

**Hotel Eco-innovation Demand-Pull Strategy
Is there a match with tourist perspectives?**

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Abstract

The discussion on hotels green products is usually one sided, with a focus on supply or on demand. In this investigation we intend to perceive the way both sides think concerning to green products and to what extent exists a correspondence.

Supported in a quantitative study in a hotel sample and in another qualitative and quantitative study on a sample of tourists, the two models were tested. The results suggest that hotel green strategies should be more market-centric than just complying with regulations. The tourist model permitted to perceive that tourists who are more sensitive to environmental issues are willing to pay more and recommend green hotels, but this relationship should be better understood by hotel decision makers in order to align their green strategy and communication.

Keywords: Eco-innovation; Green Products; Hotel Management

JEL: O31; Z31; Z32

Introduction

News on climate change has been the subject of debate inside and outside the academic forum. As in most subjects, there's a divergence of opinion also in the field of eco-innovation. It's not within the aim of this article to cover all the points of discussion about this matter. We will focus on two topics: the conceptual issue and the divergence of what a hotel means to be eco-innovative and what tourist's value as a green product.

The very concept of eco-innovation is not clear (Díaz-García et al., 2015). Fussler firstly introduced in 1996 the concept of eco-innovation (Fussler, 1996; Fussler & James, 1996). They defined eco-innovation as the development of new products, processes or services with significantly decrease environmental impact (Fussler & James, 1996). The conceptual debate involved a semantic discussion about what should be considered

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3 within the concept. The importance of business performance oriented some definitions
4 which considered basically the improvement of environmental performance (Carrillo-
5 Hermosilla et al. 2010) or the attraction of green rents (Andersen, 2008).
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7 Other authors emphasized what seems to be the aim of eco-innovation – the
8 environment protection. For example, Del Río, et al. (2016) underlined its role on the
9 reduction of the environmental impact of consumption and production activities. In the
10 same vein, the European Union recognized that eco-innovation should lead to a
11 significant and demonstrable progress towards the goal of sustainable development by
12 reducing the impact on the environment (European Commission, 2007).
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15 Another perspective is centered in products and organizational processes which should
16 be novel to the firm and contribute to reduce environmental burdens (Horbach et al.
17 2012; Kemp & Pearson, 2008).
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20 In relation to tourism and more specifically in hotels, the environmental harmful impact
21 of hotels has attracted tourists' attention (Han & Yoon, 2015), and sustainability is
22 considered one of the most important topic in accommodation industry (Jones et al.,
23 2016). On this industry it is also not clear that the companies in the accommodation
24 industry and tourists perceive eco-innovative products from the same point of view. The
25 discussion of the reason why firm management adopts eco-innovation introduces
26 several drivers and triggers (Bossle et al., 2016) ranging from external to internal factors
27 external and internal. (Agan et al., 2013; Del Río, 2009; Gadenne et al., 2009; Horbach
28 et al., 2012). Most of them lead to the so-called double externalities that distinguish
29 innovation from eco-innovation (Hojnik & Ruzzier, 2016) which emphasizes the role of
30 environmental policy instruments and market pull as drivers of eco-innovation. Double
31 externalities places eco-innovation in a multidisciplinary field including technological,
32 organizational, social, or institutional dimensions (Rennings, 2000).
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37 However, in spite of recent studies emphasize the role of customer demand (Horbach, et
38 al., 2012) which includes his environmental friendly attitudes and behaviors and green
39 procurement (Hojnik & Ruzzier, 2016) the way firms and specifically hotels respond to
40 these demand pull drivers in order to match specific customer and tourists demands isn't
41 sufficiently explored. As discussed Hjalager (1997) there is a slow pace in adopting
42 innovation by the tourism industry, which is predominantly launched as part of
43 defensive strategies. Thus, this research intends to bring empirical evidence on this
44 subject. As such, the main objective is to perceive if priorities match, to see if in fact the
45 options taken by hotels are in line with the tourists' intentions of staying,
46 recommending or paying more for a green hotel.
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50 On the supply side, the aim is also to understand whether market focus and eco-product
51 innovation strategy contributes to firm's environmental performance in the market. On
52 the demand side, it seeks to assess their preferences in the context of green hotel
53 products and how this relates to the intentions of staying or recommending a hotel.
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Theoretical Framework

