer satisfaction and green customer loyalty in a B2B context.

2.2 | Green customer satisfaction and loyalty

Many studies have investigated antecedents and outcomes of customer satisfaction and customer loyalty. Satisfaction and loyalty are generally considered as critically important concepts for practical and theoretical purposes (e.g. Jamal, 2004). Prior research paid much attention to satisfaction and loyalty of consumers in general. Far less studies have investigated satisfaction and loyalty of professional purchasers in relation to green and environmental concerns (e.g. Ranaei Kordshouli, Ebrahimi, & Allahyari Bouzanjani, 2015). Chang and Fong (2010) introduced the concepts of 'green customer satisfaction' and 'green customer loyalty' that proved to be useful for studying green buying behaviour (e.g. Asgharian, Salehi, Saleki, Hojabri, & Nikkheslat, 2012; Cheema, Durrani, Khokhar, & Pasha, 2015; Ranaei Kordshouli, Ebrahimi, & Allahyari Bouzanjani, 2015; Saeednia & Valahzaghard, 2012).

Customer loyalty is most commonly referred to as a strong commitment to rebuy a product in the future (Oliver, 1999). The intention to repurchase positions loyalty from a behavioural perspective, whereas attitudinal loyalty emphasizes the emotional bond with and a strong preference for a certain brand or product (e.g. Uncles, Dowling, & Hammond, 2003). The attitudinal conceptualization is often preferred in research, since it 'goes beyond overt behaviour and expresses loyalty in terms of (…) affection' (Mechinda, Serirat, & Gulid, 2009, p. 131). This study will capture aspects of both behavioural and attitudinal loyalty (cf. Chang & Fong, 2010). Green customer loyalty refers to the customer's desire to maintain a relationship with an institute which has environmental or green concerns and the customer's commitment to rebuy a preferred product on a regular basis in the future (cf. Asgharian, Salehi, Saleki, Hojabri, & Nikkheslat, 2012; Chang & Fong, 2010). Similarly, we can define green customer satisfaction as an overall pleasurable fulfilment of some customer's needs, goals and desires about environmental or green concerns (cf. Chang & Fong, 2010). Exceeding or matching prior expectations is of critical importance for (green) customer satisfaction (e.g. Suki, 2017).

Many studies have investigated and confirmed a positive relationship between customer satisfaction and customer loyalty in industrial markets (e.g. Biedenbach, Bengtsson, & Marell, 2015; Butcher, Sparks, & O'Callaghan, 2002; Da Silva & Alwi, 2006; Elsäßer & Wirtz, 2017; Fornell, Mithas, Morgenson, & Krishnan, 2006; Gountas & Gountas, 2007; Zboja & Voorhees, 2006). Obviously, satisfied customers are more likely to rebuy a product or service compared to non-satisfied or less satisfied customers (e.g. Oliver, 1999). However, few studies have examined the positive effect of green customer satisfaction on green customer loyalty (Chang & Fong, 2010; Martinez, 2015). Although these results were found in a B2C setting, we expect a similar effect in a B2B context. We hypothesize:

H1. : Green customer satisfaction has a positive effect on the green customer loyalty of professional buyers in a B2B setting.

2.3 | Green product quality

The positive relationship between product quality in general and customer satisfaction has been confirmed in many empirical B2B studies (e.g. Cretu & Brodie, 2007; Elsäßer & Wirtz, 2017; Van Riel, De Mortanges, & Streukens, 2005). The underlying logic is simply that professional buyers are satisfied with high-performing products. Green product quality is reflected by its environmental characteristics and benefits (Ali, Khan, Ahmed, & Shahzad, 2011). Examples of green attributes are eco-labelling, non-polluting materials, recyclability, high energy conservation and a general assurance of limited environmental impacts (Tseng & Hung, 2013). According to Chang and Fong (2010), green product quality can be defined as 'the dimensions of product features, product design and product package that are involved in energy-saving, pollution prevention, waste recycling and being environmentally friendly' (p. 2839). Customer decisions are influenced by the knowledge of the quality of green products (cf. Mayer, 2013; Norazah, 2013; Suki, 2016). Studies have reported a direct impact on performance and a close link with green customer satisfaction and customer loyalty (e.g. Chang & Fong, 2010; Chen & Chang, 2013; Suki, 2017). Green product quality is therefore an important antecedent for green customer satisfaction:

H2. Green product quality has a positive effect on the green customer satisfaction of professional buyers in a B2B setting.

