

Sustainable Packaging: The Impact of Fresh Start Mindset on Consumer Inferences

Dissertation presented as partial requirement for obtaining
the Master's degree in Information Management

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SUSTAINABLE PACKAGING: THE IMPACT OF FRESH START MINDSET ON CONSUMER INFERENCES

by

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ABSTRACT

This study focuses on the behavioral effect of the fresh start mindset towards sustainable packaging options. The objective of this research was to provide an empirical study to explain the impact of fresh start mindset on perceptions and moral satisfaction towards products with sustainable packaging, as well as if it has an effect on consumers intention to purchase the product. A conceptual model has been proposed and subjected to empirical verification through an online questionnaire that counted with 339 respondents. Results were analysed through the PLS-SEM technique and suggests fresh start mindset contributes to the inference making and moral satisfaction of products with paper-based packaging. The current paper ends with a discussion of the study's limitations and implications for companies as a whole and, specially, for marketers.

KEYWORDS

Fresh Start Mindset; Sustainable Packaging; Paper-based Packaging; Perceived Sustainability; Perceived Naturalness; Perceived Consumer Effectiveness; Moral Satisfaction; Purchase Intention; PLS-SEM

INDEX

1. INTRODUCTION	1
2. THEORETICAL BACKGROUND	3
2.1. FRESH START MINDSET	3
2.2. THE RISE OF SUSTAINABLE PACKAGING & CONSUMER'S RESPONSE.....	3
2.2.1. <i>Consumer Inference-making on Sustainable Packaging</i>	4
2.2.2. <i>Moral Satisfaction</i>	4
3. CONCEPTUAL MODEL DEVELOPMENT	6
3.1. FRESH START MINDSET	6
3.2. PERCEIVED NATURALNESS	7
3.3. PERCEIVED SUSTAINABILITY	7
3.4. PERCEIVED CONSUMER EFFECTIVENESS.....	8
3.5. MORAL SATISFACTION	8
4. METHODOLOGY	9
4.1. MEASUREMENT INSTRUMENTS AND OPERATIONALIZATION OF VALUES	9
4.2. SAMPLE	9
5. ANALYSIS AND RESULTS.....	11
5.1. ASSESSMENT OF THE MEASUREMENT MODEL	11
5.1.1. <i>Indicator Reliability</i>	12
5.1.2. <i>Internal Consistency Reliability and Convergent Validity</i>	12
5.1.3. <i>Discriminant Validity</i>	12
5.2. ESTIMATION OF THE STRUCTURAL MODEL	13
5.2.1. <i>Collinearity (VIF)</i>	13
5.2.2. <i>Coefficient of Determination (R^2)</i>	14
5.2.3. <i>Cross-validated Redundancy (Q^2)</i>	15
5.2.4. <i>Effect Size (F^2)</i>	15
5.3. MODEL VALIDATION	15
6. DISCUSSION	18
6.1. THEORETICAL DISCUSSION	18
6.2. MANAGERIAL IMPLICATIONS.....	19
6.3. LIMITATIONS AND FUTURE RESEARCH	20
7. CONCLUDING REMARKS	21
8. REFERENCES	22
9. APPENDIX.....	26

LIST OF FIGURES

Figure 1. Conceptual Model	6
Figure 2. Sustainable Paper-based Packaging showed on the questionnaire	10
Figure 3. Bootstrapping.....	17

LIST OF TABLES

Table 1. Demographic data of respondents	10
Table 2. Outer model results	11
Table 3. Discriminant validity.....	13
Table 4. Collinearity (VIF)	13
Table 5. Coefficient of determination (R^2).....	14
Table 6. Effect size (F^2)	15
Table 7. Hypothesis testing for relationships among constructs	16
Table 8. Scales and items used in the questionnaire.....	26

1. INTRODUCTION

Currently, we live in an ecological crisis where contemporary economies represent severe and potentially disastrous challenges to the natural environment (Buenstorf & Cordes, 2008). The increasing awareness of the impact of environmental issues and unsustainable consumption are being addressed in a more intentional, comprehensive and systematic approach in the previous years (Prothero et al., 2011).