External drivers of eco-innovation

Eco-innovation drivers can be considered from two points of view: external and internal (Agan et al., 2013). The former points to factors over which companies have little or no control (Bossle et al., 2016) and can be divided in macro and meso dimensions (Díaz-García, et al., 2015). Macro drivers are linked to policy instruments including regulatory and normative pressures (Berrone et al., 2013; Cainelli et al., 2012; Carrillo-Hermosilla et al., 2010; Demirel & Kesidou, 2011; Paraschiv et al., 2012), technology (Del Rio et al., 2016; Hojnik & Ruzzier, 2016; Oltra & Jean, 2009) and business environment which can increase economic risk and affect eco-innovation investment decisions (Norberg-Bohm, 1999).

Meso dimension includes market pressure and other pressure groups (Doran & Ryan, 2012; Horbach et al., 2012; Li, 2014) and networks and cooperation (Buttol et al., 2012; Cainelli et al., 2012; Carrillo-Hermosilla et al., 2010), among others. Industry competitiveness can be considered an external driver especially in cost driven competition (Ziegler, 2015).

As referred before customer demand is an important driver (Horbach, et al., 2012) which can lead to improve the corporate environmental image (Arundel & Kemp, 2009). Customer demand as a driver is linked to their green attitudes and behaviors, (Hojnik & Ruzzier, 2016).

External drivers of eco-innovation

External drivers in general (Horbach, 2008; Ghisetti, et al., 2015) and regulation, in particular, are pointed as main external drivers of the adoption of eco-innovation strategies. As a response eco-innovation strategy is mostly linked to comply with standards (Cainelli et al., 2015), than reaching sustainable goals (Bossle et al. 2016). In tourism industry "innovations are predominantly launched as part of defensive strategies by the tourism industry" (Hjalager, 1997: 35). In the bottom line, what is in stake is competitive advantage through differentiation (Porter, 1996) since firm's response to comply with standards will be very similar. Eventually, the same logic will appear in cost savings strategies (Horbach et al., 2012).

On this vein, it's within the firm the ability to act differently in response to the same environmental challenges (Del Río, et al., 2016) leading to a sustainable competitive advantage based on the firm's resources and capabilities which should be unique, inimitable, valuable and non-substitutable, as defended by resource based view theory (Barney, 1991, Li, 2014).

The micro (Díaz-García, et al., 2015) or internal drivers includes dimensions such as:

- Environmental managements systems like ISO14001 or Total Quality Environmental Management Systems (Hojnik & Ruzzier, 2015) and managerial commitment with environmental issues and behavior (Agan et al., 2013; Qi et al., 2010).
- Leadership. It's the starting point for the willingness to be environmental friendly (Arnold & Hockerts, 2011; Chen et al., 2012). In this case is from within the firm that emerges eco-innovation as a deliberate choice by the owner or manager personal ethics (Tzschentke, et al., 2008). Leadership also plays an important role on developing eco-friendly organizational capabilities, such as: environmental culture and environmental capability (Chen et al. 2012; Bossle et al. 2016; Hojnik & Ruzzier, 2016).
- Entrepreneurial behavior (Arnold & Hockerts, 2011). Ecopreneurs (Ferrari & Vargas-Vargas, 2010) are important to promote environmental awareness. There are several degrees of 'ecopreneurship' ranging from responding to customer demands to entire management systems (Ferrari & Vargas-Vargas, 2010). Entrepreneurial behavior plays also another important role as an internal drivers since it facilitate an eco-innovative approach (Hojnik & Ruzzier, 2016) and permits to establish a knowledge base for competitiveness through eco-innovation (Andersen, 2008).
- Human resources (Cainelli et al., 2012; Hojnik & Ruzzier, 2015; Paraschiv et al., 2012), Fourth, human resources and the way they are managed can be understood as a platform to enhance all these capabilities (entrepreneurship, technological knowledge, culture, etc.) (Cainelli et al., 2012) and, simultaneously, be the support of competitive advantage based on eco-innovation adoption (Horbach et al., 2012; Bossle et al., 2016; Hojnik & Ruzzier, 2016). Human resources are also a reflex of visionary management and managerial concern, considered two of the most important factors in the development of eco-innovations and green organizational identity (Díaz-García et al., 2015).
- Knowledge. It seems to be decisive in the adoption of eco-innovation strategies by linking external factors to the firm, embedding internal resources and capabilities with the ability to address eco-innovation (Leonidou, et al., 2015). Knowledge transfer mechanisms also permits to sustain competitive advantage (Eisenhardt & Martin, 2000; Zahra & George, 2002; Horbach, et al. 2012). Knowledge management allows the firm to accumulate past experiences that will influence future eco-innovation strategy through path dependency (Helfat & Peteraf, 2009; Leonidou, et al. 2015).
- Networking and cooperation capabilities. The ability to cooperate with other companies and stakeholders facilitates access to information and knowledge about eco-innovation (Rave et al., 2011; Cainelli et al., 2015). For example, in the case of smaller and younger companies which evidences a lack of eco-innovative capacities (Horbach, 2008; Cainelli et al., 2015), they can overcome