2.4 | Green product price

The green imperative has resulted in much awareness for environmental concerns. These concerns in their turn have contributed to an increased demand for green and eco-friendly products (e.g. Suki, 2016). Green products can be more costly (Agyeman, 2014), for instance, due to 'supplementary costs oriented on environment protection' (Cătoiu, Vrânceanu, & Filip, 2010, p. 119). Developing innovative green products allows companies to ask higher prices and to gain higher profits (Chen, Lai, & Wen, 2006). Many customers are willing to pay higher prices for green products, as long as this extra sacrifice is justified by sufficient extra value (e.g. Chen, 2010; Laroche, Bergeron, & Barbaro-Forleo, 2001; Ranaei Kordshouli, Ebrahimi, & Allahyari Bouzanjani, 2015). Obviously, not all customers are willing or able to pay more money for green or environmentally friendly products (Agyeman, 2014; Cheema, Durrani, Khokhar, & Pasha, 2015). Customers require price fairness, in the sense that the perceived (environmental) value matches a relatively high price (cf. Cătoiu, Vrânceanu, & Filip, 2010). Customers are less sensitive to price when a (green) product is believed to contribute to sustainable development. Organizational buyers are reluctant to pay high prices whenever they view green or recycled products, such as paper, to be of lower quality (Sharma & Iyer, 2012).

In this study, we follow Konuk (2018) who defines product price as 'the customer's assessment and associated emotions of whether the difference between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable' (p.142). Green product prices can play an ambiguous role in the purchasing process. A high price can be viewed as 'a high sacrifice' but at the same time as 'a cue for high quality' (Grewal, Monroe, & Krishnan, 1998). Given the customer intentions to obtain reliable information, including product price, about environmental concerns (Ganapathy, Natarajan, Gunasekaran, & Subramanian, 2014; Thongplew, Spaargaren, & Koppen, 2014), customers are willing to spend more money for environmentally friendly products and services as they understand their environmental knowledge influence their ecological behaviour (Juwaheer, Pudaruth, & Noyaux, 2012; Norazah, 2013). Goebel, Reuter, Pibernik, Sichtmann and Bals (2018) found that purchasing managers are willing to pay higher prices to companies that meet basis responsibilities to people and planet by complying with the United Nations Global Compact (UNGC) principles. We posit that professional purchasers are well aware of the logic and need for companies to ask higher prices for green products. We therefore hypothesize a positive association between green product prices and customer satisfaction and customer loyalty.

H3. Green product price has a positive effect on the green satisfaction of professional buyers in a B2B setting.

2.5 | Green corporate image

The corporate image of a company refers to a general impression, as perceived by its stakeholders (Dowling, 2004). The corporate image reflects the features of a company in the perception of stakeholders (Van Riel & Fombrun, 2007). Obviously, the green corporate image relates to environmental features of a company (Amores-Salvadó, Martín-de Castro, & Navas-López, 2014). A positive, strong green corporate image lays the foundation for the environmental legitimacy of companies (Chen, Lai, & Wen, 2006; Hunter & Bansal, 2006). Many studies reported that corporate image is positively linked to customer satisfaction and customer loyalty (e.g. Abdullah, Al-Nasser, & Husain, 2000; Chang & Fong, 2010; Chang & Tu, 2005; Martenson, 2007; Park, Robertson, & Wu, 2004; Suki, 2017; Zins, 2001), and it increases also sales revenue and competitive advantage (e.g. Chen, 2008; Chen, Lai, & Wen, 2006; Hu & Wall, 2005; Porter & van der Linde, 1995).

Green corporate image will be especially important in industries 'where business activities have important social and negative environmental externalities' (Amores-Salvadó, Martín-de Castro, & Navas-López, 2014, p. 358). Although we expect many positive effects of a green corporate image, only limited research has shown a positive impact of green corporate image on customer satisfaction and customer loyalty (cf. Bathmanathan & Hironaka, 2016). Companies in these environmentally sensitive industries will put much effort in communicating to their customers that environmental issues are properly dealt with.

Professional purchasers represent organizations, although they are also individuals, seeking not only organizational performance but also their own personal and professional success (Webster & Keller, 2004). Industrial buyers may therefore be sensitive to brands and corporate image (Viardot, 2017). Professional buyers are on alert for greenwashing, that is, when a supplier spends more time, energy and money in claiming to be green instead of taking actual sustainability initiatives (Kapitan, Kennedy, & Berth, 2019). Greenwashing is an example of misleading communication, aimed at forming overly positive attitudes of various stakeholders (Torelli, Balluchi, & Lazzini, 2020) about an organization's environmental performance, practice or products (Lyon & Montgomery, 2015). Companies may be tempted to engage in greenwashing to obtain legitimacy and to improve perceived corporate environmental responsibility (e.g. Torelli, Balluchi, & Lazzini, 2020). Purchasers often have to rely on their own subjective perceptions concerning suppliers' actual sustainability (e.g. Chamorro, Rubio, & Miranda, 2009; Simula, Lehtimäki, & Salo, 2009). In general, the perceptions of professional purchasers about environmental and social sustainability have a major impact on organization buying decisions (cf. Kapitan, Kennedy, & Berth, 2019). We propose the following hypotheses:

H4. Green corporate image has a positive effect on the green customer satisfaction of professional buyers in a B2B setting.

