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# Aiming towards green capability in the hospitality sector using nudge strategies

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## Abstract

*The use of green marketing and nudge theory in the hospitality sector is an approach that aims to influence a person's behavior by effectively steering them in a desired direction, in this case towards green consumption. It is therefore imperative that we ask ourselves how can we promote a 'greener' consumer behavior in the hospitality sector through nudging. Through a conceptual approach, one seeks to contribute to the debate and to raise new directions for re-search. A novel theoretical framework for green capabilities is also presented. Behavioral applications such as Nudge can help those making decisions in the hospitality sector to use Nudge when promoting green behavior in specific contexts. To the best of our knowledge, there has been little attempt to create a framework that explains the different dimensions that exist when intervening to implement green behaviors in the hospitality sector using Nudge strategies.*

## Keywords

Green Behavior • Green Capability • Green Marketing • Hospitality Sector; Nudge


## 1. Introduction

All tourism activities cause extensive environmental costs in destinations (Juvan & Dolnicar, 2017) and reducing the damage caused by tourism activities is not an easy task. Moreover, studies show that day-to-day pro-environmental behaviors (e.g., reduction of energy and water consumption, waste disposal, among many other) are almost completely forgotten when engaging in tourism activities (Kim et al., 2020). The urgent need to change this situation has led researchers and other public and private stakeholders to find solutions based on behavioral theories, with one particular theory standing out from the rest - the Nudge theoretical approach. Nudge is a relatively new method of influencing behavior in a sustainable direction without changing people's values (Mont et al., 2014). As Sunstein (2014) puts it, nudging enables the development and implementation of policies that do not threaten people's autonomy. Rather, it effortlessly steers people in the best direction, as if they were making the decisions themselves. It recognises that people do not act as isolated individuals, but that consumption is socially constructed and often deeply embedded in group habits and norms (Hall, 2013).

Consumers care much more about environmental sustainability today than ever before. According to the Healthy & Sustainable Living - A Global Consumer Insights Project report (GlobeScan, 2019), issues related to the environment are among humanity's greatest concerns today. Environmental sustainability has become a central topic of discussion in society, both nationally and globally. As a result, brands are increasingly adopting green marketing strategies. However, studies show that there is a gap between people's intention to live healthy and sustainably and their actual behavior (GlobeScan, 2019). In this sense, the main objective of this paper is to explore the use of nudge as an accelerator for green capacity building and its main dimensions. Green capability and its adoption could be a promising step when business aim to ease environmental issues and achieve green ideals (Khan et al., 2022). Thus, this work aims to contribute to the existing conceptual corpus of research on green behavior and Nudge, and in particular to explore their interconnection in the hospitality sector, as the literature in this field seems to lack conceptual frameworks for the use of Nudge, is still fragmented and lacks a better

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understanding of its effectiveness (Souza-Neto, et al., 2022). Moyle et al. (2021) also noted the lack of patterns, integration, and theoretical and methodological advances in sustainable tourism research over the past three decades.

The article proceeds as follows. First, it presents the methods used in this study. Second, it deepens the knowledge of the Nudge concept and its overall effectiveness. Then, it discusses the main green consumption values and green marketing in the hospitality sector. Finally, the conceptual framework for green capabilities in the hospitality sector using Nudge is clarified, explored and discussed. Conclusions and implications for future research have been draw.