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3 their limitations through integration into external knowledge networks (Del Rio
4 et al., 2017), especially with suppliers and customers (Cuerva et al., 2014) and
5 universities and research centers (Triguero et al., 2013).

- 6 • Cost saving products and processes (Berrone et al., 2013; Demirel & Kesidou,
7 2011; Horbach et al., 2012; Triguero et al., 2013).
- 8 • Implementation organizational capabilities (Berrone et al., 2013; Cheng & Shiu,
9 2012). Involves those activities for enhancing organization and management
10 capabilities that enables the firm to change or improve operational processes,
11 existing products and the development of new products (Mahmood, et al., 2011).
12 Cheng and Shiu (2012) divided those capabilities in: eco-organization
13 implementation, eco-process implementation, and eco-product implementation.
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18 **Model and hypothesis**

20 **Supply side**

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23 In the tourism sector, there is a growing concern around eco-innovation as tourist pay a
24 higher attention to environmental issues (Aguiló, et al., 2005). However, eco-innovation
25 capabilities research in tourism is scarce. In industrial sectors, capabilities were already
26 identified as presented in previous section. In the specific case of tourism industry,
27 Leonidou et al. (2015) presented a construct were eco-based competitive advantage
28 depended on firm's ability to develop certain capabilities such as organizational
29 learning, relationship building, shared vision, cross-functional integration and
30 technology sensing and response. Other capabilities should also be attained such as
31 social capital that serves as a knowledge base for eco-innovation (Martínez-Pérez et al.,
32 2015) and entrepreneurial behavior which plays an important role in business
33 management and eco-innovation (Tzschentke, et al.; 2008; Ferrari & Vargas-Vargas,
34 2010).
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51 Above mentioned capabilities are related to sensing, accessing and implementing eco-
52 innovation processes and organization. However, market focus should permit to match
53 all these efforts according to tourist demand. To achieve and sustain competitive
54 advantage, hotels green products should go behind complying with industry or
55 regulation standards and achieve firm's superiority over competitors in environmental
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3 issues (Leonidou, et al., 2015). To do so, market focus is essential to understand
4 attractive market opportunities to create and develop eco-innovative products to green
5 market (Bossle, et al. 2016). Market focus permits a more accurate definition of
6 strategic market goals which have a significant influence product level, especially on
7 innovation in integrated environmental protection (Cleff & Rennings, 1999).
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10 As such, in Figure 1. we consider market focus as a hotel green product performance
11 antecedent and correspond to hypothesis 1, as follows:
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13 H1. The higher the hotel capabilities for market focus, the higher its green product
14 performance
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16 As referred, the existence of external drivers contributes to the development of eco-
17 innovation. However without internal capabilities to develop eco-products that promote
18 competitiveness the results will be questionable. This means that some internal
19 capabilities are just enough to permit to comply with regulatory standards (Cleff &
20 Rennings, 1999), but it also means that other capabilities can contribute both to eco-
21 innovation performance (Li, 2014) and competitive advantage (Leonidou, et al. 2015).
22 As such firms must determine the resources and capabilities they dedicate to
23 environmental competitiveness (Jones et al., 2016). Considering the capabilities' role on
24 the development of eco-product innovation, we can hypothesize:
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28 H2: Eco-product innovation capabilities contributes positively to green product
29 performance
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31 32 33 **Demand side**