2.6 | Salesperson's green expertise

Interpersonal trust and salesperson expertise are critical in developing successful B2B relationships (cf. Newell, Wu, Leingpibul, & Jiang, 2016). Personal selling and personal relationships are important in a B2B context. Marketing outcomes, such as customer satisfaction, can be positively influenced by the personality of the salesperson (cf. Elsäßer & Wirtz, 2017). Professional purchasers often communicate and deal with sales representatives. These B2B salespersons obviously need a certain level of knowledge and expertise to influence and convince professional buyers (e.g. Crosby, Evans, & Cowles, 1990; O'Hara, Netemeyer, & Burton, 1991; Tsai, Chin, & Chen, 2010). A salesperson's expertise is reflected by the effectiveness of the solutions to buyer problems that may require specialized knowledge and experience of the salesperson (cf. Liu & Leach, 2001). Salesperson's expertise forms a key component in building trust and loyalty in long-lasting B2B relationships. Within the context of green products, salespersons should be knowledgeable about different features and aspects of supplier's green products. Remarkably, the salesperson's green expertise has not been investigated as an antecedent for customer satisfaction and customer loyalty. As salespersons in the B2B markets are an important link between companies and their customers, it is expected that when a salesperson has sufficient professional expertise (knowledge, skills and abilities) about the green products, he or she could probably influence customer's green behavioural intentions/loyalty. Therefore, the following hypothesis is conducted:

H5. Salesperson's green expertise has a positive effect on the green customer satisfaction of professional buyers in a B2B setting.

Figure 1 shows the conceptual model and the hypotheses resulting from our literature review.

3 | METHODOLOGY

3.1 | Data collection and sample characteristics

Data collection took place through a survey among purchasing managers employed at Dutch manufacturing companies that recently bought (cleaning-related) green products. The sample frame was made available by a customer resource management (CRM) database of a large global operating and leading manufacturer of cleaning products, located in the Netherlands. The database captures data of a broad variety of customers who purchase cleaning-related products, for example, cleaning companies, holiday resorts, theme parks, restaurants and hotels. The reason for choosing this specific target population is that the cleaning industry involves a wide range of choice in several types of products, often chemicals or detergents, available as both traditional products (non-environmentally friendly) and green products (environmentally friendly). The cleaning industry is therefore an appropriate setting for administrating a questionnaire to professional buyers.

Professional purchasers perform boundary spanning functions which implies a crucial position when it comes to selecting green(er) products and contracting environmentally sensitive suppliers (Blome, Hollos, & Paulraj, 2014). Procurement managers can play a crucial role in the development and implementation of green procurement strategies, reducing the negative impact of products on the environment (Ghosh, 2019). B2B buyers are often ill-informed about the actual sustainability of their suppliers. Professional buyers develop and rely on their own subjective perceptions of suppliers' sustainability (Kapitan, Kennedy, & Berth, 2019).

A total of 500 customers who bought (cleaning-related) green products in the 12 months prior to the survey were selected from the CRM database and invited to participate in the survey. A total of 154 responses were received, resulting in a gross response rate of 31%. After the pre-data analysis, 148 respondents remained useful

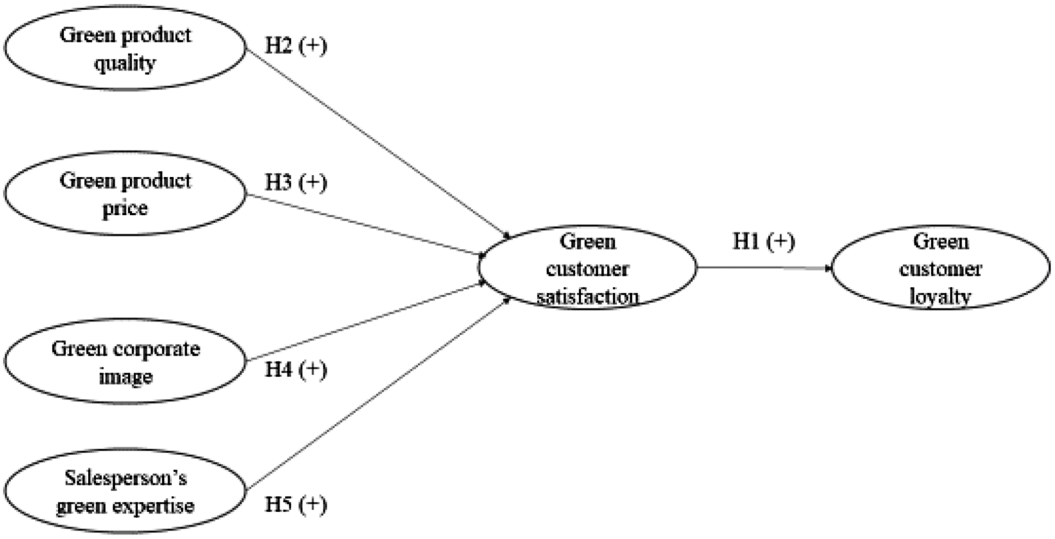

FIGURE 1 Conceptual model

for analysis (net response rate of 30%). Six records were removed since they were incomplete or contained monotone answers.

Table 1 displays the demographic profile of the 148 respondents. The female respondents outnumbered the male respondents by 20 persons (64 males = 43% vs. 84 females = 57%). Almost 50% of the respondents is aged between 46 and 60 years, and 40% is aged between 26 and 45 years. If we take a look at the educational level of the respondents, 85% of the respondents have at least a secondary vocational degree (39% secondary vocational education; 43% higher vocational education; 4% academic master's degree). The remaining 14% attained a more general secondary education.