## 2. Literature Review

### 2.1. The Nudge Concept

The reality shows us that everyday environmentally friendly behaviors (e.g., reduction of water and/or energy consumption, not littering, etc.) do not occur in tourism and hospitality activities (Gössling, 2002; Kim et al., 2020), creating a gap between attitudes, intentions and behavior is produced (Juvan & Dolnicar, 2014; Juvan & Dolnicar 2017). Over the years, behavioral researchers and practitioners have struggled to deliver a framework that recognises human behavior for what it is, rather than based on simplistic economic models. This changed fundamentally when Thaler and Sunstein (2008) coined the term 'nudge'. This led to a renewed interest in applying behavioral science to the design of policies that consider individual and social welfare (Lehner et al., 2016). Nudge explores decision architecture and was defined by its creators as "the tactic of skilfully modifying a behavior. It is then any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives" (Thaler & Sunstein, 2008:6). Hausman and Welsh (2010) add a 'constructive' condition to the definition of nudge, explaining that nudges are required because of errors in individual decision-making and their role is to exploit these very errors. According to Hansen (2014:158), nudge can be described as "any attempt at influencing people's judgement, choice or behavior in a predictable way (1) this is made possible because of cognitive boundaries, routines and habits in individual and social decision-making posing barriers for people to perform rationally in their own declared self-interests and which (2) working by making use of those boundaries, biases, routines, and habits as an integral part of such attempts". Thus, nudges "help individuals to make what, on reflection, they themselves would recognise as the better choice" (Infante et al., 2016:4). To consolidate existing definitions and his own, Hansen (2016) sets out some conditions under which a nudge must be a nudge; according to this, a nudge would be any aspect

of the choice architecture that alters people's behavior in a foreseeable manner without:

1. Forbidding any option;
2. Significantly changing incentives, whether regarded in terms of time, trouble, social sanctions, economic and so forth;
3. Nudges are called for because of cognitive boundaries, biases, routines, and habits in individual and social decision-making;
4. Work by making use of those binderies, biases, routines, and habits as integral parts of the choice architecture.

In summary, the nudge construct works by providing contextual attributes (i.e. a change in decision architecture occurs) that take ascendancy due to the human propensity to act automatically (e.g. a heuristic), but diverge from a biased heurist in that they lead people to make (presumably) good decisions (Tagliabue et al., 2019), moreover, green nudges have the potential to promote the wellbeing of both current and future generations (Hage, 2019).

### 2.2. The Nudge Effectiveness

Since its appearance, scholars have praised 'nudge' as an encouraging tool for behavior change because it allows the possibility of influencing individuals' decisions through simple changes in what is known as choice architecture. Choice architecture consists of defining the physical, social, and psychological context in which decisions are made (Thaler et al., 2013). A meta-analysis study conducted by Mertens et al. (2022:8), incorporating the results of more than 440 nudge interventions, has shown that "choice architecture is an effective and widely applicable behavior change tool that facilitates personally and socially desirable choices across behavioral domains, geographical locations, and populations". Nudge interventions to promote healthier food choices have led to an average increase of 15.3%, according to a meta-analysis by Arno and Thomas (2016). However, the authors point out that perhaps only positive results have been published. Lycett et al. (2017) analysed 40 studies that tested the effectiveness of nudge strategies designed to transform positively children's dietary behavior in their homes and found that 83 % of these studies produced positive results.

Over the years, researchers have made many attempts to prove the effectiveness of nudge. One of these early attempts was made by Allcott (2011), who used a sample of more than 600 thousand households in the United States of America (U.S.A.) to show that households that regularly received mail comparing their energy consumption with the ones of their neighbor's reduced consumption by an average of 2%. However, a study conducted by Gaudel & Crosetto (2019) points out to the fact that the nudge effect can disappear

if the proper time and incentives are given to the decision-makers in order to review their assessment, that implies that the nudge effect may not survive cognitive deliberation. A study by Sürücü et al. (2019) has shown that the nudge effect disappears or is extremely affected when the decision maker is presented with two options and strongly prefers one of them while being indifferent between the two options. Despite that, it would be illogical to believe that the ones that decide always have strong preferences and engage in cogitations in any situation when having no incentive to do so (Congiu & Moscati, 2022) and is presented with more than one option to choose from. Bang et al. (2020), for their part, have shown that disclosing the fact that it is a nudge does not reduce effectiveness and that understanding the intended outcomes increases acceptability. These studies thus show practitioners what to avoid or what should be done to maintain the effectiveness and efficacy of applying nudging. Yet nudge is not infallible, and one of its best-known failures is in the fight against smoking around the world. "The strength of the images used in the advertising campaigns of various brands weakens public policy efforts" (Sunstein, 2017:20).

