Sustainable Entrepreneurship: Does a Sustainable Value Proposition Increase Consumers' Acceptance of a New Service?

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Abstract

The main purpose of this study is to verify whether the communication of sustainable attributes for a new service increases the likelihood of adoption and consumers' service evaluation. The hypotheses formulated were tested by means of a survey where participants evaluated the service based on different messages (sustainable vs. functional attributes). The results showed no significant difference in the type of information displayed on the likelihood of adoption or the evaluation of the service. The fact of including sustainable attributes in the value proposition did not increase individuals' preferences towards the service. I discuss these findings and propose directions for future research.

Keywords: sustainable entrepreneurship, sustainable consumption, value proposition, communication consumer behaviors

Resumo

Este estudo tem como principal objectivo verificar se a comunicação dos atributos sustentáveis de um novo serviço aumenta as suas taxas de adopção e avaliação por parte dos consumidores. As hipóteses formuladas foram testadas através de um questionário no qual os inquiridos avaliaram um serviço com base em diferentes mensagens (atributos sustentáveis vs. funcionais). Os resultados mostraram não haver nenhum efeito significativo do tipo de informação exibido na adopção ou na avaliação do serviço. O facto de incluir atributos sustentáveis na sua proposta de valor não aumentou as preferências do indivíduo em relação ao serviço. Eu discuto estas conclusões e proponho direcções para estudos futuros.

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INTRODUCTION

Currently, there is a global agenda which is focused on the implementation of sustainable practices across all sectors of society. The business community is very important in spreading and promoting them. Growing concerns about the way our capitalist societies and economies work (Porter and Kramer, 2011), including its institutions and organizations, might help explain the growing interest within academic literature and the entrepreneurial field in exploring alternative and environmentally responsible business models (Schaltegger, Lüdeke-Freund and Hansen, 2016). However, these issues do not necessarily translate into consumers' purchasing behavior as they often struggle to identify what products are actually less environmentally impactful (Young et al., 2010). Due to this new paradigm, companies have to find new communication strategies to facilitate the introduction of their products in order to allow consumers to learn about their key benefits (Houssi, Morel and Hultink, 2005). Therefore, in order to bring both products and consumers closer together, a crucial aspect of a business model that serves the purpose of engaging with customers is its value proposition (Baden-Fuller and Mangematin, 2013), as the acceptance of a new product is highly dependent on the perception of its advantages by the consumer (Cooper and Kleinschmidt, 1995; Hultink and Robben, 1999).

A great driver of change and progress in the business world is entrepreneurship (Bocken, 2015). With the growth and dynamism of the start-up landscape, there are many companies that grew successfully by introducing changes in the market they entered, or even disrupt it (for instance: Airbnb, Uber, Spotify) (Guttentag, 2013; Chase, 2012; Swanson, 2013). Among these new innovative companies there are entrepreneurs who build their businesses around social or environmental issues, presenting solutions to tackle them (Schaltegger, et al., 2016). Hence, sustainable entrepreneurship comprises new companies that include in their business models practices that contribute to the sustainable development of society. However, these businesses often struggle to gain market share from their competitors as they have new products or services that the mainstream public is not familiarized with (Bohnsak and Pinkse, 2017). The fact that consumers find it difficult to understand the link between new products' attributes and its benefits (Hoeffler, 2003) poses the need to find new ways of effectively communicating them.

The innovation literature addressed the issue of communicating new products. Hoeffler (2003) argues that really new products differ from incrementally new products, in the sense that having some knowledge is crucial for consumers to assess properly how important are the new benefits and make trade-offs that reflect the utility of the product's attributes. The author proposes modifications to existing research techniques in order to enhance the predictive accuracy of preference measurement for really new products. Moreover, a follow on study (Houssi, Morel and Hultink, 2005) compares two different techniques of communicating a new product's distinctive benefits, through analogies and through literal similarity comparisons. They concluded that, although no differences were verified between both approaches in terms of increased consumer preference, they found a positive effect of benefit comprehension on product preference. More recently Bohnsack and Pinkse, (2017) suggested that, in order to improve the acceptance of new products' attributes by mainstream customers a company may use certain tactics of reconfiguration of their value proposition. It is argued that, because new, disruptive technologies underperform on attributes that customers value most, it is still challenging to enter successfully in the mainstream market. However, if communicated in the right way the introduction of these products in the market may be improved. In sum, the main idea drawn from the aforementioned research is that new products that have attributes not very familiar to the general public require a different strategy of communication that facilitates the learning of its key benefits.

Considering that the sustainability topic, as a new and emerging field of research, has many domains that are yet to be investigated (Schaltegger et al., 2013), this study addresses the topic of sustainable consumption. Within this topic, there are three areas that require further development: the inconsistency between attitudes and behaviors of consumers, the role of individual citizens in society, and a macroinstitutional approach to fostering sustainability (Prothero et al., 2011). This work looks at behavioral attitudes. As several researchers have identified some contributing factors that explain the attitude-behavior gap (Vermeier and Verbeke, 2006), there are the negative inferences about the functional performance of sustainable products (Luchs et al., 2010). As such, this work assesses how a sustainable service may position itself in the market in order to reduce this gap among consumers. The relevance of this study is also reinforced by the fact that the majority of consumer behavior

researchers have focused on the consumption of packaged goods and other relatively low-involvement products (Prothero et al., 2011). To use a high involvement product I will target a moto-sharing service, which has some features that characterize it as such (complex technical features and great differences from alternative products). This way, extending research into a different context will generate new knowledge on consumption behaviors and the factors that influence them.

The aim of this study is to understand what would be the most effective way to communicate the attributes of a new service that has a sustainable component, apart from its other benefits. With this, I expect to increase the knowledge about how to introduce in a more effective way a new service in the market, helping companies to increase their products acceptance. I explore which of two different sets of attributes, one solely including the functional attributes and the other with both the functional and the sustainable attributes, have a greater impact on the attitude of consumers towards the service. The sets of attributes tested refer to a recent moto-sharing service named 'eCooltra'. This service started operating in Lisbon on April 2017 and it presents itself as an innovative, sustainable service that aims to reduce the environmental impact of mobility inside the city. As stated previously, the field of sustainable consumption and in particular the attitude-behavior gap is still understudied. Hence, by extending this research to a new context, I intend to propose new explanatory factors and to help identify differences in the degree and nature of the sustainability attitude-behavior gap (Prothero et al., 2011), mainly at the communication level.