3.2 | Measures

A questionnaire was developed to measure the variables in the conceptual model and to test the hypotheses of this study. A draft version of the questionnaire was pretested on a small number of respondents. The questionnaire was developed by adopting validated multiple-item scales from previous research. When necessary, some items were slightly adapted to the (green and B2B) context of this study. Another important fact to mention is that there are no questions about a specific brand but just a green brand of a company that is in the mind of the customer. This favours validity and generalizability. All six model constructs were measured on 5-point Likert scales, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

TABLE 1 Socio-demographic profile of respondents

Characteristic	Frequency	Percentage
Gender		
Male	64	43.2
Female	84	56.8
Total	148	100
Age		
<25 years	1	0.7
26–45 years	59	39.9
46–60 years	71	48.0
>60 years	17	11.5
Total	148	100
Educational level		
Pre-vocational sec. education	18	12.2
Higher general sec. education	2	1.4
Pre-university education	1	0.7
Sec. vocational education	57	38.5
Higher vocational eduction	64	43.2
Academic master's degree	6	4.1
Total	148	100

3.2.1 | Green customer loyalty

Green customer loyalty refers to three dimensions of behavioural intentions, namely, purchase intentions, word-of-mouth intentions and willingness to pay (premium). These three dimensions of behavioural intentions were used to reflect green customer loyalty, which was measured through three validated items from Suki (2017), Chang and Fong (2010) and Reid and Reid (1993).

3.2.2 | Green customer satisfaction

Green satisfaction is about satisfying/achieving customer's environmental desires, sustainable expectations and green needs. To measure this variable, six validated items of earlier studies are adopted (Chang & Fong, 2010; Chen & Chang, 2013; Suki, 2017).

3.2.3 | Green product quality

The literature review revealed that green product quality is about a product dimension of features, design and package that are involved in energy saving, pollution prevention, waste recycling and being environmentally friendly. To measure this variable, four validated items of past research were used (Chang & Fong, 2010; Suki, 2017).

3.2.4 | Green product price

Green product price is defined as the customer assessment and associated emotions of whether the difference between a seller's price and the price of a comparative other party is reasonable, acceptable or justifiable. To measure this variable, three validated items from earlier studies were adopted (Konuk, 2018).

3.2.5 | Green corporate image

Green corporate image is defined as the perceptions developed from the interaction among the institute, personnel, customers and the community that are linked to environmental commitments and environmental concerns. To measure this variable, four validated items from past research were adopted (Chang & Fong, 2010; Suki, 2017).

3.2.6 | Salesperson's green expertise

Green expertise of a salesperson is defined as the level of (product) knowledge, skill and ability of a salesperson, regarding green products. To measure this variable, four validated items from research by Tsai, Chin and Chen (2010) were adopted, as this research describes salesperson's expertise nearly identical (the only difference is a non-green marketing context).

Appendix 1 provides an overview of all items' wordings.

3.3 | Data analysis

Since our main aim is to identify the most important antecedents of our target constructs green customer satisfaction and green customer loyalty, PLS-SEM is a more appropriate approach analysing our data than CB-SEM, the latter which is primarily used to confirm or reject theories (Sarstedt, Ringle, Smith, Reams, & Hair, 2014). Non-normality of our data and the use of a small sample size further favour the use of PLS-SEM since PLS-SEM makes practically no assumptions about the underlying data and generally achieves higher levels of statistical power in spite of a limited sample size (Hair, Hult, Ringle, & Sarstedt, 2017).

4 | RESULTS

We controlled our results for age, level of education and gender and concluded that these socio-demographic variables did not have a significant influence in predicting our target variable green customer loyalty and, therefore, were left out of further analysis.

4.1 | Assessing the measurement models

In the first stage of our evaluation, we assess the measures which in our study are all reflectively measured constructs. All indicator loadings are well above the threshold value of 0.70, except for indicator Quality3 (loading: 0.675). Indicator Quality3, however, is retained in our analysis since indicators with outer loadings between 0.40 and 0.70 should be removed only when deleting the indicator leads to an increase in the composite reliability (CR) and/or the average variance extracted (AVE) above the suggested threshold value (Hair, Hult, Ringle, & Sarstedt, 2017). Since Cronbach's alpha values and CR for all constructs, including green product quality and all AVE values already are above the threshold value of 0.70 and 0.50, respectively, it is suggested to retain the item. As a result, indicator reliability, internal consistency reliability and convergent validity are considered satisfactory. See Appendix 2.

Next, we examine the discriminant validity of our constructs. A conservative indication for discriminant validity is provided by the Fornell and Larcker (1981) criterion. As can be concluded from Table 2, the Fornell and Larcker (1981) criterion has been met, suggesting satisfactory discriminant validity. Another approach to assess discriminant validity is to examine the HTMT values (Henseler, Ringle, & Sarstedt, 2015), which are also provided in Table 2. From Table 2, it can be seen that all HTMT values are well below the suggested threshold value of 0.85, providing further evidence of discriminant validity.