### 2.3. The Nudge Effectiveness in the Hospitality sector

A few studies have been conducted to measure the nudging effect in the hospitality sector. The first study to use nudge, as far as one knows, was conducted back in 2008 when nudging was still in its infancy, as Goldstein et al. (2008). In the study, they found that by indicating that most guests to participate in the towel reuse program, followed the message "join your fellow guests in helping to save the environment" was more effective than the message "help save the environment. You can show your respect for nature by reusing your towels during your stay". The results show that 75% of the guests in the first sample complied with the program, but in reality, only 44.1% truly followed the program to the letter. In the second sample, 35% of the guests also adhere to the reuse of their towels. They believe that the difference has to do with social norms - those rules that govern behavior in groups.

Chang et al. (2016) conducted a study that confirmed the effectiveness of nudges in saving electricity. They proved that hotels could achieve guest-driven electricity efficiency with properly designed nudges. The results indicated that guests are more inclined to engage in electricity saving practices when they are informed in real time about how much others are consuming. A study by Kim et al. (2020) on the implementation of architectural choice modes showed, through several experiments, that tourists who had to choose between an environmentally friendly hotel and a hotel with regular services chose the environmentally friendly hotel due to a feeling of guilt resulting from the choices. This result confirms the experiment led by Goldstein et al. (2008); as

Festinger (1954) stated, people usually evaluate themselves in comparison to others.

Kallbekken and Sælen (2013) demonstrated that it was possible to lessen the quantity of food leftovers in hotel restaurants by an average of 20% with two non-intrusive nudges. In this study, the researchers reduced plate size and provided social cues. Given the contribution of edibles waste to climate change, this study should have received much more attention from hotels, restaurants, and researchers. It is imperative to remember that "in European countries, 40% of food waste happens at the retail and consumer stages" (Barker et al., 2021:1). Finally, it is important to enhance the study conducted by Visser-Amundson (2020) on the broad multi-stakeholder partnership to tackle food waste in the hospitality sector in the Netherlands, in which 172 restaurants participated and whose use resulted in a 21% reduction in food waste. Nudging in the hospitality's food sector is important as one third of all edibles produced for human consumption worldwide are never consumed (Murphy et al., 2019).

### 2.4. Green Consumption Values

There is a prevailing belief among researchers that environmental problems can be mitigated or even solved by correcting human behavior towards greater environmental sustainability (Han, 2021). Changing individual consumer behavior at the moments of approaching, buying, and consuming products in an environmentally friendly way is considered a fundamental requirement for environmental sustainability (White et al., 2019; Halder et al., 2020; Wang et al., 2020). This may be a consequence of the fact that environmentally friendly consumption has become increasingly important worldwide, especially since the 1980s, as environmentally friendly consumption can effectively contribute to the achievement of the global Sustainable Development Goals (Zhao et al., 2022). However, not much is known about how consumers' cultural values and ethical ideologies lead to green consumption (Halder et al., 2020). Nevertheless, there is a well-grounded theoretical basis in the literature on pro-environmental consumer behavior in hospitality. Several of the mainstream theories include: "the theory of planned behavior" (Ajzen, 1991; Manaktola & Jauhari, 2007; Han et al., 2009; Han & Kim, 2010; Lee et al., 2010; Chen & Tung, 2014; Grimmer & Milles, 2017), "the descriptive theory of social norms and social comparison" (Goldstein et al., 2007), "the construct of the new ecological paradigm" (Mair & Bergin-Seers, 2010; Kang et al., 2012), "value-belief -norm theory" (Stern, 2000; De Groot & Steg, 2009; Choi et al, 2015; Han, 2015), "commitment to the environment" (Rahman & Reynolds, 2016), "social exchange theory" (Homans, 1961; Blau, 1964; Emerson, 1976; Jiang & Kim, 2015) and "consumer demand theory" (Millar & Baloglu, 2011; Rahman et al, 2013).