Thus, this led us to a global social movement away from plastic packaging and, consequently, the single use of plastics, which has been shared not only by environmental groups and legislators, but also by consumers, local communities, public authorities, financial institutions and employees (Vince & Stoett, 2018 cited in Borg et al., 2020; Gadenne et al., 2009). Some studies present packaging as a “necessary evil” that is prominently associated with environmental degradation (Steenis et al., 2017). The pervasiveness of packaging contributes to environmental problems, such as global warming and climate change (Meherishi et al., 2019; Steenis et al., 2017). This environmental impact is generating a growing awareness on detrimental impacts of packaging on the environment; thus, this consciousness is forcing and pressuring companies and businesses to develop and promote sustainable product packaging. Besides this, it also motivates researchers and academicians to understand the sustainable buying behaviour and intentions (Meherishi et al., 2019; Prakash et al., 2019; Nguyen et al., 2020).

Exploring eco-innovative products from consumer perspective became imperative. (Paparoidamis et al., 2019). In this sense, in recent years, literatures and researches from different disciplinary backgrounds have been covering a richer understanding on product packaging and its importance on consumer’s sustainable purchase intentions and behaviour (White et al., 2016; Sundar et al., 2020). Also, numerous studies of environmental behaviour reported correlations between environmental values, intentions, attitudes and behaviour (Rettie et al., 2014). In other hand, only a few studies are covering the importance of sustainable packaging material and consumer’s perceptions and intentions towards it. Understand perceptions and behaviours regarding to different sustainable materials becomes important as products increasingly are marketed using environmental claims and consumers thus have growing opportunities to express environmental values and attitudes (Jansson et al., 2011; Paparoidamis et al., 2019).

By doing so, this research contributes to the work on consumer behaviour towards sustainable product packaging by extending it situating fresh start mindset as a psychological trait that can influence consumers inferences, response and intention towards packaging with different sustainable packaging materials, specifically paper-based packaging. In recent years, fresh start mindset has been a trait that is used as a marketing tool in promotions, commercials and different types of the marketing mix, however, it is still one of the least explored territories when analysing its impact on consumer behaviour (Vaskova, 2019). In addition to this, fresh start mindset has been associated with various transformational

practices and aspirational behaviours but mostly with consumerism. In this sense, it is important to understand the impact of this concept on consumers behaviour domains.

Summing up, the aim of this dissertation is to investigate and analyse the impact of fresh start mindset on consumers perceptions and response towards sustainable packaging. To do so, the research to be conducted has as mains question: Does fresh start mindset impacts consumers perceptions and intentions towards products with sustainable packaging?

The structure of the paper is as follows. In the next section the concepts of fresh start mindset, sustainable packaging, consumer inferences, moral satisfaction and environmental involvement are presented, and the research model is conceptualized. Then, chapter 4 presents the methodology applied and on chapter 5 the results of this research are presented. Finally, the results and main findings of the study are discussed, including its implications for theory and practice, and possible further research directions are outlined.

2. THEORETICAL BACKGROUND

2.1. FRESH START MINDSET

Price et al (2018) defined fresh start mindset as a “belief that people can make a new start, get a new beginning, and chart a new course in life regardless of the circumstances.” (p. 22). The author documents that the fresh start mindset, although distinct, it is associated with individual characteristics including optimism, goal perseverance and growth mindset, which are concepts that have been covered in recent literatures.

The fresh start mindset is associated with greater engagement in efforts to make a new start, new beginnings through consumption practices, and display more positive attitudes, openness to new brand experiences. Thus, it is shared among individuals who identify themselves with global consumer culture, globalisation processes and environmentalism (Price et al., 2018). In addition to this, when activated, the fresh start mindset effect in individuals not only allows them to follow through good intentions in naturally arising landmarks, but also has important implications and influences on their consumption choices related with self-transformation (Dai et al., 2014; Price et al., 2018).

2.2. THE RISE OF SUSTAINABLE PACKAGING & CONSUMER'S RESPONSE

In recent years, literature specifies packaging material and shape as important attributes of a product, as it is a pervasive element of modern consumption (Steenis et al., 2018; Sundar et al., 2020; Prakash et al., 2019).

According to Dangelico & Pujari, (2010), the global consumers packaging market is associated with a significant environmental burden and, in the context of growing awareness of this issue, it now represents an important one for industrials and retailers, as new norms put mounting pressure on people to minimize their ecological footprint and encouraging them to be more concerned about environmental consequences of their purchases and product usage. This is changing consumers willing to change their daily attitudes and reducing their levels of consumption and/or modifying the kinds of goods they consume (Gadenne et al., 2009; Borg et al., 2020; Paparoidamis et al., 2019; Buenstorf & Cordes, 2008).