4.2 | Assessing the structural model

For assessing our structural model for potential collinearity issues, we evaluate the inner variance inflation factor (VIF). Inner VIF values in our study range from a minimum of 1.000 to a maximum of 1.582. Since these inner VIF values are well below the suggested threshold value of 5 (Hair, Hult, Ringle, & Sarstedt, 2017), there is no indication for potential collinearity between the measurement models. Therefore, we continue assessing the model's quality by reviewing the coefficient of determination (R^2) and the structural path coefficients (betas). The R^2 values for green customer satisfaction and green customer loyalty are 0.541 and 0.605, respectively (see Figure 2) and may be considered moderate (Hair, Hult, Ringle, & Sarstedt, 2017; Sarstedt, Ringle, Smith, Reams, & Hair, 2014). Table 3 includes the strength and significance of the structural path coefficients. Table 3 shows that all structural relationships are found significant.

Besides the direct effects as summarized in Table 3 and presented in Figure 2, we also consider the total effects of the four exogenous constructs on the endogenous target construct green customer loyalty (see Table 4). The total effect represents the total influence of an exogenous construct on the target construct, thus including the influence through mediating construct green customer satisfaction. The results indicate that green customer satisfaction is a crucial mediator in the effects of the four antecedents on green customer loyalty.

Evaluating the total effects 'provides a richer picture of the relationships in the structural model' (Sarstedt, Ringle, Smith, Reams, & Hair, 2014, p. 110). Considering the total effects the important role of

TABLE 2 Discriminant validity of latent variables

	1	2	3	4	5	6
1 Green corporate image	**0.804**	0.582	0.6640.664 664	0.535	0.238	0.630
2 Green customer loyalty	0.491	**0.870**	0.518	0.549	0.562	0.869
3 Green product price	0.554	0.437	**0.876**	0.466	0.263	0.543
4 Green product quality	0.422	0.435	0.366	**0.742**	0.180	0.477
5 Salesperson's green expertise	0.213	0.498	0.232	0.110	**0.883**	0.643
6 Green customer satisfaction	0.530	0.747	0.463	0.384	0.572	**0.767**

Note: On the diagonal (in **bold**) the square root of the AVE values; below the diagonal the correlations; above the diagonal the HTMT values.

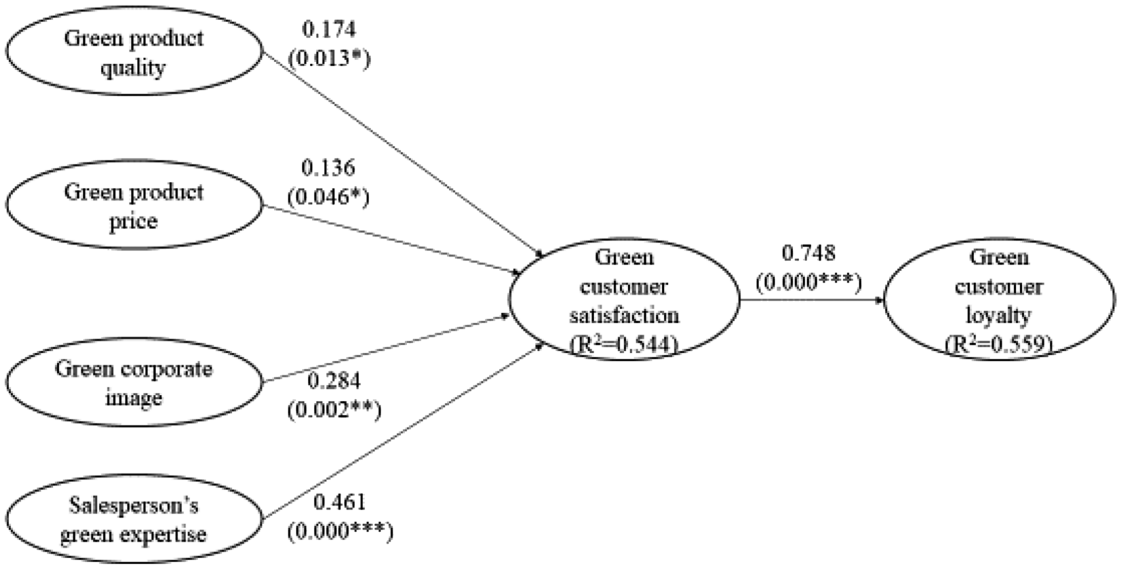

FIGURE 2 Structural model results

TABLE 3 Structural path coefficients and hypothesis testing

Hypothesis	Path	Beta	*t*-Value	Significance	Supported
H1	Green customer satisfaction → green customer loyalty	0.748	25.853	***	Yes
H2	Green product quality → green customer satisfaction	0.174	2.474	*	Yes
H3	Green product price → green customer satisfaction	0.136	1.994	*	Yes
H4	Green corporate image → green customer satisfaction	0.284	3.053	**	Yes
H5	Salesperson's green expertise → green customer satisfaction	0.461	8.163	***	Yes

Abbreviation: n.s. = non-significant.
***$p \le 0.001$, **$p \le 0.01$, *$p \le 0.05$.