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35 As referred by Bleda and Valente (2009) “environmental policymakers have tended to
36 rely heavily on ‘supply oriented’ market based instruments (e.g. eco-taxes and tradable
37 permits)” (p. 513). However, in recent years the consumer responsibility increased as a
38 response to the recognition of the importance of being eco-friendly. Figure 2. covers the
39 demand dimension. This research aims to analyze both sides of hotel green
40 products/services performance – supply and demand. Since environmentally responsible
41 consumers are more aware of environmental problems they are prone to engage in eco-
42 friendly activities and actively seek eco-products or services sold (Han & Yoon, 2015).
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46 However, customer acknowledgement of environmental benefits of the product or
47 service is determinant. As such, suppliers will gain from product eco-innovations only if
48 consumers are provided with appropriate information on the products environmental
49 benefits, eventually using eco-labels (Bleda & Valente, 2009). So, “simply providing
50 scientific solutions to environmental problems in product development will not suffice
51 to gather closeness to customer, improve corporate image and increase sales and
52 competitiveness” (Triguero et al., 2013: 26). Thus, acquiring information about
53 customers' green needs on lodging-related product permits hotel managers to establish
54 and implement green strategies (Han & Kim, 2010) based on a closer integration of
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3 product development and marketing is needed (Triguero et al., 2013). As referred by
4 Han and Yoon (2015) an environmentally responsible hotel actively implements green
5 marketing strategies, follows environmental friendly guidelines, and engages in eco-
6 friendly practices.
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18 Han and Yoon (2015) analyzed hotel guests' decision formation and brought evidence
19 that consumer environmental awareness, and eco-friendly behavior affects the decision
20 making about purchasing behavior of environmentally responsible products. Customer
21 benefit fosters the implementation environmental product innovations (Kammerer,
22 2009) which "can be more costly than non-environmental ones but firms are able to
23 sacrifice short run profits in order to reach higher mid-term and long-term business
24 goals" (Triguero et al., 2013: 26).
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28 This effect is dependent of customer awareness, leading the producers to assure that the
29 products or services are properly identified in order to inform consumers about
30 environmental benefits (Kammerer, 2009). It also influenced by the environmentally
31 friendly consumer behavior that reflects a conscious decision by consumers (Han &
32 Yoon, 2015). As such, we can hypothesize:
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35 H3: Environmentally responsible consumers have positive intention toward green hotel
36 products or services
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46 **Method**

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50 To test our models we structured and applied two studies. Study 1 embraced hotel's
51 perspective based on a quantitative study supported on a questionnaire applied to a
52 sample of Portuguese hotels. The model variables were operationalized based on pre-
53 existing measures in the literature, as described below. Then translation into Portuguese
54 was made. To ensure measures accuracy it was undertaken a reverse translation to
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3 verify that there was no change in meaning. The Portuguese version of the questionnaire
4 was then pre-tested with two hotel consultants and two hotel managers. Changes were
5 made accordingly. We used an email-based questionnaire because it could prevent
6 respondents from missing any questions. The response to each item must be done before
7 moving on to the next item.
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10 Study 2 covers tourist dimension. We started with a small sample of 10 participants
11 sought to understand what they think about the hotel's proposal in terms of eco-
12 innovation and what are the topics most associated with this type of practice. Participant
13 observation and semi-structured interviews was used to evaluate those issues. These
14 interviews were also for green decision acknowledgement, to observe how tourists think
15 about environmental hotel attitude, which permitted to better fulfill this research
16 objective. A short list of items with higher occurrence was selected to integrate the
17 questionnaire, which was also complemented by pre-existing measures in the literature
18 that allowed the variables to be operationalized. The questionnaire was designed in
19 English and Portuguese, since it was intended to include foreign tourists and Portuguese
20 speakers (Portugal receives many tourists from countries such as Brazil, Angola, Cape
21 Verde, etc.). In the case of the Portuguese version, translation and reverse translation
22 were done to guarantee the meaning of the original questions. Pre-tests of both
23 questionnaires were done to three tourists each.
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30 **Measures**