The final aim of this research is to make recommendations for future companies that may launch a new and, at the same time, sustainable service, thus helping them to understand what attributes they should focus on when communicating their product. I argue that, for 'eCooltra', its positioning in the market could focus on giving more emphasis to its sustainable benefits.

LITERATURE REVIEW

Within the recent business literature there has been a growing interest about sustainability and its implications to the managerial field. For instance, previous research (Azapagic, 2003) focused on large corporations' opportunities through corporate sustainability, proposing a framework to introduce, in a systematic and structured way, sustainability thinking into corporate practice. Other authors dedicated their research to the study of entrepreneurial and start-up areas. For instance, addressing the issue of sustainability-driven entrepreneurship, Parrish (2010) proposes a new organization design for this kind of businesses, identifying five principles in which it differs from conventional entrepreneurship. Moreover, Hockerts and Wüstenhagen (2010) compared the differences between incumbents and sustainable new-entrants in terms of their commitment to the sustainable transformation of industries, and propose a model in which both 'actors' engage in a compounded impact.

Yet, some of the main issues studied within the sustainable entrepreneurship topic have focused on: entrepreneurs' values and motives for starting their businesses (Spence, Gherib and Biwolé, 2010; Rodgers, 2010; Schroeder and Denoble, 2014), business model innovation/transformation (Schaltegge et al., 2013; Stubbs and Cocklin, 2008), or also success and failure factors and challenges faced by sustainable businesses (Bocken, 2015; Lange, 2016). Nonetheless, there are further research areas that need to be considered and the linkage between sustainable entrepreneurship and consumer behavior is one of them. Following, the relevant literature on these matters is analyzed.

Sustainable Entrepreneurship: Groundings and Conceptualization

The concept of sustainable entrepreneurship combines the elements of two broader topics: sustainable development and entrepreneurship. The first topic was primarily defined at the United Nations Conference on the Human Environment in 1972, and later registered in a report by the World Commission on Environment and Development as:

> "... [the] development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43)

The WCED definition states that any activity contributing to the human wellbeing should not compromise the environmental and societal dynamics on which they depend, thus limiting the human action up to a certain degree. In the specific context of a company, there are different ways in which this concept can be interpreted and built upon. In a static (closed systems) view, the concept is applied to an enterprise itself, whereas in a dynamic (open systems) view the focus is on how the organization contributes to the sustainable development of the whole society (Figge and Hahn, 2004). The latter approach addresses how a company should act, in the sense that it locates an enterprise within a dynamic milieu of individuals, formal and informal institutions, and other organizations, thus reflecting it in the way the concept is applied at the enterprise level (Parrish, 2010). Therefore, the so-called sustainable-driven companies are the ones who run their businesses and, at the same time contribute to the sustainable development of the major socio-ecological system they are also part of (Atkinson, 2000; Parrish, 2007).

To define entrepreneurship, the common criteria within literature is "newness" of actions taken (Spence et al., 2011). An entrepreneur is someone who breaks the system of equilibrium through the introduction of new combinations in the market (Caird, 1990). Although the motivations of these individuals to engage in their enterprises may differ, research shows that there are common traits among entrepreneurs. Earning a living, passion, being your own boss and identifying a gap in the market (Kirkwood and Walton, 2010). Within entrepreneurship theory, four paradigms were identified (Verstraete and Fayolle, 2005). The first is innovation, which includes "the destructive discovery of a new process, a new resources combination, or a new product" (Schumpeter, 1934; Spence et al., 2010); these were further complemented with invention, extension, duplication and synthesis (Kuratko and Hodgetts, 2001). Before innovation comes opportunity recognition and development, as the second paradigm, which comprise the discovery and exploitation of a certain opportunity capable of generating a profit, before competitors do (Spence et al., 2010). Business creation is the third paradigm and, in the authors' definition, it limits the scope of the entrepreneurial term to solely for-profit organizations, excluding all other kinds of projects that have several different goals, such as social or sustainable. The last paradigm refers to the value creation brought by entrepreneurs, both to society and to the enterprise (Spence et al., 2010). This last paradigm emphasizes that entrepreneurship, as an

important source of value creation, must be able to communicate in an effective way the advantages it brings, in order to ensure that every sphere of society keeps progressing towards a sustainable way of life (Prothero et al., 2011).

The sustainable entrepreneurship concept comprises the triple bottom line focus on: the economy (through balanced economic health), the people (contributing to social equity), and the planet (undertaking and fostering environmentally friendly practices) (Elkington, 1997; Kuckertz and Wagner, 2010). Related literature has evolved both from social and environmental entrepreneurship, thus emerging as a new strand that focuses on entrepreneurial activities that contribute positively to sustainable development and its inherent goals (Kuckertz and Wagner, 2010). Moreover, the sustainable entrepreneur motivations and business mindset differ from those of a conventional entrepreneur. The main difference between them lays on the sustainable enterprise pronounced value-based approach and intention to initiate social and environmental change in society (Hockerts and Wüstenhagen, 2010). In fact, most businesses today are increasingly being confronted with environmental and social challenges, mainly due to the growing awareness among society about such issues (Elkington, 1997). Thus, sustainable oriented businesses, in order to address the increasing intensity and pressure of global issues (Ehrenfeld, 2008), need to adapt their business models (Bocken, 2015). As such, they will need to include a wide range of stakeholder concerns in their value proposition and, featuring as important stakeholders to tackle global issues are the environment and society (Bocken et al., 2013). Moreover, as a normative requirement to present itself as a sustainable business, its value proposition must provide either ecological or social and economic value through their products or services (Boons and Lüdeke-Freund, 2013).

This study addresses these increasing demands for sustainable-minded businesses by building two different value propositions for the same service, in order to understand how these types of businesses should position in the market. As argued by Russo (2003), companies that look at protecting and enhancing their supply of ‘natural’ capital will achieve a competitive advantage in the future. Therefore, sustainability can be considered as a business opportunity (Bocken, 2015).