Recent scholarly work has been focused on the increasing practitioner in greening new products design, that can be done through its material (Paparoidamis et al., 2019). Also, according to Nguyen et al., (2020) study, consumers expectations of eco-friendly/sustainable packaging are primarily associated with materials (such as biodegradability and recyclability) and to market appeal. Adding to this, packaging materials are the main contributor to direct environmental impacts. Today, packaging is being improved and shifted to sustainable packaging, by reducing materials, increasing recycled content and increasing the amount of renewable materials throughout a packaging life cycle from production to consumption, disposal and after disposal (Magnier & Schoormans, 2017; Magnier & Cri  , 2015; Nguyen et al., 2020). Following this green movement, companies and brands of today are strategically

investing in eco-innovations by reducing packaging materials to avoid and reduce environmental harms and are adopting environmental principles in order to align themselves with customers and be better valued by them and, consequently, boost consumption and add value to the company (Phipps et al., 2013; Paparoidamis et al., 2019; Dangelico & Pujari, 2010; Jansson et al., 2011; Magnier & Cri , 2015).

2.2.1. Consumer Inference-making on Sustainable Packaging

The rise of environmental awareness and new sustainable options are changing consumer behaviour (Zhang et al., 2015). At the point of purchase, consumers are usually confronted with a packaged product, thus, the success of sustainable packaging, and its effective environmental improvement, relies on consumers acceptance, inferences and response to it (Steenis et al., 2017).

According to several studies, the visual aspect of a package is a source of inference for the consumer, hence, the way an object looks like has high relevant role explaining actual purchase decisions and guaranteeing its success. This happens because the aspect leads to spontaneous inferences consumer's make regarding the design of the package, since they naturally prone to categorize visual cues to make sense of it (Steenis et al., 2017; Celhay & Trinqu coste, 2015; Orth & Malkewitz, 2008; Magnier & Cri , 2015). Focusing on the packaging characteristics, literature specifies that the material is not directly related to the product content. However, research has also shown that consumers draw inferences in which perceptions derived from packaging attributes (material). These inferences made on the material aspect influences product evaluation, purchase intention, beliefs and consumer's attitudes (Magnier & Schoormans, 2017; Magnier & Cri , (2015).

Researches and scholars have argued and reported mixed (strong and weak) association between consumer's attitudes and sustainable consumption behaviour (Joshi & Rahman, 2019; Paparoidamis et al., 2019). According to Rees et al., 2019 these associations, and sustainability perception is mainly affected by graphical and structural cues. Also, adding to this, according to Steenis et al., (2017), the role of packaging design and material is demonstrated in its effects in naturalness and health perceptions. Even through sustainable packaging needs to be visually appealing in order to catch consumers attention and consequently allow consumers to make inferences on the product, Perceived Consumer Effectiveness (PCE) also influences consumer's intentions to engage with sustainable products/packages (Antonetti & Maklan, 2014). PCE has been explained in literature as a way of measuring the ability of a customer to affect environmental issues (Antil and Bennett, 1979 cited in Joshi & Rahman, 2019).

2.2.2. Moral Satisfaction

In the past years, and in addition to the previous chapter, several empirical studies claim the idea that environmental attitudes regarding everyday consumer behaviour are also morally based. This is supported by the idea that consumers may achieve a high degree of moral satisfaction from any sustainability perception, which leads them to the actual

purchase of the product in order to feel more morally satisfied (Thøgersen, 1999; Steenis et al., 2018).

In line with this, according to Thøgersen, (1999) study, consumers express that they feel an obligation to avoid packaging-related waste problems in order to achieve a high degree of moral satisfaction. In other hand, according to Steenis et al., (2018), consumers who want to “do the right thing” may be morally satisfied in a similar way regardless of whether their purchase features one sustainability improvement or several.

3. CONCEPTUAL MODEL DEVELOPMENT

Integrating the different concepts of the theoretical background, a conceptual model is proposed. Figure 1 displays this proposed conceptual model, which displays hypotheses and relation between the proposed constructs. By assembling the six constructs presented in this conceptual model, the present research proposes that that, together, they can offer a more consistent characterization of the fresh start mindset impact on consumer behaviour. In sum, the research supports the hypothesis that fresh start mindset, when activated, is an important contributor to consumers inferences and response towards sustainable packaging, more specifically, paper-based packaging.