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32 In study 1, to measure eco-product innovation we adapted Cheng and Shiu (2012)
33 proposal. Original measure is part of organizational capabilities to implement new
34 forms of management, organization, processes and products that contribute to eco-
35 innovation. Cheng and Shiu's construct is divided in: eco-organization implementation,
36 eco-process implementation and eco-product implementation. We used the last one,
37 which consisted in a seven item measure where respondents were asked to rate their unit
38 relative to major competitors over the last three years. A seven-point likert scale was
39 used (1=strongly disagree; 7=strongly agree). Questionnaire had an initial text that
40 introduced the items - «on the extent to which...». Items were like «our unit often
41 emphasizes developing new eco-products through new technologies to easily recycle
42 their components» or «our unit often emphasizes developing new eco-products through
43 new technologies to use natural materials».
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48 Market focus was measured by using three items from Pujari (2006) eco-innovation
49 activities. Based on the author proposal a five-point likert scale was used (1= 'strongly
50 disagree', 5='strongly agree'). Questionnaire items were like «we established specific
51 target market in market assessment» or «we obtained customers' view of the green
52 product idea».
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55 Green product performance was estimated by adapting Pujari (2006). The measure
56 consisted of seven items. The respondent was asked to evaluate their green products or
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3 services in relation to their performance in the market. The scale was 1='not at all',
4 5='to a great extent'. Items included affirmations like «created new markets in the
5 country» or «enhanced environmental image».

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7 In study 2, comfort trade-off was measured by applying Baker, et al. (2014) work using
8 three items in seven-point likert scale (1=strongly disagree; 7=strongly agree). Items
9 were like «when a guest in a hotel, I put comfort before being environmentally
10 conscious». Measures for luxury trade-off and cost reduction come from the same
11 authors. The former consisted of two items (eg. «As a guest in a hotel, I put luxury
12 before being environmentally conscious») and cost reduction of three items (eg. «I think
13 hotel green initiatives are ways for the hotel to cut costs»).

14
15 The measurement of tourist intentions consisted in three dimensions as proposed by
16 Han, et al. (2011): intention to stay (three items, such as «I will stay at a green hotel
17 when traveling»); intention to spread word-of-mouth (three items like «If someone is
18 looking for a hotel, I will suggest to him/her to stay at a green hotel; and intention to
19 pay more also with three items like «I will spend extra in order to stay at an
20 environmentally friendly hotel».

21 22 23 24 25 26 27 **Results and discussion**

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30 Responses to the questionnaire were obtained in May-June 2018. A final sample of 42
31 hotels was reached consisting in a response rate of 11.67% (sample error of 6.57%). The
32 sample is representative of the population by means of firms' size and regional
33 distribution. Table 1 summarizes the hotels sample characteristics.

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36 As can be seen there is a balanced distribution in terms of activity time and size, herein
37 assessed by the number of employees. The same can be applied to the number of years
38 of eco-innovation. However 62% of the hotels don't have procedures to identify and
39 regularly reduce environmental impacts.