Sustainable Entrepreneurship: an Opportunity to Innovate

According to Schumpeter's definition of entrepreneurship (1934), new value creation is inherent to innovation, as without new value creation there is no innovation (Bruyat, 1993). An innovation that does not create new value remains as an unexploited invention or a 'technical object' (Millier, 1997). Depending on the specific field, innovation may be defined in several different ways, such as the change of something established (Kanter, 1985) or the introduction of something new – a practice, a product, a method (Evan and Black, 1967). Within entrepreneurship literature, innovation has been properly defined. Carland et al. (1984) claimed that the difference between entrepreneurs and conventional managers is innovation, an idea further enforced by Drucker (1985) who stated that "innovation is the specific instrument of entrepreneurship". Furthermore, they argue that innovation is linked with the foundation of entrepreneurship, bringing new ideas that generate new products and services, or even reorganize firms. New companies that are distinct from their incumbents emerge, and with them new products are discovered or transformed, thus proposing new ways of producing, distributing or selling them (Julien and Marchesnay, 1996). Within the innovation domain, there are two ways in which it can emerge: as the continuity of a product or process, where the improvement is incremental and concerns the profit margin, or as a breakthrough, in which it is a radical innovation (Fayolle, 2007). The former is the most common as it is easier to make small adaptations or modifications to a product, a service or a process which already exists. It is more common to have a company imitating a radical innovation by introducing some modifications to it, and thus trying to make it more attractive to a specific segment of the market that the original prototype was not able to reach. The latter is rarer as it requires an entrepreneur to introduce a product or service which is inexistent within the market. However, radical or disruptive innovations can be introduced in the market more easily through the reconfiguration of their value proposition (Bohnsack and Pinkse, 2017).

Regarding the introduction of innovation and corporate sustainability, it is easier for large companies that have great resources to introduce new products in the market. Thus, they should be the ones leading the change towards new ways of doing business. However, the start-up industry must also be considered as a crucial driver of sustainable practices and business model innovations. In fact, the growing start-up landscape keeps presenting and

offering forward-looking solutions to many social and environmental issues (Hall et al., 2010; Pacheco et al., 2010). According to the EU (2012):

> "(…) SMEs, and especially start-ups, can be the ideal incubators for eco-innovation, and can bring to market new, less environmentally damaging products, services and processes."

Moreover, the early stage of these businesses, as a defining phase for their business model, is paramount to the level and scope of the sustainable impact they will have in the future (Herstatt and Verworn, 2001; Bocken et al., 2014).

Some of these companies largely succeed in implementing their business models to the extent that they outgrow incumbent businesses' size. This is the case of Airbnb which, in only a few years accounted for nearly as many rooms as standard hotel groups (Chase, 2012). From another perspective, apart from succeeding in terms of business growth, the increasing importance of sustainable development brought to the political debate the need for 'green growth' (Ki-moon and Gore, 2009). In fact, companies such as Airbnb or Zipcar that encourage the sharing of space, have a sustainable claim embedded in their business model (Bocken 2015), by reducing energy and taking cars off the roads (Chase, 2012; Cleantech Report, 2017). In order to take advantage of the opportunities brought by sustainable development, companies must come up with innovative solutions (Hart and Milstein, 2003). That is what these companies did, by focusing their business models on specific trends that are emerging globally, such as the sharing economy or the green consumerism (Cheng, M., 2016; Peattie, 2010).

Parallel to these businesses in terms of the introduction of an innovative product are DriveNow and Citydrive (car sharing) or eCooltra (moto sharing). These sharing services, although inherently sustainable as aforementioned, do not give much emphasis to this claim on their value proposition. On the channels through which they communicate and operate their innovative services (website and mobile app), there is a clear focus on the functional benefits they bring to customers. On the contrary, their sustainable benefits are barely referred. Thus, if evidence shows that an increasing number of businessmen report to profit from sustainability (MIT Sloan Management Review and The Boston Consulting Group, 2013), and an exponential growth of the sharing economy is expected for the next years (PwC, 2015), why do these services that feature both claims do not exploit them in a more effective way?

Consumers' Perception of Sustainability

The "green consumerism" trend emerged during the late 1980's and early 1990's. At that time, the greening of business brought big innovations, such as environmental product assessment and design, green marketing or new communication initiatives (Heiskanen and Pantzar, 1997). As habits and behaviors towards sustainable consumption increased, so did research on individual's motives to change their consumption patterns. Recent data shows that 55% of American consumers are actively seeking environmentally friendly products and services and, if given a green product and a non-green product with similar quality and price, consumers would prefer the first option by a large margin (SolarCity and Clean Edge, 2013). Furthermore, in a study including 2600 executives, managers and thought-leaders worldwide, the percentage of respondents who reported to be directly profitable from sustainable practices increased to 37%, and around 50% have adapted their business models in order to exploit new sustainable opportunities (MIT Sloan Management Review and The Boston Consulting Group, 2013). Concerning academic research, Waddock and Graves (1997) found a significant, positive relation between corporate social performance and profitability; for instance, corporate social performance can influence profitability through customer or employee loyalty, community goodwill, or socially responsible investing. Hence, the aforementioned literature clearly shows that a shift towards socially responsibility and sustainability can actually bring promising and stable streams of profit. However, executives need to consider the ever-changing customer value, as it changes between customers, across contexts, and over time (Holbrook, 1999), in order to assess how consumers will react to their products and thus avoid taking decisions that are too risky.

Regarding the attitude-behavior gap, the situation of when a consumer is actually purchasing a product or a service can be influenced by a large number of factors, such as: culture, demographic characteristics, brand strength, lack of information, finance, habit, lifestyles, personalities, and trade-off between different ethical factors (Biel, Dahlstrand and Grankvist 2005; Sener and Hazer, 2008; Wheale and Hinton, 2007). Within the sustainable consumerism literature the attitude-behavior gap has also been addressed. For instance, in the case of a green product or service, one aspect often referred to as a factor that discourages its purchase is the price. In fact, the actual willingness to pay for greener products is much weaker than predicted by surveys (Heiskanen and Pantzar, 1997).

Furthermore, evidence brought by Hughner et al. (2007) shows that, although attitudes that consumers have regarding organic food are generally favorable, their actual behavior remains at a rather lower level. Among the deterrents to purchase, price was found to be the main obstacle (Magnusson et al., 2001). However, other obstacles to purchase were identified, namely insufficient marketing. As Latacz-Lohmann and Foster (1997) concluded, some consumers are not able to perceive any benefits or value to purchasing organic food, which may point to the lack and/or ineffectiveness of its promotion. This may also be the case of many new sustainable products that are still struggling to gain market share from their incumbents. Therefore, 'green' entrepreneurs have to find new tools and strategies to overcome incumbents in order to successfully sell their products and, as discussed below, communication is an important factor.