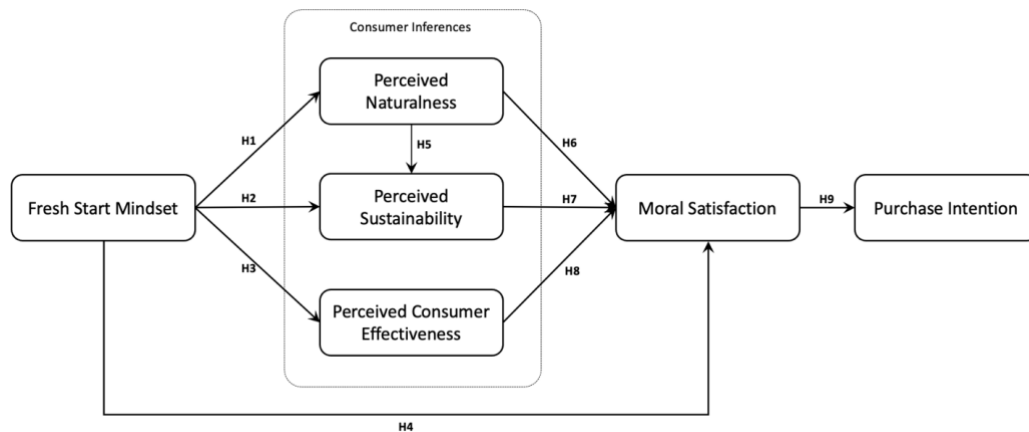


Figure 1. Conceptual Model

3.1. FRESH START MINDSET

According to Price et al. (2018), consumers with fresh start mindset have multi-faceted identity and fluid within global environmental. The authors also argue that fresh start mindset is probable to be activated by marketing promotional tactics and, consequently it has important implications on consumer's consumption choices. This relates with self-transformation by, for example, individuals that stand out with a fresh start mindset are more likely to exhibit more positive attitudes towards products that allow a fresh start and, also, more likely to hold more positive intentions to help social and environmental causes (Price et al.; White et al., 2019). Therefore, I assume that the level of fresh start mindset of customers is a key factor that influences their inferences in terms of naturalness and sustainability on sustainable packaging. Hence, this study hypothesizes that:

H1: Fresh start mindset has a positive impact on perceived naturalness.

H2: Fresh start mindset has a positive impact on perceived sustainability.

White et al. (2019) cited that when individuals take a “fresh start” view of a new behaviour, it probably serves as a form of discontinuity that makes them change a habit. In line and related with this, Price et al (2018) argued that a certain level of PCE can lead to

habit change and, in particular, consumers that engage with sustainable consumption often replace relatively automatic behavioural responses with more effortful new responses. Thus, based on this, I assume that the level of fresh start mindset is a key point on perceived consumer effectiveness because a change of habit can lead a customer to affect and be involved in environmental issues. Thus, this study also hypothesizes that:

H3: Fresh Start Mindset has a positive impact on perceived consumer effectiveness.

In addition to the influence of Fresh start mindset on consumer's inference making, other purpose of this research is to investigate whether the activation of fresh start mindset contributes to higher moral satisfaction of consumers towards products with sustainable packaging. While there are no following studies for the fresh start mindset theory yet, existing evidence suggest that the belief that people can make a new start, regardless of the past or present circumstances could impact consumers moral values. As stated before, several literatures support the idea that environmental attitudes regarding everyday consumer behaviour are morally based. In this study, I argue that activating of fresh start mindset will result in moral satisfaction towards products with sustainable paper-based packaging.

H4: Fresh Start Mindset has a positive impact on moral satisfaction.

3.2. PERCEIVED NATURALNESS

According to Binninger (2017), the concept of naturalness is linked with "green", eco-friendly and organic consumption. In this line, the inference making of naturalness of a product gives global symbolic and aesthetic value that consumers perceived through the product packaging. Also, recent literatures have studied the effect of perceived naturalness in consumer's inferences and responses. First, when perceived naturalness of the product packaging is perceived higher, it overall led to inferences of higher perceived sustainability (Magnier et al., 2016; Steenis et al., 2017).

Second, having as basis the concept of consumer perceived naturalness studied by Rozin (2005) and Rozin et al. (2004), it is characterized as an emotional aspect of consumers. This means that when consumers perceive a product packaging as natural it implicitly means better, genuine and, especially more moral, so it has an important impact on moral satisfaction (Binninger, 2017).