Psychological research has uncovered an apparent attitude-behavior gap (also referred to in literature as the value-action gap) when examining the relationship between environmental attitudes and behavior. While most people may support pro-environmental beliefs, few are willing to choose 'green products' over price, utility, convenience and simplicity (Young *et al.*, 2010; Sachdeva *et al.*, 2015). Research also shows that values are an important antecedent of a multitude of pro-environmental behaviors (Steg *et al.*, 2015). The literature also shows that the most relevant factors explaining people's pro-environmental behavior are "biospheric values" (concern for nature and environmental protection), "altruistic values" (concern for the well-being of others), "egoistic values" (safeguarding and promoting personal interests) and "hedonic values" (seeking pleasure with as little effort as possible) (De Groot & Steg, 2009; Steg *et al.*, 2014; Bouman & Steg, 2020; Wang *et al.*, 2021).

One can propose a broad taxonomy of values, however, studies conducted across countries and among different people and cultures allowed to establish the existence of two broad facets of core values (Rahman & Reynolds, 2019) - self-transcendence versus self-enhancement (Schwartz & Bardi, 2001; De Groot & Steg, 2008). The self-transcendence versus self-enhancement dimension characterizes itself by universalism and benevolence as opposed to power and achievement values (Schwartz, 2005). Pro-environmental beliefs, attitudes, identities and behaviors according to the self-transcendence (i.e. altruistic or biospheric) and self-enhancement (i.e., egoistic or hedonistic) dimension, according to several studies (Stern *et al.*, 1998; Nordlund & Garvill, 2002; De Groot & Steg, 2009; Boer & Fisher, 2013; Nilsson *et al.* 2016). Values of self-transcendence lead individuals to care about the wants of others and the environment (Schwartz, 2012) and are considered positively related with pro-environmental attitudes and beliefs (Stern *et al.* 1998; Boer & Fisher, 2013; Steg *et al.*, 2014). Self-enhancement values lead individuals to focus on themselves, on their own interests (Schwartz, 2012) and are generally negatively related to pro-environmental beliefs and attitudes (Stern *et al.*, 1998; Steg *et al.*, 2014). Conversely, environmental self-identity (i.e. the degree to which individuals see themselves as environmentally friendly) and also group factors might play a crucial role in predicting pro-environmental behavior (Hornsey *et al.*, 2006; Bouman & Steg, 2020).

In summary, hospitality managers need to comprehend the dynamics of consumer behavior if they are to implement an effective and efficient environmental program that is not only beneficial to the environment but also to the bottom line (Rahan & Reynolds, 2015).

## 2.5. Green Marketing in Hospitality

Research on green marketing and the purchase of green products began in the 1970s. But it was not until the 1980s

and early 1990s that significant progress was made in this particular thematic, including the appearance of eco-labeling (Horne, 2009; Smith & Bower, 2012; Braimah, 2015).

Probably the first definition of green marketing was given by Mintu and Lozada (1993). According to them, it is the use of marketing tools to promote exchanges that are able to satisfy organizational and individual goals in such a manner that makes the preservation, protection and conservation of the physical environment sustainable. Green marketing is thus clearly based on Elkington's (1994) Triple Bottom Line. Green marketing strategies can largely be applied to hospitality in order to achieve the three major effects of green marketing on businesses identified by Polonsky (1994):

1 – Cutting back costs – Adapting production processes to become greener often results in the more effective use of resources and, through this, to changes in cost patterns;

2 – Differentiation relative to rivals – When supplying new products on new markets and/or creating value for existing products, a business can gain access to new market(s) segments, enhance customer loyalty, and increase profitability – in other words, improve its relative position in the market in comparison with rivals;

3 – Revitalisation of a business – A business can use greener processes as an opportunity to revitalise its product(s), as well as its overall corporate strategy, culture, mission, vision, image, etc. by applying the guidelines of green marketing.