As a key topic in the management literature, identifying and managing customer value propositions is fundamental for companies to differentiate from their competition in order to achieve a competitive advantage (Payne and Frow, 2014). Hence, this component of a business serves the purpose of differentiating from their competitors when, in comparison, their offering adds more value or presents a better solution. Through their value proposition, firms can engage with their customers and communicate the value they promise to deliver them (Bohnsack and Pinkse, 2017). If we refer to communicate sustainable value this aspect is of even greater concern. As argued by Houssi et al. (2005), conventional advertising is not the most effective way for consumer learning of really new products' attributes and benefits. The communication of complex products, such as really new or sustainable new products, needs to contain a great amount of attribute information, because there is more content-related information to disclose about a new mobility sharing service, than, for instance, a new soft drink (Abernethy and Franke, 1996; Mortimer, 2000). As sustainable products and services often include attributes or benefits that differ from existing ones, to reach mainstream customers often poses a challenge. At the beginning, only few customers value the new attributes mainly because the new product seems to underperform on the established attributes mainstream customers most value (Bohnsack and Pinkse, 2017). Later on, when the product reaches these customers due to the fact that they now value the new, disruptive attributes is what is called disruption.

In order to appreciate really new products, consumers usually have to learn about their new benefits (Lehmann 1994; Urban, Weinberg and Hauser 1996). However, as benefit comprehension does not necessarily lead to a positive evaluation of these benefits, often marketers develop communication strategies that go beyond understanding, thus creating a positively exaggerated impression of the key benefits that make the product more appealing to consumers (Houssi et al., 2005). This way, companies can actually enhance the evaluation of their products through benefit comprehension, thus making sure to emphasize which product benefits they consider consumers will appreciate the most.

Thus, I hypothesize that:

H1: Consumers will show a higher likelihood of adoption of a new service when the service is communicated as sustainable, than when is communicated as functional only.

H2: Consumers will show a higher evaluation of a service when the service is communicated as sustainable, than when is communicated as functional only.

METHODOLOGY

This study was a two (functional vs. sustainable) between subject design survey. It was conducted an online survey, distributed with "Qualtrics" software (Appendix 1). This web-based method was chosen because of its convenience in terms of distribution and posterior result's analysis, as it provides the ability to automatically verify and store survey responses using database technology (Andrews, Nonnecke and Preece, 2003). Also, because the product stimuli 'eCooltra' has its main target consumers between 20 to 45 years old who are accustomed to new technologies ("E-Cooltra: The Main Company", 2016), an online survey is easily distributed and answered by these individuals, either through computers or smartphones.

Company Overview

The service used to test the hypotheses of this study is the moto-sharing service 'eCooltra'. It is a recent service of urban mobility based on the concept of pay per use (0.24€/min), offering electric scooters that are interconnected. It uses a new technology that allows using the service at the time and place needed by the user, and hence the client is the 'owner' of the vehicle whilst using it. The service has a coverage area within the city in which the scooters can be parked. Through a mobile app the user can reserve the nearest vehicle and start it, with no need for a key. He then has fifteen minutes to start riding it, with a free cancelation policy. It comes with helmets included and, when the user finishes his trip, the cost is directly charged from a credit card previously provided. Finally, the service provider makes sure that the scooters are available and in the right conditions to be used, making the replacement of the batteries locally, wherever the vehicle is parked, avoiding moving the vehicles to a charging spot. The scooters have an autonomy of 45 kilometers ("E-Cooltra: The Main Company", 2016).

The first release was made in Barcelona in 2016, with 250 scooters available for use and currently it is available in 3 other European cities (Lisbon, Madrid and Rome). In Lisbon, this service was launched in early 2017 with a fleet of 170 scooters. It promises to be a complementary alternative to public transportation and a substitute to private vehicles, but also to reduce polluting gases emissions, as well as noise. In fact, sustainability is an

important factor for the company, as in a year it expects to reduce by seventy million tons the carbon dioxide emissions ("eCooltra. Lisboa já tem 170 Scooters Elétricas", 2017).

The company has several collaborators that altogether form the service 'eCooltra'. The German company 'Govecs' provides the electric scooters, especially adapted for the moto-sharing service. 'EletricFeel', a Swiss company, provides the smart platform to do the management and planning of the system in real-time. Moreover, 'CEiiA', a Portuguese technological centre specialized in mobility provides the electronic equipment of the vehicle, and is in charge of the development of the mobile app. Finally, the Catalan company 'Nekita' was responsible for the technical supervision of the project ("El Repte de ser el Primer", 2016).

In sum, 'eCooltra' promises to offer a door-to-door service, which is agile, with payment per use and avoids the parking hassle inherent to automobiles. With all the attributes aforementioned, it aims to improve citizens' life quality within cities through a sustainable mobility alternative. Since its launch, it already generated two million € from investors and it is a totally scalable system. Hereupon, in the medium term, the company wants to take the service to London, Amsterdam, Berlin and also the United States. After almost two years of operations, 'eCooltra' became the first moto-sharing service in the world to be available in more than one city ("El Repte de ser el Primer", 2016).

DATA COLLECTION

The data was collected during November 2017, with a total number of 79 valid questionnaires. Questionnaires were evenly distributed across the scenarios designed, which are explained below. The survey was distributed through several university groups on Facebook and sent via email to a contact list of university students.

The questionnaire was divided in three parts. In the first part, the individual was asked about the frequency with which he uses the means of transportation listed – car, motorbike, public transport, walk, or other.

The second part included a manipulation of the independent variable. To undertake this manipulation I wrote two different scenarios, displayed randomly to respondents. Each version was equally presented to participants. This information was aimed to present the

service and its attributes to respondents and it included two paragraphs. Each block started with the following paragraph:

> "'eCooltra' is a recent moto-sharing service available in Lisbon since April 2017. The company provides 170 scooters for customers to ride within the coverage limits of the service. Through a mobile app you can start riding a scooter and, when you are finished it can be used by someone else from the location you have finished your journey. The price per minute is 0.24€, and thus a 10 minutes ride costs 2.4€."

This first paragraph was intended to inform individuals about the features of the service, allowing comparisons with the means of transportation normally used in terms of easiness to use and price. Then, the second paragraph introduced the scenarios. The first scenario informed respondents about the functional attributes of the service, excluding all sustainable attributes:

> "In a city with increasing cars on its roads, time gets scarcer due to huge traffic jams and the difficulty to find a parking space. 'eCooltra' allows you to go from point A to point B in a vehicle that: avoids long traffic queues and can be parked wherever you want, within the coverage limits of the service. Also, it doesn't need fuel and it includes insurance, maintenance and two helmets."