TABLE 4 Total effects of exogenous constructs on green customer loyalty

Path	Total effects
Green corporate image → green customer loyalty	0.233***
Green product price → green customer loyalty	0.126*
Green product quality → green customer loyalty	0.248***
Salesperson's green expertise → green customer loyalty	0.392***

***$p \le 0.001$, **$p \le 0.01$, *$p \le 0.05$.

a salesperson's (green) expertise in a B2B context is underlined as well as a (green) product's quality. (Green) product price, though significant, is less dominant in predicting (green) customer loyalty.

An evaluation of the f^2 effect sizes confirms these results. The f^2 effect size shows the change in the R^2 value when an exogenous construct is omitted from the model. The f^2 effect sizes as shown in Table 5 indicate that salesperson's green expertise has the most substantive impact on green customer satisfaction, followed by green corporate image, green product quality and green product price, respectively. According to the guidelines for assessing the f^2 effect sizes, the impact of salesperson's green expertise is large, and the impact of green corporate image is medium. Green product quality and green product price represent a small impact on green customer satisfaction.

To assess what exogenous construct has the largest predictive relevance for our endogenous construct 'green customer satisfaction', we calculated the q^2 effect sizes (see Table 5). The q^2 effect sizes shown in Table 5 confirm our earlier findings that salesperson's green expertise is most relevant in predicting green customer satisfaction,

TABLE 5 Effect sizes for green customer satisfaction

	f^2 effect sizes	q^2 effect sizes
Green corporate image	0.112	0.04
Green product price	0.027	0.01
Green product quality	0.053	0.02
Salesperson's green expertise	0.436	0.17

followed by green corporate image, green product quality and green product price (in that order).

We also examined the Q^2 values for our two dependent constructs 'green customer satisfaction' and 'green customer loyalty'. Q^2 values provide an indication for the path model's predictive relevance for a specific reflective endogenous latent variable. Positive Q^2 values suggest that the path model is relevant for predicting a particular target construct. The Q^2 values in our study (using omission distance D = 7) for the reflective endogenous constructs green customer satisfaction and green customer loyalty are 0.313 and 0.414, respectively, and suggest that our model has predictive relevance.

5 | DISCUSSION

Our study provides insights into the structural linkages of product quality, product price, corporate image and salesperson's expertise on customer satisfaction in a green and B2B context. This study contributes in a number of ways to the current body of knowledge on the antecedents of green customer satisfaction of professional buyers in a B2B setting. First, our research has indicated a significant positive association between customer satisfaction and customer loyalty (H1 supported). This result is in line with other studies that also found significant relationships between green satisfaction and green loyalty (e.g. Chang & Fong, 2010; Martinez, 2015; Suki, 2017). Literature posits that customer satisfaction is an essential step in loyalty formation (e.g. Oliver, 1999). The results of our study suggest that customer satisfaction is a crucial mediator in the effects of marketing variables on customer loyalty in B2B context.

This study found that product quality is positively associated with satisfaction (H2 supported). These findings are consistent with studies in B2C setting (Chang & Fong, 2010; Chen & Chang, 2013; Suki, 2017), which implies that product quality has a direct significant influence on satisfaction. Besides satisfaction and salesperson's expertise, product quality is indicated as the third important antecedent of loyalty in our study. To achieve higher levels of satisfaction and loyalty, product quality should be improved to the highest level.

Another important finding of this study is that product price has a positive significant relationship with satisfaction and (H3 supported). Similar results were reported in Suki (2017) and Konuk (2018). Given the total effect results of the exogenous constructs, including green product price, we are inclined to conclude that product price (fairness) is an important driver of satisfaction. However, compared to the other constructs, product price is the least important antecedent of satisfaction in our model. Still, the importance of product price should not be underestimated in the B2B context, as professional buyers are willing to pay more for green products of high quality (e.g. Goebel, Reuter, Pibernik, Sichtmann, & Bals, 2018), yet price negotiations form an important task their strategic role in the company. To achieve higher levels of satisfaction, product prices have to be fair, acceptable and reasonable.

Many studies confirmed that corporate image is positively linked to customer satisfaction (Abdullah, Al-Nasser, & Husain, 2000; Zins, 2001; Park, Robertson, & Wu, 2004; Chang & Tu, 2005; Martenson, 2007; Chang & Fong, 2010). The results of our study support the positive association between green corporate image and green customer satisfaction (H4 supported). To achieve higher levels of satisfaction, corporate image should be improved and compliant to the green context (with respect to environmental issues, innovation, social responsibility, ethics, regulations and sustainable development).