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50 According to the results shown in table 2, even though a large majority of the hotels
51 didn't have procedures to measure environmental impacts, hotel managers had the
52 perception that their green product performance was moderate (Mean = 3.667). Even
53 though, there is also the recognition that hotels has the capacity to implement eco-
54 products (Mean = 4.776). One important finding is that these capabilities for eco-
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3 product implementation aren't correlated with green product performance, as could be
4 supposed, but market focus is ($R=.504$, $p<.01$). As such, H1 is supported by the result
5 and H2 is rejected. One interpretation is that managers are concerned to comply with
6 regulations and industry standards more than understanding tourist preferences about
7 green product and services in hotels. Tourism industry is generally associated with
8 following eco-innovation defensive strategies implemented in slow pace (Hjalager,
9 1997). Most of the research about eco-innovation points to external drivers, mostly
10 regulations and demand pull (Hojnik & Ruzzier, 2015). In this area, the response is
11 standard compliance (Carrillo-Hermosilla, et al., 2010), not differentiation.
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15 Differentiation results from adding value to customers (Kammerer, 2009) which, with
16 time, will recognize firms' sacrifice of short run profits in return correspond to their
17 needs and preferences (Triguero et al., 2013). However, tourism industry research point
18 to several internal sources influencing eco-innovation decisions: owners personal values
19 (Tzschentke, et al., 2008), entrepreneurs' environmental perceptions (Ferrari and
20 Vargas-Vargas, 2010), organizational capabilities (Leonidou et al., 2015) or social
21 capital (Martínez-Pérez et al., 2015). Market focus is important to gain insights about
22 hotel guests' decision formation (Han & Yoon, 2015) and to align hotel strategy and
23 bundle of capabilities towards the market and competitive differentiation as our results
24 suggest.
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The main survey of study 2 was also conducted in May-June 2015. A total of 204
questionnaires were collected in hand to a random sample of tourists in the center of
Lisbon. The responses permitted a convenience sample to test our model and evaluate
tourists' preferences in relation to eco-products. The demographic profile of the
participants is shown in Table 3. The majority of the respondents were from Portugal
(22.1%), UK (14.2%) and Germany (13.2%). Approximately half of the respondents
were aged between 21 and 40, and most of them (69.1%) stayed in hotels for more than
9 nights per year.

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Our results about tourist preferences (Table 4.) show that H3 is partially confirmed. Environmentally responsible consumers were measured using three dimensions: luxury trade-off, comfort trade-off and cost reduction reconnaissance. The first two allowed verifying if tourists are willing to exchange luxury or comfort for green products or services offered by hotels. A negative and significant correlation was obtained since measure was reverse coded. As such, the results suggest that more environmental sensitive tourists are more willing to stay or recommend hotels with green products and services. Correlation is stronger in relation in comfort trade-off than luxury trade-off.

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However, cost reduction had no correlation with tourist intentions. Cost reduction measure intended to evaluate if hotel green initiatives were understood by tourist as a way for the hotel to cut costs. No significant correlation was found.

By crossing both studies results, it is possible to perceive, in the foreground, that hotels invest in capabilities to implement green products, but that investment must be market oriented, which is not always the case, since there is essentially a compliance concern (Carrillo-Hermosilla, et al., 2010). On the tourists' side it turns out that those who are more available to comfort or luxury exchange environmental issues are those who have more positive intentions to stay, recommend or to pay more to stay in green hotels. Implicitly we come to a mismatch. Without proper market orientation (Jaworski & Kohli, 1993), it is very difficult for a hotel to offer green products that effectively meet the tourists' expectations. At the same time, the latter have complex consumer behavior and can only be known through in-depth market research.

Semi-structured interviews with tourists permitted to understand that some green activities are insufficient like towel reuse with the argument that saves water and detergent could be seen as a "cost-cutting measure for the hotel that has little benefit to the consumer" (Baker et al., 2014: 9). Instead, hotel managers must pursue the excellent attributes and services that "induce customers' positive evaluations and stimulate the formation of favorable attitudes toward visits to green hotels" (Han & Kim, 2010: 666).

Marketing strategies should support operational green efforts. In fact, field interviews brought insights that technological solutions aren't always easily understandable or recognizable by customers and, without proper communication, they won't contribute to improve corporate image and increase sales and competitiveness (Triguero et al., 2013). Semi-structured interviews underlined the importance of tourist awareness and even active involvement on green activities and green product development. As such, market focus can provide important insights about customers' environmental involvement (Hu, 2012) and their green needs on lodging-related product (Han & Kim, 2010) to establish