The second scenario described both the functional and the sustainable attributes of the service:

> "In a city with increasing cars on its roads, time gets scarcer due to huge traffic jams and the difficulty to find a parking space. Moreover, pollution is on the rise due to higher levels of exhaust gases and noise from combustion engines. 'eCooltra' allows you to go from point A to point B in a vehicle that can overcome traffic queues, be parked wherever you want within the coverage limits of the service, has zero gas emissions, is noiseless and doesn't use fossil fuels. Moreover, it includes insurance, charged batteries, maintenance and two helmets."

Following the scenarios, several dependent measures were asked. Respondents were asked to what degree they find the service functional, and to what degree they find the service sustainable. Then they answered questions about how do they evaluate the service. Service adoption was measured by asking participants how likely they would use the service or recommend the service. In the third part of the survey, participants answered some questions about sustainable consumption concerns. Before finishing, participants were asked about age, gender and education.

Sample Profile

The majority of respondents (95.2%) was between 18 and 34 years old, a rather younger sample. Regarding gender, the participants' distribution is very even, with 46% of males and 54% of females. Finally, regarding the level of education this sample shows a high level of literacy with 93.6% of the individuals holding either a bachelor or a master's degree.

Measures and Construct Validity

To achieve a significant level of sensitivity on the dependent variables, I used a 7-scale type of answer on every question. The first question used a 7-point scale (from 'Never' to 'Daily') to measure the frequency of means of transportation used – car, motorbike, public transport, walk, or other.

A manipulation check was included in order to test whether the two levels of the independent variable differ on the dependent variables measured. Hence, I included two scales before the measures of the dependent variables that were studied. The two scales were drawn to test the perceived functionality of the service (1-not at all functional, 7-extremely functional) according to four functional attributes (no fixed parking, no need to fuel, traffic avoidance, included insurance), and the perceived sustainability of the service (1-not at all sustainable, 7-extremely sustainable) according to four sustainable attributes (reduce air pollution, reduce urban traffic, reduce noise pollution, no use of fossil fuels). In fact, they rated the service higher in sustainability when presented with the sustainable benefits than when not presented with them, meaning that the manipulation was successful.

Moreover, a scale with three items (quality, functional/practical value, and overall value) was used to assess service evaluation (1-extremely bad, 7-extremely good). Service adoption was measured by asking them how likely it would be for them to use the service and to recommend the service in two separate scales (1-extremely unlikely, 7-extremely likely). Finally, a last scale to measure individuals' sustainable consumption was drawn based on the "Socially Responsible Purchase and Disposable" (SRPD) scale (Webb, Mohr and Harris, 2008). New companies, such as 'eCooltra', whose business model is fairly new, benefit from scales that measure consumers' responsiveness to their services and to track the market trends in terms of social responsibility and environmental impact. The scale

developed by Webb et al. (2008) reflects the developments occurred in theory and practice in the field of socially responsible consumption. This scale measures consumers' behavior in response to a wide range of social and environmental issues, and it comprises three dimensions: purchasing based on firms' corporate social responsibility performance,

Table 1. Construct reliability statistics (Cronbach's alpha value*)

Scale	**α value**	**Corrected Item – Total Correlation**
Service adoption (2 items)	0.437	
-Willingness to use		0.310
-Willingness to recommend		0.310
Functionality of the service (4 items)	0.601	
- No fixed parking		0.297
- No need to fuel		0.490
- Traffic avoidance		0.335
- Included insurance		0.450
Sustainability of the service (4 items)	0.868*	
- Reduce air pollution		0.803
- Reduce urban traffic		0.751
- Reduce noise pollution		0.789
- No use of fossil fuels		0.765
Sustainable consumption concerns (7 items)	0.782*	
- I use the highest quality service, regardless of its impact on the environment		0.758
- I use the lowest priced service, regardless of its impact on the environment		0.761
- I use the most time efficient service, regardless of its in impact on the environment		0.747
- Whenever possible, I walk, ride a bike, car pool, car share or use public transportation to help reduce air pollution		0.753
- I avoid using products that pollute the air		0.732
- I make an effort to avoid products or services that cause environmental damage		0.776
- I limit my use of energy**,** such as electricity or natural gas, to reduce my impact on the environment		0.752
Evaluation of the service (3 items)	0.787*	
- Quality		0.761
- Functional/practical value		0.748
- Overall value		0.755

**Cronbach's alpha is a measure of internal consistency that gives information about the reliability of a multi-item scale. That is to say, it tells whether the items of a scale are correctly measuring the same issue. Values higher than 0.70 were considered as reliable*

recycling, and avoidance and use reduction of products based on their environmental impact (Webb et al., 2008). However, this research addresses sustainable consumption and therefore I only used and adapted some of the third dimension items to measure respondent's attitudes towards sustainability. It focused on the third and fourth factors of this scale, traditional purchase criteria and environmental impact purchase and use criteria, respectively. It comprises seven items (Table 1) measured using a 7-point scale, ranging from 'Never true' to 'Always true'.

To undertake the analysis of the results obtained, a reliability check was conducted in all the constructs with three or more items. With exception of perceived functionality (α=0.601) and adoption (α=0.437), the remaining three constructs drawn – perceived sustainability (α=0.868), individual's sustainable consumption concerns (α=0.782) and perceived value (α=0.787) – showed ample reliability with a Cronbach's alpha higher than 0.70 (Table 1). This means that, for the constructs 'perceived functionality' and 'adoption', individuals did not perceive it as a unified scale that measures functionality, whereas in the remaining constructs they perceived it as it was intended. Hence, the former scales were not used for further analysis.

RESULTS' ANALYSIS

In order to test the first hypothesis (H1) where we argued that consumers will show a higher adoption of a new service when it is presented as sustainable, than when presented as functional only, I conducted an independent samples t-test with 'willingness to use' as the dependent variable and the two scenarios as the independent variable. T-test is a statistical technique used to examine the differences among means for two populations. The t-statistic tests for the null hypothesis that the category means are equal in the population. The p-value indicates the probability of rejecting a null hypothesis that is in fact true, i.e., concluding that the means are different whereas they are in fact equal (Vermeier and Verbeke, 2006). The results showed that, contrary to the first hypothesis, when presented with the sustainable set of attributes consumers did not show a significant higher adoption of the service, than when presented solely with its functional benefits ($M_{func+sust\_use}$=4.12 vs. M_{func_use}=3.47), $t(77)$=1.387, p=0.170. Moreover, also to test the first hypothesis, another

independent samples t-test with 'willingness to recommend' as the dependent variable and the two scenarios as the independent variable was conducted. Again, results showed that, contrary to the first hypothesis, when presented with the sustainable set of attributes consumers did not show a significant higher adoption of the service than when presented solely with its functional benefits ($M_{func+sust\_recommend}$=6.07 vs. $M_{func\_recommend}$=5.79), $t(77)$=1.185, p=0.240. As both measures of adoption in the two scenarios did not show a statistically significant difference between them, the first hypothesis is rejected.