H5: Perceived Naturalness has a positive impact on perceived sustainability.

H6: Perceived Naturalness has a positive impact on moral satisfaction.

3.3. PERCEIVED SUSTAINABILITY

Consumer's response to sustainable packaging are influenced by the contextual factor of the degree of sustainability that the product packaging (Steenis et al., 2018).

According (Gershoff & Frels, 2015), the way consumers rely on attributes, features and material and structural cues that define a product can play an important role in the extent to which a product is perceived as green or sustainable. When evaluating packaging at the material level, organic materials are generally perceived as more sustainable and therefore influence the evaluation of the sustainability of the package (Steenis et al., 2017; Magnier & Crié, 2015). According to Steenis et al. (2017) higher perceived sustainability of a product packaging is associated with greater moral satisfaction. As such, the present study hypothesizes:

H7: Perceived Sustainability has a positive impact on moral satisfaction.

3.4. PERCEIVED CONSUMER EFFECTIVENESS

According to (Thøgersen, 1999), perceived consumer effectiveness is a concept in its own right in the study of environmentally significant consumer behaviour.

People have a tendency to support sustainable behaviours and consumption when they believe that they can make a positive contribution to solving an environmental problem (Kabadayi et al., 2015). In line with this, several studies have noted that consumers with high PCE transform positive attitudes into actual purchases. This means that PCE is higher when consumers realize that their efforts in terms of individual action in itself makes a difference and, consequently, that they are being able to contribute to the environment in a specific consumption episode. Because people's beliefs are strongly influenced by their confidence in their ability to perform a sustainable behaviour, this study suggests that PCE has a positive effect on moral satisfaction on a sustainable consumption episode.

H8: PCE has a positive impact on moral satisfaction.

3.5. MORAL SATISFACTION

Consumer's response and behaviour towards products may derive from the moral satisfaction they get from a specific consumption scenario in order to satisfy their moral goals and behaving in an ethically admirable way (Steenis et al., 2018; Biel et al., 2011).

Literatures in the domain of consumer behaviour have been showing that environmental attitudes are based on moral reasoning is valid with regard to consumer buying attitudes, since much evidence suggests that people derive personal benefit in the form of moral satisfaction when they contribute to environmental causes (Bratanova et al., 2015). This is supported by the idea that consumers have a higher degree of moral satisfaction when purchasing a product they perceived as sustainable (Thøgersen, 1999; Steenis et al., 2018). Summing up, and according to Thøgersen (1999) study, moral satisfaction influences environmentally important consumer purchase decisions. Therefore, this study posits:

H9: Moral satisfaction has a positive impact on purchase intention.

4. METHODOLOGY

The data for this research was obtained through the use of an online questionnaire. Data collection was performed during the period from March 22 to April 8 of 2021. The questionnaire was developed in English and hosted on Qualtrics. The link to the questionnaire was shared via digital social networks and groups. In order to test the hypotheses proposed, the data analysis method chosen was the Structural Equation Modelling (SEM). The partial least squares technique (PLS-SEM) was applied through the software SmartPLS 3.3.3. on MacOs.

4.1. MEASUREMENT INSTRUMENTS AND OPERATIONALIZATION OF VALUES

All measurement items were adapted, with slight adjustments, from the literature.

Fresh Start Mindset (FSM) was adapted from Price et al., (2018); Purchase Intention (PI) was adapted from White & Dahl (2015); Perceived Naturalness (PN) was adapted from Gershoff & Frels (2015) and Page & Herr (2002); Perceived Consumer Effectiveness (PCE) was adapted from Webb et al., 2008 and Joshi & Rahman, 2019; Perceived Sustainability (PS) and Moral Satisfaction (MS) were adapted from Steenis et al., (2018). The items for all constructs are included in Appendix A. The majority of the items were classified and measured through a seven-point quantitative Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (7). The items for perceived naturalness (PN) were the exception, by being based on seven-point semantic differential scales.

The items described were measured through a questionnaire that was divided into three parts. The first part of the questionnaire was dedicated to the stimuli that was created through an image of a cosmetic product with paper-based packaging (see figure 2.), with the following story: *“A Beauty Company launched a new product in the following packaging. Please look carefully at the image below”*. This stimuli was developed and used to ease the reflection of consumer’s perceptions and intentions regarding the packaging in the following parts of the questionnaire. Respondents were asked to answer questions on Perceived Naturalness, Perceived Sustainability, Purchase Intention, Moral Satisfaction and Perceived Consumer Effectiveness based on the stimuli. The third part of the questionnaire aimed to analyse the psychological constructs, such as Fresh Start Mindset. The third part is dedicated to demographic data of the respondents.