The study found a strong, positive and significant relationships between salesperson's expertise and the satisfaction of professional buyers (H5 supported). It shows the importance of suppliers' sustainability profile and positioning in B2B context, as outlined by Kapitan, Kennedy and Berth (2019). The link between the professional buyer and salesperson's expertise is rarely included in customer satisfaction studies, and certainly not in this specific green context. According to our study, a salesperson with greater green expertise will directly affect customer satisfaction. This study indicated that the rare and novel construct salesperson's expertise is the most important driver for green customer satisfaction in our model. This implies that professional purchasers are not immune to the efforts of experienced salespersons. The green product knowledge of salesmen directly affects customer satisfaction.

From a conceptual perspective, our study contributes to the body of knowledge by confirming the importance of genuine green marketing efforts in a B2B context in order to prevent (being accused of) greenwashing (e.g. Kapitan, Kennedy, & Berth, 2019). Furthermore, our results, and more specifically the relationships between professional buyer and supplier in green marketing context, point towards the importance of integrating both the marketing and supply chain management in order to capture both perspectives (e.g. Brindley & Oxborrow, 2014; Chan, He, & Wang, 2012), for example, through the conceptualization of 'green' or 'sustainable' demand chain management.

Furthermore, in interlinking the buyer and supplier perspective, our results support the call of both the marketing and supply chain domain for holistic approaches and interpretations of green and sustainable management practices and policies (e.g. Chan, He, & Wang, 2012; Lambrechts, 2021). Such calls for holistic approaches are in line with Elkington's (2018) critical account regarding the limited views in which his triple bottom line has been integrated in business.

6 | CONCLUSIONS

In recent years, business ethics, environmental issues, sustainable development and social responsibility have become more important

than ever for companies (Chen, 2011; Dwyer, 2009; Lee, 2009; Lim, 2016; Peattie, 1995). However, almost no studies to date investigated the effects of possible drivers for satisfaction and loyalty in a green and B2B context. The purpose of this study was to examine the influences of green marketing strategy elements (i.e. green corporate image, green product price, green product quality and salesperson's green expertise) on satisfaction in the B2B context. The results provided support for our hypotheses. The four antecedents (quality, price, corporate image and salesperson's expertise) all demonstrated positive significant relationships with green customer satisfaction. As expected, we found a strong positive relationship between green customer satisfaction and green customer loyalty in B2B context.

7 | RECOMMENDATIONS FOR PRACTITIONERS

The findings have practical relevance for companies and organizations. In addition, policymakers and regulatory agencies could benefit from the results of our study. In addition to the development and implementation of regulations, these agencies could acknowledge the impact of green marketing on (industrial) customers. Enhanced awareness about the environment is a necessary, but not a sufficient condition for enhanced green buying behaviour in business markets. Professional buyers can be stimulated to (repeatedly) buy green products through the green marketing efforts of their suppliers. Regulatory bodies could try to help and motivate companies to develop and implement green marketing as an environmental management practice.

The implementation of environmental management practices is often regarded among practitioners as the fulfilment of a need to comply with rules and regulations. Our study posits the idea that professional buyers can be seduced and convinced to buy green by the marketing efforts of supplying companies. Moreover, our study confirms that both professional sellers and professional buyers have an important role in the pursuit of environmental practices by companies in B2B settings. Our study underlines the need for and the effectiveness of green marketing for environmental purposes. Many environmental issues and problems appear to be 'deeply rooted in the human behaviour' (Mukonza & Swarts, 2020, p. 843). Green marketing is a viable and promising approach to change professional buying behaviour that reduces its impact on the environment.

Companies should acknowledge that they are influenced by the marketing efforts of their suppliers. Professional buyers may be inclined to think that they are in the position to 'manage suppliers' and to 'develop suppliers'. The reality is most commonly less clear-cut. Whether consciously or unconsciously, buyers will always be the marketing target of supplying companies. Our results confirm that a green marketing strategy may actually contribute to the (green) satisfaction of the professional purchaser. The personal attention from a competent and knowledgeable salesperson appears to be quite effective and influential when it comes to satisfaction and loyalty. Purchasers should therefore be aware of the behaviour of suppliers as external drivers for green procurement in general and for satisfaction and loyalty in particular.

The findings clearly confirm the effectiveness of green marketing. A green image and a green product quality contribute significantly to the satisfaction of their customers. Even a positive relationship was found between prices and satisfaction, indicating that buyers are willing to pay higher prices for green(er) products of high quality. Most importantly, even in a digital age where online tools are predominantly present, suppliers should not underestimate the importance of their salesforce. The human factor in B2B relationships, as represented by the knowledge and experience salespersons, appears to be decisive in satisfying the green needs and requirements of their customers. Companies should realize that customer satisfaction is the key for any (improvement of) customer loyalty.

8 | LIMITATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

This study has several limitations which could stimulate scholars to set up further research. First, the survey was restricted to purchasing professionals of buying companies. A dyadic study design could capture the experience and views of buyers and suppliers. Another limitation is the cross-sectional nature of the data collection. Longitudinal studies are more appropriate to investigate the causalities in our conceptual model. A different research approach, such as an experimental design, could also be employed to test the hypothesized causalities. The sample frame was further restricted to companies that were customer of a supplier of green cleaning-related products for facility businesses in the Netherlands. Future studies could be set up on a larger scale with a broader sample composition, including other industries and other countries.