In order to to test the second hypothesis (H2) where we argued that consumers will show a higher evaluation of a service when it is presented as sustainable, than when presented as functional only, a T-test with 'service evaluation' as the dependent variable and the two scenarios as the independent variable was conducted. The results showed that, contrary to the second hypothesis, when presented with the sustainable set of attributes consumers did not show a significant higher evaluation of the service, than when presented solely with its functional benefits ($M_{func+sust\_evaluation}$=6.07 vs. $M_{func\_evaluation}$=5.86), $t(77)$=1.086, p=0.281.

Both sets of attributes generated an equally positive evaluation of the service, thus rejecting also the second hypothesis.

These results show that, to present consumers with a 'sustainable' value proposition does not increase their willingness to adopt a service or the evaluation they make of it, when compared with a solely 'functional' value proposition. In sum, they showed no preference for a more sustainable service, nor considered it as more valuable than a conventional service.

Table 2. Independent Group T-test

	Func+Sust		Func		
	M	SD	M	SD	T-test
Willingness to use	4.12	2.09	3.47	2.06	1.39
Willingness to recommend	6.07	0.96	5.79	1.17	1.18
Service evaluation	6.07	0.91	5.86	0.84	1.09

NOTE: M=Mean, SD=Standard Deviation

In order to investigate whether individual's concerns towards sustainable consumption could explain sustainable preference I ran an analysis of covariance (ANCOVA) by adding

sustainable consumption concerns as a covariate. This is an extension of the analysis of variance as it includes one or more continuous variables that may predict the dependent variable. These are called 'covariates' and they are not part of the main experimental manipulation, but still may have an influence on the dependent variable. The analysis did not reveal any significant effect of the covariate, $F(1,76)=1.207$, $p>0.05$. It was then tested whether there was a statistically significant difference between both scenarios on the dependent variable 'willingness to recommend', controlling for the covariate 'individuals' sustainable consumption concerns'. Again, the analysis did not reveal any significant effect of the covariate, $F(1,76)=3.095$, $p>0.05$). Moreover, I tested whether there was a statistically significant difference between both scenarios on the dependent variable 'service evaluation', controlling for the covariate 'individuals' sustainable consumption concerns'. This analysis did not show any significant effect of the covariate, $F(1,76)=1.559$, $p>0.05$. The measure for individuals' sustainable consumption concerns was included as some studies have found environmental concern to be a factor in consumers' attitudes towards green products (Roddy et al., 1996; Wandel and Bugge, 1997). However, in this study individuals' sustainable consumption concerns did not show any influence on willingness to use, willingness to recommend or service evaluation (the dependent variables).

Next, to verify whether the ownership of a specific means of transportation could affect the way the service was evaluated, since consumers could have preference for some type of transportation, I conducted another analysis of covariance. Again, no statistically significant difference was found between both scenarios on the dependent variable 'willingness to use'. Even when controlling for the covariates: car use, motorbike use, public transport use, walk and bicycle use (Table 3) the analysis did not reveal any significant effect of the covariates in the dependent variable: Car use $F(1,76)=0.004$, $p>0.05$, Motorbike use $F(1,76)=3.296$, $p>0.05$, Public transport use $F(1,76)=0.281$, $p>0.05$, Walk $F(1,76)=1.535$, $p>0.05$ and Bicycle use $F(1,76)=0.247$, $p>0.05$.

Table 3. ANCOVA for the factor scenario with 'willingness to use' as dependent variable, and means of transport as covariates

	F	*p*	$M_{func+sust}$	M_{func}	$M_{Difference}$
Scenario	1.620	0.207	4.12	3.47	0.65
Covariates					
-Car use	0.004	0.949			
-Motorbike use	3.296	0.074			
-Public transportation use	0.281	0.598			
-Walk	1.535	0.219			
-Bicycle use	0.071	0.791			

Moreover, to analyze whether there was a statistically significant difference between both scenarios on the dependent variable 'willingness to recommend', controlling for the covariates: car use, motorbike use, public transport use, walk and bicycle use, I conducted an analysis of covariance (Table 4). The analysis did not reveal any significant effect of the covariates in this dependent variable: Car use $F(1,76)=2.289$, $p>0.05$, Motorbike use $F(1,76)=0.013$, $p>0.05$, Public transport use $F(1,76)=1.342$, $p>0.05$, Walk $F(1,76)=1.974$, $p>0.05$ and Bicycle use $F(1,76)=0.247$, $p>0.05$.

Table 4. ANCOVA for the factor scenario with 'willingness to recommend' as dependent variable, and means of transport as covariates

	F	*p*	$M_{func+sust}$	M_{func}	$M_{Difference}$
Scenario	1.612	0.208	6.07	5.79	0.28
Covariates					
-Car use	2.289	0.135			
-Motorbike use	0.013	0.911			
-Public transportation use	1.342	0.251			
-Walk	1.974	0.164			
-Bicycle use	0.247	0.621			

Finally, I conducted a last analysis of covariance to ascertain whether there was a difference on how the service was evaluated according to how the service is communicated to consumers (sustainable attributes vs sustainable and functional attributes) controlling for the type of transportation consumers use (car, motorbike, public transport, walk and bicycle) (Table 5). The analysis did not reveal any significant effect of the covariates in the dependent variable: Car use $F(1,76)=0.280$, $p>0.05$, Motorbike use $F(1,76)=1.633$, $p>0.05$,

Public transport use $F(1,76)=3.469$, $p>0.05$, Walk $F(1,76)=1.182$, $p>0.05$ and Bicycle use $F(1,76)=0.511$, $p>0.05$.

Table 5. ANCOVA for the factor scenario with 'service evaluation' as dependent variable, and means of transport as covariates

	F	*p*	$M_{func+sust}$	M_{func}	$M_{Difference}$
Scenario	0.990	0.323	6.07	5.86	0.21
Covariates					
-Car use	0.280	0.599			
-Motorbike use	1.633	0.205			
-Public transportation use	3.469	0.067			
-Walk	1.182	0.281			
-Bicycle use	0.511	0.477			

I used the measure for daily travel behavior because it was found that attitudes towards the environment and sustainability have a significant impact on daily travel behavior (Prillwitz and Barr, 2011), and also due to the fact that the stimuli used refers to an alternative mean to daily travel. The results showed that the covariates used regarding means of transport did not affect the outcome of this study. In fact, none of the daily commutes used by individuals influence their adoption or evaluation of this service.