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3 and implement green advertising (and eventually pricing) strategies. These strategies
4 can contribute to enhance their perceived importance of being environmentally friendly
5 (Han et al., 2011). So, hotel effort should “address the disconnect between whether
6 customers thought a hotel should have a particular green practice, and whether it was
7 important for them to stay in a hotel that has such a practice” (Baker et al., 2014: 9).
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10 11 **Conclusions**

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16 This research main objective considered the evaluation of the possible divergences in
17 the investment decisions in eco-innovation by the hotel management relative to the
18 valuation of the tourists on the same subject. On this vein, we intended to comprehend
19 whether market focus and eco-product innovation strategy contributes to firm’s
20 environmental performance in the market. Our data suggests that hotel capabilities for
21 eco-product implementation don’t contribute to improve green product performance.
22 But market focus does. As such, hotel managers should direct their green strategies
23 focusing on gathering information about tourist preferences about green product and
24 services in hotels, and not only comply with regulations and industry standards.
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28 A second objective linked to the demand side, was to assess tourist preferences in the
29 context of green hotel products and how they influence the intentions of staying or
30 recommending a hotel. Results suggest that tourists with environmental attitudes are
31 more willing to stay and recommend and even pay more to stay than other tourists. As
32 such, the investment of market focus capabilities and activities is important to evaluate
33 hotel guests’ decision formation and will provide managers with important tools to
34 define their green strategy.
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38 Another important finding is the reconnaissance of marketing and advertising role on
39 green product performance. Tourist is eventually unaware about environmental
40 advantages of technological investments, As such, providing that information will not
41 only influence their intentions to visit or recommend, but also improve tourist own
42 sentiment of contributing to environmental causes.
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46 On these perspectives, a long-term green product strategy is important to align hotel
47 resources and capabilities towards market orientation and a more effective organization
48 and product development that correspond to tourist needs and preferences. It also
49 permits to better align communication strategy that inform, educate and reinforces
50 competitive differentiation.
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53 This work can lead to further research that deepens the models dimensions. For
54 example, future research can detail our findings detailing the most valued green
55 products and marketing and communication strategies that best inform and convince
56 tourists to stay in a green hotel. The expansion of our models should be based on larger
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3 a sample that permits to identify different segments supported on environmental attitude
4 variables.
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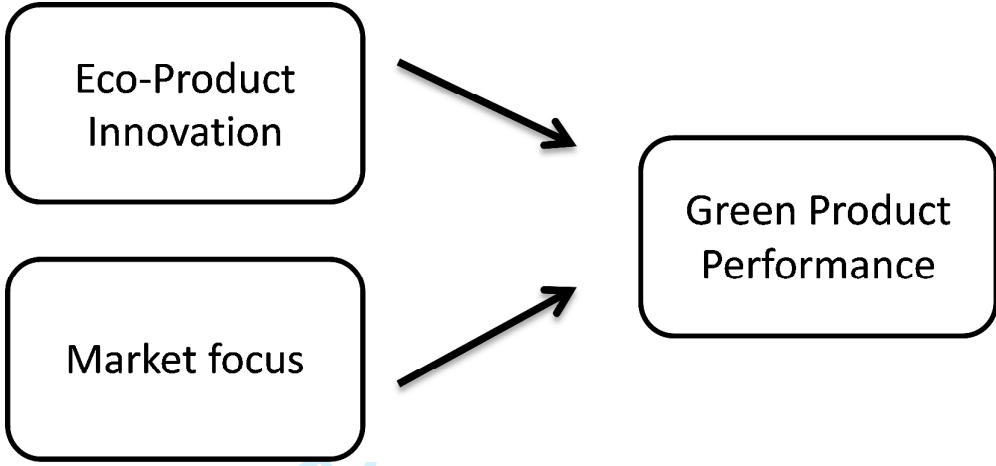
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Figure 1. Hotel Green Product Performance Antecedents



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Figure 2. Intention Towards Green Hotel Tourist Antecedents