Second, this study introduced a new construct: salesperson's green expertise, which was adapted from Tsai, Chin and Chen (2010) who used the 'salesperson's expertise' in a non-green and non-consumer context. The salesperson's green expertise construct needs further validation in future studies.

Third, we investigated the impact of green marketing on (green) customer satisfaction of professional buyers in a B2B setting. Future research could focus on the role of managerial and personal attitudes towards the environment and their impact on environmental buying behaviours (cf. Knight, Megicks, Agarwal, & Leenders, 2019). Most commonly, organizational buying behaviour has been considered 'a rational activity, even though humans are involved in the decision-making' (Kemp, Borders, Anaza, & Johnston, 2018, p. 19). As a result, personal attitudes and emotions are largely overlooked and understudied in research on organizational buying behaviour. Here are promising avenues for further research in the area of green marketing and green customer satisfaction in B2B markets.

Fourth, in most studies, quality usually consists out of a service quality aspect and a product quality aspect. In this study, we primarily

focussed on product quality which gives other researchers the possibility to take the service quality aspect into account for future research. A related suggestion is to include the variable 'trust'. In other green (B2C) studies, trust proved to be an important influencer of loyalty (Konuk, 2018; Konuk, Rahman, & Salo, 2015; Martinez, 2015). We focussed on the impact of the green marketing strategy elements on customer satisfaction. Other performance variables could be included, such the green core competence and the competitive advantage of companies (cf. Chen, 2008). Future research could also incorporate and investigate the influence of social sustainability (cf. Lim, 2016), for example, social aspects such as labour conditions, charity and sponsorships. To conclude, there are still many other factors which can influence the satisfaction of professional buyers; therefore, we recommend adding new variables as possible drivers of green customer satisfaction.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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APPENDIX 1: LATENT VARIABLES AND THEIR MEASUREMENT ITEMS

Latent variable	Items
Green customer loyalty[e]	I will continue to do shopping with this company
	I am willing to recommend my family, friends and business relations to do shopping with this company
	I can accept the higher price for green products, even though the price of other (non-green) products is cheaper than that of green products
Green customer satisfaction[d]	I am satisfied with my decision to purchase the green products of this company
	I am glad to purchase the green products of this company
	I believe that I do the right thing in purchasing these green products
	I feel that I contribute to the environmental protection and sustainable development
	Overall, I am glad to buy this product because it is environmentally friendly
	Overall, I am satisfied with this product because of its environmental concern
Green product quality[a]	The products of this company meet or exceed the requirements of environmentally regulations
	The products of this company consume the least amount of resources and energy
	The products of this company are easy to recycle, disassemble, decompose and reuse
	The products of this company result in minimum environment damage
Green product price[b]	The price of this green product is acceptable
	The price of this green product is fair
	The price of this green product is reasonable
Green corporate image[a]	The green products of this company are credible and stable
	This company has sufficient abilities to meet the green needs of customers
	This company has a fine environmental reputation
	This company has excellent performance with respect to environmental management and green innovation
Salesperson's green expertise[c]	The salesperson of this company possesses green expertise
	The salesperson of this company is knowledgeable about green products
	The salesperson of this company can give a detailed explanation of the green product
	The salesperson of this company can give customers professional advice about green products

Note: Items are adapted from [a]Suki (2017); Chang and Fong (2010); [b]Konuk (2018); [c]Tsai, Chin, and Chen (2010); [d]Suki (2017); Chang and Fong (2010); Chen and Chang (2013); [e]Suki (2017); Chang and Fong (2010); Reid and Reid (1993).

APPENDIX 2: VARIABLES, ITEMS, LOADINGS, RELIABILITY AND VALIDITY

Latent variable	Item	Loading	CR	Cronbach's α	AVE
Green customer loyalty	Loyalty purchase intentions	0.900***	0.903	0.840	0.757
	Loyalty WOM	0.883***			
	Loyalty WTP	0.826***			
Green customer satisfaction	Satisfaction1	0.822***	0.895	0.860	0.588
	Satisfaction2	0.772***			
	Satisfaction3	0.741***			
	Satisfaction4	0.751***			
	Satisfaction5	0.738***			
	Satisfaction6	0.774***			
Green product quality	Quality1	0.739***	0.830	0.728	0.550
	Quality2	0.794***			
	Quality3	0.683***			
	Quality4	0.747***			
Green product price	Price1	0.891***	0.908	0.848	0.767
	Price2	0.843***			
	Price3	0.893***			
Green corporate image	CorporateImage1	0.748***	0.880	0.819	0.647
	CorporateImage2	0.818***			
	CorporateImage3	0.826***			
	CorporateImage4	0.824***			
Salesperson's green expertise	Salespersons Expertise1	0.847***	0.934	0.905	0.779
	Salespersons Expertise2	0.911***			
	Salespersons Expertise3	0.904***			
	Salespersons Expertise4	0.868***			

Abbreviations: AVE = average variance extracted; CR = composite reliability.
***$p \le 0.001$, **$p \le 0.01$, *$p \le 0.05$.