Most studies that seek to understand the impact of green marketing on consumers' environmental behavior date back to the last fifteen years, such as that of Kim and Han (2010), who concluded that customers accept to a slight extent a service with lower quality of a green hotel if the green initiative does not lead to a rise in the room cost. Haanes *et al.* (2011), for example, found that companies pursuing green marketing strategies can achieve economic benefits in the areas of operations and innovation (e.g. process improvements, operational savings and enhanced technological development), but do not achieve monetary benefits through higher customer prices or market share. Ko *et al.* (2013) demonstrated that green practices directly prop up a retailer's brand image but only indirectly influence customer loyalty, or the study by Patwary *et al.* (2022), which showed that the use of green marketing instruments (e.g., eco-label, eco-brand and environmental advertising) in the Malaysian hospitality industry improves green attitudes and behavioral intention to purchase green products.

## 2.6. Aiming Towards Green Capability in the Hospitality Sector Using Nudge

All that has been said points to the benefits that nudge can have in changing behavior. As far as the hospitality sector is concerned, the development of environmentally friendly tourism behavior through nudge has already begun. However, there is a clear lack

of conceptual work in the literature dealing with the hospitality sector and with the application of nudge. Our study aims to help fill this gap. Furthermore, studies like the one of Khan et al. (2022) have shown that green capability can play a pivotal role in the adoption of green purchasing practices. Coates and McDermott (2002:436) defined capabilities as “a bundle of aptitudes, skills and technologies that a firm performs better than its competitors, that it is difficult to imitate and provides an advantage in the marketplace”. Lee and Klassen (2008) defined green capabilities as the assets, technologies, and expertise that firms can exploit to respond in a timely and decisive manner to the diverse environmental needs of customers and other stakeholders. Four green capabilities can be identified in literature:

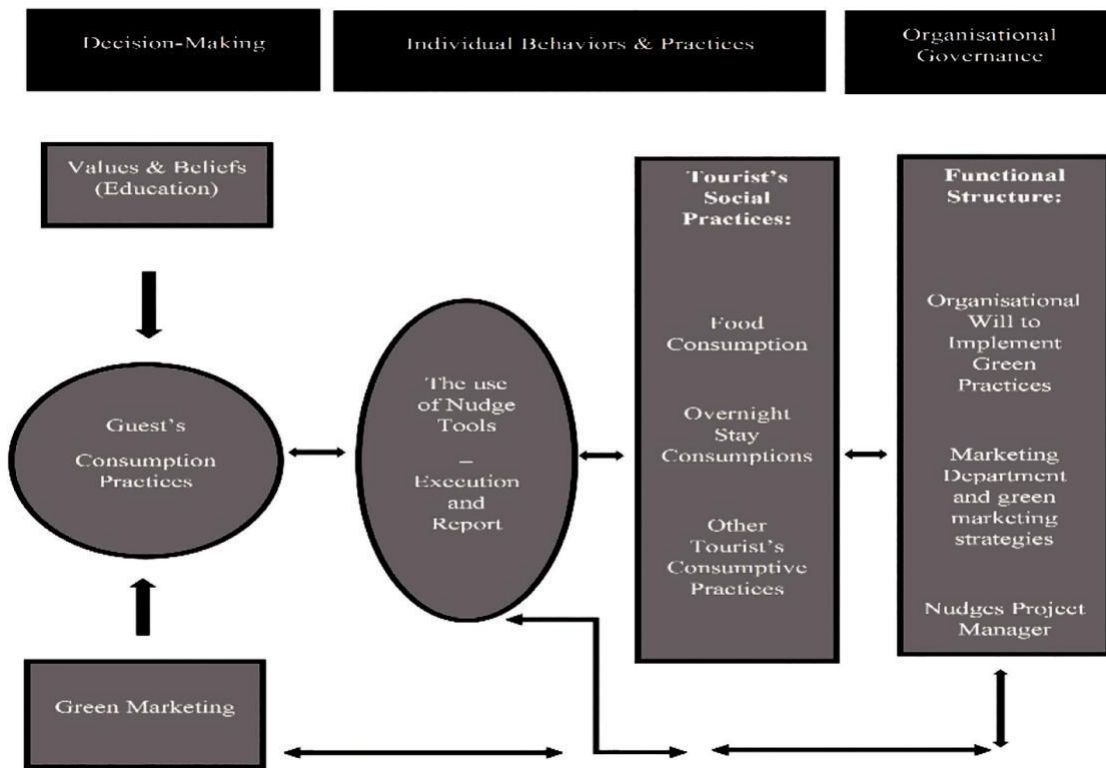
- 1) Green supplier development, that refers to the ability of the firm to identify and collaborate with their suppliers to achieve greater green outcomes (Blome et al., 2014);
- 2) Green marketing, that refers to the ability of the firm to effectively market its green products and processes to its customers and stakeholders (Shang et al., 2010);
- 3) Green manufacturing and packaging, that refers to the ability of firms to alter their manufacturing and packaging processes in way to reflect green concerns (Shang et al., 2010);