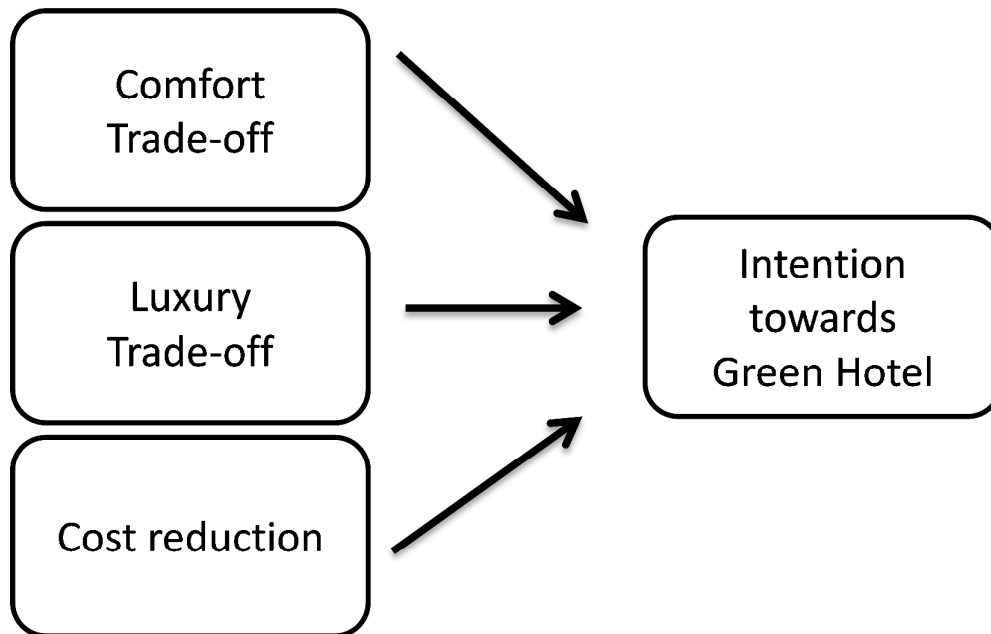


Table 1. Characteristic of respondent firms (N = 42).

Characteristic	%	Characteristic	%
Age		Labor force	
Less than 5 years	16%	Less than 20	15%
5 – 10 years	22%	21 – 50 years	17%
11-20 years	27%	51-150 years	35%
More than 21 years	35%	More than 151	33%
Number of years of eco-innovation		Procedures to identify and regularly reduce environmental impacts	
Less than 3 years	15%	Yes	38%
3 – 5 years	25%	No	62%
6-10 years	27%		
More than 11 years	33%		

Table 2. Pearson correlations between the variables (Hotels).

	Cronbach's	Mean	S. D.	2	3
	Alpha				
1. Green product performance	.869	3.667	.669	.504**	.291
2. Market Focus	.919	3.198	1.498	-	.556**
3. Eco-product Implementation Capabilities	.936	4.776	1.528	-	-

**p < 0.01.

Table 3. Characteristic of respondent (N = 204).

Characteristic	%	Characteristic	%
Number of nights in hotel per years		Age	
1 a 3	4.8%	Less than 20	10.4%
4 a 6	9.5%	21 – 40 years	49.5%
7 a 9	16.7%	45-60 years	34.7%
9 a 12	23.8%	More than 60	5.4%
13 a 15	14.3%	Country of origin	
+ de 16	31.0%	Portugal	22.1%
Gender		Spain	3.9%
Female	43%	Brazil	7.8%
Male<	57%	Germany	13.2%
		France	6.4%
		Uk	14.2%
		Other	32.4%

Table 4. Pearson correlations between the variables (tourists).

	Cronbach's	Mean	S.D.	2	3	4	5	6	7
	Alpha								
1. Lux. Trade-off	.720	3.453	1.367	.148*	.067	-.276**	-.258**	-.282**	-.197**
2. Comfort Trade-off	.722	4.064	1.502		-.296**	-.389**	-.268**	-.417**	-.348**
3. Cost Reduction	.893	3.336	1.472			-.030	-.078	.042	-.036
4. Intentions in general	.895	4.691	1.140				.893**	.878**	.863**
5. Intention to stay	.763	4.793	1.163					.741**	.619**
6. Intent to recommend	.932	4.522	1.544						.614**
7. Intent to pay more	.781	4.703	1.267						

**p < 0.01.