In sum, the results obtained are clear: individuals did not see any incremental benefits in this service's sustainable attributes. The fact of being presented with both types of benefits, rather than just with the functional ones, did not translate into higher rates of adoption or evaluation by consumers.

CONCLUSIONS

The empirical study undertaken was aimed at understanding what attributes a business should emphasize more in its communication strategy, when it has strong claims both in the functional and sustainable value it promises to bring to customers. As the sustainable consumption literature is still a growing subject, this study addressed the benefits that emphasizing the sustainable benefits of a service could bring. In sum, when a company has a new product that brings both functional benefits and sustainable benefits, which of them will have a higher impact on the behavioral attitude of the consumer towards the service?

Managerial Implications

The results revealed that young consumers who are presented with a service that has strong sustainable and functional claims do not show a higher rate of adoption or evaluation in comparison with a service that only has strong functional claims. Hence, communicating the service as sustainable has not shown to influence the attitude towards the service.

To Bohnsack and Pinkse (2017) a company may use specific tactics in order to increase the acceptance of a product when it is new to the market. In this study, although the service tested is not so new to the market with the existence of a few car sharing services, this service introduced a new product in the mobility sharing market in Lisbon: electric scooters. With this in mind I focused on two categories of attributes that are currently used by 'eCooltra' to communicate its service. Alongside with its functionality, the sustainability is also present in its value proposition. When compared with other similar car sharing services existing in Lisbon, namely 'DriveNow' and 'Citydrive', this service is much more sustainable due to the fact that its fleet only has electric vehicles (including the vehicles that replace the motorbikes' charged batteries). For this reason, I proposed that this is the main component that should be exploited by 'eCooltra' when positioning itself among its direct competitors.

However, contrary to my expectations, this did not verify. When stimulated with a highly sustainable offering, individuals were neither 'mobilized' nor showed any enthusiasm towards its adoption, although the sample was rather young, and hereupon expected to be quite familiar with technologies and environmental issues. In fact, whereas adult green purchasing behaviors are more influenced by rationality and cognition (i.e. environmental

knowledge, assessment of product attributes, environmental information processing), youngsters are more driven by social influence, emotional appeal, image branding and behavioral efficacy (Lee, 2008). Hence, this may help explain why the communication of sustainable features per se is not effective for the market segment of this sample. In order to effectively introduce sustainable products in the market, companies should undertake a market segmentation approach, because not all the market segments have the same purchasing behaviors, and different communication strategies work differently between them. Specifically for this service, which has a young target population, the most appropriate strategy might not be only to communicate its sustainable attributes in its value proposition, but rather to undertake other approaches that are more adequate to this type of consumers, such as appealing to their emotions and explaining them what are the practical consequences of their consumption habits.

Academic Implications

The survey conducted was aimed at collecting data in order to clarify whether a possible relationship between a sustainable communication and a more positive attitude towards a sustainable service exists. The outcome of the inquiry revealed that young consumers did not show a higher willingness to use or recommend, nor valued more a service when they were presented with a value proposition that contains all its sustainable attributes rather than solely its functional ones. These results reveal that sustainability was not considered as a key factor when it came to adopting the service. In this case, as stated above, the age of the sample may help explain this outcome. In fact, almost all the individuals of this sample belong to the so-called group Generation Y, known for being very pragmatic and thus less likely to change their consumption habits unless they are cost-effective and convenient (Hume, 2010). Nonetheless, they are also expected to have higher demands for environmentally friendly products (Jan, Kim and Bonn, 2011). In this study, the pragmatism of these individuals seemed to prevail over its demand for sustainable products, as its great sustainable components did not stimulate its adoption by consumers.

Also, concerning the evaluation of the service, the results showed no connection between sustainability and increased value. As sustainable consumption is a rather recent trend in society (Schaltegger et al., 2016), if on the one hand consumers may not be yet so familiar

with sustainable products, on the other hand many sustainable services are yet being developed and improved. Hence, most of the times they seem to underperform on general characteristics that consumers still value most (Bohnsack and Pinkse, 2017) and for this reason the quality perceived may be unclear.

As stated previously, sustainability is a rather recent domain and, as we are now experiencing the expansion of electric vehicles (Global EV Outlook, 2017) and other innovative means of transportation to the mainstream market, it is expectable that individuals will start getting more familiar with this type of products, and hence adopting them in a larger scale. However, for this to happen there must be developed the right strategies and tools that allow companies to foster their sustainable products' benefits within society. Beyond communication, which did not show any positive effect among our sample, alternative marketing strategies must be developed. As Schultz (2002) argues, apart from focusing on increasing the awareness and perception of the benefits of sustainability among all consumers, focusing on consumers who already have an understanding of and are concerned about sustainability matters may lead to a greater change in the short-term, thus clearing the way for others to follow. Therefore, by analyzing what drives these individuals' sustainable consumption behavior and what were the causes that triggered it in the first place may be the right starting point for developing new marketing strategies.

Limitations and Future Research

Along this research and after analyzing the results, I consider there were some limitations that shaped the final outcome of this study.

Regarding the data collection method, there are some aspects missing in the survey that future research should include. First, as the survey was distributed through university groups and, even if college students are an appropriate sample to represent Generation Y, the generalization of these results to all Generation Yers should be done carefully. Also, asking respondents about car or motorbike ownership could have had an influence in the results of attitude towards the service. Indeed, auto ownership is one of the main explanatory factors of auto trip generation and frequency (Xing et al., 2010). Hence, an individual who owns a vehicle may have a different motive not to use 'eCooltra' (for instance, the tradeoff might not justify it), when compared with someone who does not own

a vehicle (the tradeoff does not apply but other motives, such as the simple fact of not being able to ride a scooter, may be present). Also, asking whether individuals have ever used the service could have been useful in order to see whether experience could lead to differences in individuals' attitude and perception.

As aforementioned, there are many factors that lead individuals to perceive the same product in a different way. Specifically in this case, which includes a new service that has features that most people are not yet familiar with (use through mobile app, electric vehicle), there are underlying motivations that are still difficult to identify and predict. For future studies on the subject, I believe that a comparison between sustainable minded individuals and other individuals should be made, in order to understand what the inhibitors of such behaviors are. Also, in case someone undertakes a study with a longer time frame and a higher complexity I would recommend trying to communicate directly with the company or the entrepreneurs who created the product before starting a study on it. To better understand their motivations and the previous study they developed, would definitely be the best way to start the research and build it from there.