- 4) Environmental participation, that refers to the ability of the firm to bring together its internal stakeholders (staff and departments) to work together in the implementation of green initiatives (Bae., 2017).

Our framework (Figure 1) has had in account these four dimensions previously presented and in the work of Whitmarsh et al. (2011) and Hall (2013), more specifically the latter author’s framework. Although Whitmarsh’s and Hall’s frameworks include the dimensions of carbon capability, it seemed right to us to make some adjustments and transform their frameworks on carbon capability into one on the dimensions of green capability in the hospitality sector. Several constructs were added due to the specifics of the context of our own research.

In this framework on tourist’s green behavior change through nudge, three dimensions were identified:

- 1) Decision-making (e.g., knowledge, skills, judgement);
- 2) Individual behavior and practices (e.g., energy conservation, water savings, avoiding food waste, etc.);
- 3) Organisational engagement with greener governance (e.g., institutional change, implementing green processes; eco-labeling, nudge, etc.).



**Figure 1.** Dimensions of Green Capability in the Hospitality Sector.  
 Source: Designed by the authors based on the carbon capability models of Whitmarsh et al. (2011) and Hall (2013).

Bearing in mind the work of Whitmarsh *et al.* (2011), it is possible to say that the idea of changing tourists' behavior through nudges aimed at implementing green consumption behavior requires a comprehension of the limits of individual action and where these meet larger social institutions and infrastructures. Furthermore, we argue that much of tourists' consumption behavior is based on hedonic values (seeking pleasure with less effort as possible (De Groot & Steg, 2009; Steg *et al.*, 2014; Bouman & Steg, 2020; Wang *et al.*, 2021) or habitual and routine actions that are not based on conscious decision-making (Hall, 2013). In line with the literature on social studies and structuration (Giddens, 1984), which organizational theory draws on to analyze change over time (Langley, 2009; Floyd *et al.*, 2011), we see the cognitive decision-making of individuals (guests) in relation to consumption (micro-level) as resulting from institutionalized, formal and informal rules that shape lifestyle choices, and in a set of practices bounded by social systems and rules dictated by macro-level structures (Whitmarsh *et al.*, 2011) - it is "the practice concept that links the micro and macro level likewise" (Whittington, 2015:146), i.e., individual choices and practices such as those of hospitality consumption are highly shaped by social structures.

Contrary to Whitmarsh's *et al.* (2011) carbon capability framework, in our case the pressure is not exerted by the actors (guests) on dimension 3 (governance), but from dimension 3 on the other dimensions through nudge. Our dimension 3 - governance - is already engaged with greener practices, i.e., it is a *sine qua non* condition. It therefore aims to achieve behavioral change (dimension 2) through nudge in order to influence the cognitive and motivational processes of the guests (actors) (dimension 1).

The importance of nudge on green capability comes from the fact that reality shows us that in tourism the everyday pro-environmental behaviors (e.g. reduction of water and/or energy consumption, not littering, etc.) are not happening in tourism and hospitality activities (Gössling, 2002; Kim *et al.*, 2020), especially due to egoistic values (safeguarding and promoting personal interests) and hedonistic values (seeking pleasure with the less effort as possible) (De Groot & Steg, 2009; Steg *et al.*, 2014; Bouman & Steg, 2020; Wang *et al.*, 2021). Nudge is consequently important to promote green capabilities by "skillfully modifying a behavior (...) in a predictable way without forbidding any options or significantly changing their economic incentives" (Thaler & Sunstein, 2008:6). It should work by bidirectionally linking dimensions 1 (decision-making, i.e., guest consumption practises) and 2 (individuals' behavior and practises, i.e. social practises of guests). This is important because individuals do not act as isolated individuals; consumption is a social practise (Hall, 2013). Nevertheless, according to Bovens (2009) and Alemanno (2012), the use of nudges must satisfy the following parameters:

- 1) Intervention must not restrict individual choice;
- 2) It must be in the interest of the individual(s) being nudged;
- 3) It involves a change on the architecture choice;
- 4) It implies the cognitive use of cognitive biases;
- 5) The intended action does not result from a totally autonomous choice.

It is crucial to note that this framework also envisages that the use of nudge will be considered after the implementation of green marketing strategies and will act as a complement in a much broader green policy. Furthermore, once nudge has been implemented, if the effectiveness is to be reached, that the results are communicated to the functional structure (dimension 3 - organisational governance) that needs to address green growth in order to adapt or even change the current messages as necessary without changing the overall policy goals (e.g., engagement with green growth).

### 3. Methodology

This study follows the idea that conceptual analysis sometimes consists in disintegrating concepts into their constituent parts in order to improve overall understanding. Therefore, conceptual research is a particular research strategy that is mainly in the subjectivist-interpretivist paradigm and provides opportunities for critical engagement (Shin *et al.*, 2012). Researchers opt for conceptual research because the research problem cannot be addressed using only one theory or the concepts that integrate it. In the words of Gilson and Goldberg (2015:128), conceptual research should "bridge existing theories in interesting ways, link work across disciplines, provide multi-level insights, and broaden the scope of our thinking". As our previous analysis on conceptual research suggests, it can be said that the main characteristic of conceptual research is that it can make progress without requiring specific empirical data to support its knowledge assertions. A particular advantage of conceptual research is that it allows for multiple mental constructs (Shin *et al.*, 2012).

Conceptual research was chosen, culminating in a conceptual framework, because in it a researcher can synthesize concepts or and perspectives drawn from multiple sources (Imenda, 2014). It was our intention with this paper to contribute to the existing theoretical corpus of research on green behavior and nudge in the context of the hospitality sector.

### 4. Results and Discussion

Despite growing knowledge and awareness regarding our impact on the environment, changing current behaviors,

and in particular the behavior of tourists, has had limited results (Gössling et al., 2009; Hall, 2013; Gössling & Buckley, 2016). Studies have consistently demonstrated a disparity between expressed values and practical actions (White et al., 2019). The literature review also indicates that the use of messages that encourage social comparison generally has a much greater impact in hospitality than messages that do not (Goldstein, 2008; Gächter et al., 2013; Visser-Amundson, 2020). Thus, although appeals to individual responsibility and moral obligation produce some results, social comparison seems to result in a greater level of effectiveness.

The framework presented here emphasizes the role played by nudge, but also by green marketing. The implementation of green marketing strategies should anticipate the use of nudging - nudge should come as a complement, not as a panacea. It is then our believe that this framework here presented clear answers to our research question, i.e. how can we promote 'greener' consumer behavior in the hospitality industry through nudging. Based on the literature, especially Whitmarsh (2011), we can assume that our green capabilities framework provides a critical understanding:

- The role that guests and social practices play in producing water, food and energy waste, littering and carbon emissions;
- The benefits of engaging in a green lifestyle;
- What is possible through guest actions;
- Which activities require organisational action and change;
- Nudge management;
- Green marketing management;
- Limits and opportunities for green(er) consumption.
- The role that the social environment plays in guest consumption.