This study was undertaken using a specific sustainable product. However, the conclusions achieved for this type of product should be addressed carefully once there are inherent specificities to this product that do not verify in other environmentally friendly products (i.e. organic food, sustainable clothing). More specifically, the fact that it combines strong functional claims, such as traffic reduction or hassle-free parking, with strong sustainable claims, brought by its sharing service nature and by its green technology characteristics.

To conclude, I would advise ecopreneurs who are launching a new service to analyze in depth what are the main motivations and patterns present among the population of the specific geographical area where they are launching their service. For instance, 'eCooltra' is now present in four different cities in distinct countries and the market demands and specificities differ between each other. By taking this into consideration, the value proposition presented could focus on presenting individuals with effective, alternative attributes to those they value most and/or are available in the specific market they belong. This way, businesses could develop new strategies in order to lead individuals to reevaluate their attitude and possibly their behavior towards their products.

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APPENDIX 1

Survey

Start of Block: Intro

Hi! I am currently writing my master's thesis at Católica-Lisbon.
I would be very thankful if you could spare 2-3 min answering this survey.
With these questions I am interested in knowing what your **actual daily behaviors and consumption patterns are**, rather than what you think you should be doing.
Thank you!

End of Block: Intro

Start of Block: Block 1

Q1 How frequently do you use the following means of transportation?

	Never (1)	(2)	(3)	Once a Month (4)	(5)	(6)	Daily (7)
Car (1)	○	○	○	○	○	○	○
Motorbike (2)	○	○	○	○	○	○	○
Public Transportation (3)	○	○	○	○	○	○	○
Walk (4)	○	○	○	○	○	○	○
Other, which? (5)	○	○	○	○	○	○	○

End of Block: Block 1

Start of Block: Functional

Please consider the following service:

“eCooltra” is a recent moto-sharing service available in Lisbon since April 2017. The company provides 170 scooters for customers to ride within the coverage limits of the service. Through a mobile app you can start riding a scooter and, when you are finished it can be used by someone else from the location you have finished your journey. The price per minute is 0.24€, and thus a 10 minutes ride costs 2.4€.
In a city with increasing cars on its roads, time gets scarcer due to huge traffic jams and the difficulty to find a parking space. ‘eCooltra’ allows you to go from point A to point B in a vehicle that: avoids long traffic queues and can be parked wherever you want, within the coverage limits of the service. Also, it doesn’t need fuel and it includes insurance, maintenance and two helmets.

End of Block: Functional

Start of Block: Func+Sust

Please consider the following service:
“eCooltra” is a recent moto-sharing service available in Lisbon since April 2017. The company provides 170 scooters for customers to ride within the coverage limits of the service. Through a mobile app you can start riding a scooter and, when you are finished it can be used by someone else from the location you have finished your journey. The price per minute is 0.24€, and thus a 10 minutes ride costs 2.4€.
In a city with increasing cars on its roads, time gets scarcer due to huge traffic jams and the difficulty to find a parking space. Moreover, pollution is on the rise due to higher levels of exhaust gases and noise from combustion engines. ‘eCooltra’ allows you to go from point A to point B in a vehicle that can overcome traffic queues, be parked wherever you want within the coverage limits of the service, has zero gas emissions, is noiseless and doesn’t use fossil fuels. Moreover, it includes insurance, charged batteries, maintenance and two helmets.

End of Block: Func+Sust

Start of Block: Block 2

Q2 According to the previous description, how functional do you consider this service considering the following characteristics:

	Not at all functional (1)	(2)	(3)	Moderately functional (4)	(5)	(6)	Extremely functional (7)
No fixed parking (1)	○	○	○	○	○	○	○
No need to fuel (2)	○	○	○	○	○	○	○
Traffic avoidance (3)	○	○	○	○	○	○	○
Included insurance (4)	○	○	○	○	○	○	○

Q13 And how sustainable do you consider this service considering the following characteristics:

	Not at all sustainable (1)	(2)	(3)	Moderately sustainable (4)	(5)	(6)	Extremely sustainable (7)
Reduce air polution (1)	○	○	○	○	○	○	○
Reduce urban traffic (2)	○	○	○	○	○	○	○
Reduce noise pollution (3)	○	○	○	○	○	○	○
No use of fossil fuels (4)	○	○	○	○	○	○	○

End of Block: Block 2

Start of Block: Block 8

Q3 How do you evaluate this service in terms of its:

	Extremely bad (1)	(2)	(3)	Neither good nor bad (4)	(5)	(6)	Extremely good (7)
Quality (1)	○	○	○	○	○	○	○
Functional/Practical Value (2)	○	○	○	○	○	○	○
Overall Value (3)	○	○	○	○	○	○	○

Q4 How likely are you to:

	Extremely unlikely (1)	(2)	(3)	Neither likely nor unlikely (4)	(5)	(6)	Extremely likely (7)
Use this service (1)	○	○	○	○	○	○	○
Recommend this service (2)	○	○	○	○	○	○	○

End of Block: Block 8

Start of Block: Block 6

Q5 Rank the following statements according to your consuming habits:

	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)
I use the highest quality service, regardless of its impact on the environment. (1)	○	○	○	○	○	○	○
I use the lowest priced service, regardless of its impact on the environment. (2)	○	○	○	○	○	○	○
I use the most time efficient service, regardless of its in impact on the environment. (3)	○	○	○	○	○	○	○
Whenever possible, I walk, ride a bike, car pool, car share or use public transportation to help reduce air pollution. (4)	○	○	○	○	○	○	○
I avoid using products that pollute the air. (5)	○	○	○	○	○	○	○
I make an effort to avoid products or services that cause environmental damage. (6)	○	○	○	○	○	○	○

I limit my use of energy, such as electricity or natural gas, to reduce my impact on the environment. (7)	○	○	○	○	○	○	○

End of Block: Block 6

Start of Block: Block 7

Q6 Gender:

- ○ Male (1)
- ○ Female (2)

Q7 Age:

- ○ Under 18 (1)
- ○ 18 - 24 (2)
- ○ 25 - 34 (3)
- ○ 35 - 44 (4)
- ○ 45 + (5)

Q8 Education:

- ○ Less than high school (1)
- ○ High school (2)
- ○ Bachelor (3)
- ○ Master (4)
- ○ Doctorate (5)

End of Block: Block 7