This research is thus a sound contribution to the scarce literature on nudging pro-social behavior in the hospitality sector (Nisa et al., 2017; Filimonau, 2018), although claims have been made in this direction (Hugh & Lee, 2016). In particular, this study contributes to the literature on nudging by showing how hospitality organisations can implement strategies into practise to achieve greater green effectiveness. Furthermore, it contributes to the literature with a novel framework that will certainly help to strengthen the debate on what is needed to implement nudge strategies with greater effectiveness. Our study is also important because as Khan et al. (2022) indicated, green capabilities play a key role in the adoption of green purchasing practices and that they have a positive effect on economic and environmental performance, and insignificant impact on social performance.

Furthermore, this study provides a set of guidelines that can help practitioners and researchers understand the structure and concept of green capability and how this can positively impact the organisations in the hospitality sector. Nevertheless, we argue that raising the level of Green Capability in the hospitality sector through nudge, while important, is not sufficient to significantly influence guest (tourists) behavior, at least not as much as it should, even though the financial and environmental impacts are significant, as studies have shown. However, it is not the panacea for all environmental problems in the hospitality industry.

## 5. Conclusions

In Western countries, green consumerism is understood as a means of engaging in pro-environmental-sustainable behavior. There are also operational definitions that enumerate different behaviors that can be considered as promoting positive environmental effects (Thøgersen & Noblet, 2012). The present study focuses on an illiberal model to shed light on two issues: nudge and green marketing. In doing so, this conceptual framework for changing tourists' green behavior through nudge aims to relate three dimensions. As a conceptual contribution, this study suggests that in the hospitality sector, it seems possible to integrate nudge theory with shared value co-creation in tourism services (Font et al., 2021), were shared value co-creation results in the genesis of satisfaction, commitment, and loyalty (Prahalad & Ramaswamy, 2004; Sweeney et al., 2015). Furthermore, the literature shows positive empirical results of nudge interventions in tourism (Souza-Neto et al., 2022). Another endowment of this study lies in understanding the concept of nudges and the so-called 'choice architecture', which has been explored in the scope of behavioral economics, as a concept whose implementation leads to straightforward green behaviors and practices in the hospitality sector. The focus of nudging is on redesigning the 'choice architecture' to encourage beneficial decision-making by consumers (Hall, 2013). It is well known that there is a high predisposition and positive attitude towards purchasing products that are considered environmentally friendly, even though the 'value-action gap', were people often do not act in accordance with what they know or care about (Whitmarsh et al., 2011), shows the disparity between public awareness of sustainability and limited resources and behavioral responses. As the literature supports, nudges respect individual freedom, as they can be elaborated both by governments (under libertarian paternalism) and by private entities and can be beneficial to both as well as to society. In the hospitality sector, the use of nudge strategies and green marketing tools seems

to contribute to the sustainable development of the sector by promoting cost savings, differentiation, business revitalisation (Polonsky, 1994) and improved brand image (Ko *et al.*, 2013), leading to improved green attitudes and behavioral intention to purchase green products (Patwary *et al.*, 2022).

In the future, there is a chance to reshape and promote new behaviors for a new trajectory for sustainable tourism and travel (Moyle *et al.*, 2021). Businesses that understand how to adequately explore this “new” concept, nudge, will be able to gain a competitive advantage and improve the profitability of hospitality services.

Considering that nudging and green marketing are closely linked to what is often referred to as ‘new governance’ (Hall, 2013), further research can explore this interconnection and deepen it. The potential of green marketing to influence green and in result sustainable behaviors needs to be further studied, including with regard to tourism and the hospitality sector.

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