4.2. SAMPLE

The sample was selected from the random method, via social networks, accounting 339 respondents, composed of 53,7% women, 45,4% men and 0,88% other. With regard to the age of participants, the vast majority are between 18 to 29 years (46,6%) and 30 to 40 years (31,8%). Regarding the annual household income, the majority is in between less than 20.000€ and 30.000€ (42,7%). The vast majority of the respondents considered the packaging sustainable, where 24,19% considered extremely sustainable (24,19%). Results

Sustainable Packaging: The Impact of Fresh Start Mindset on Consumer Inferences

show that 70,79% of the respondents would likely purchase a product in the packaging showed.

Table 1. Demographic data of respondents

Age			Gender			Annual Household Income		
18 - 24	82	24,2%	Male	154	45,4%	> 20.000€	92	27,14%
25 - 34	141	41,5%	Female	182	53,7%	20.000€ - 30.000€	73	21,53%
35 - 44	59	17,4%	Other	3	0,88%	30.000€ - 40.000€	44	12,98%
45 - 54	36	10,6%				40.000€ - 50.000€	43	12,68%
55 - 64	16	4,7%				50.000€ - 60.000€	32	9,44%
64 >	5	1,6%				60.000€ - 70.000€	15	4,42%
						70.000€ - 80.000€	12	3,54%
						< 80.000€	28	8,26%



Figure 2. Stimuli: Sustainable Paper-based Packaging showed on the questionnaire

5. ANALYSIS AND RESULTS

The present research has an analytical approach through the structural equation modelling (SEM). SEM allows researchers to analyse the cause-effect relations between latent constructs – independent and dependent variables within a model. Based on the approach chosen, the technique adopted was Partial Least Squares SEM (PLS-SEM), which aims at maximizing the explained variance of the dependent latent constructs. (Hair et al., 2011). Thus, the research carried out a two-step evaluation of the proposed model: (1) evaluation of the measurement model and (2) estimation of the structural model and hypothesis testing.

5.1. ASSESSMENT OF THE MEASUREMENT MODEL

The constructs of the proposed research model used a reflective measurement model, which focuses is assessed with regard to their reliability and validity. This model was chosen because the indicators of each construct are correlated and interchangeable (Hair et al., 2011). Table 2 summarizes the assessment of the measurement model.

Table 2. Outer model results

Construct	Indicators	Loadings	Composite Reliability	AVE	Cronbach Alpha
Fresh Start Mindset (FSM)	FSM 1	0.834	0.933	0.735	0.910
	FSM 2	0.888			
	FSM 3	0.844			
	FSM 4	0.876			
	FSM 5	0.844			
Perceived Naturalness (PN)	PN 1	0.910	0.904	0.824	0.787
	PN 2	0.906			
Perceived Sustainability (PS)	PS 1	0.864	0.954	0.807	0.940
	PS 2	0.930			
	PS 3	0.881			
	PS 4	0.901			
	PS 5	0.913			
Perceived Consumer Effectiveness (PCE)	PCE 1	0.637	0.917	0.652	0.892
	PCE 2	0.694			
	PCE 3	0.894			
	PCE 4	0.871			
	PCE 5	0.882			
	PCE 6	0.831			
Moral Satisfaction (MS)	MS 1	0.909	0.956	0.843	0.938
	MS 2	0.924			

	MS 3	0.918			
	MS 4	0.923			
Purchase Intention (PI)	PI 1	0.948	0.947	0.899	0.888
	PI 2	0.949			

5.1.1. Indicator Reliability

According to (Hair et al., 2011) each indicator's reliability needs to be taken into account when assessing the measurement model. As shown is table 2, the majority of the loadings show levels above 0.7, ranging from 0.637 to 0.949, demonstrating a satisfactory level of reliability. (Hair et al., 2011) also suggested that indicators with loadings between 0.40 and 0.70 should be considered for removal only if by deleting it will lead to an increase of the composite reliability. Thus, the two items from PCE with the values of 0.637 and 0.694 were maintained in the study since they don't decrease the composite reliability. The relationship between these values is associated with the hypotheses and the literature studied.

5.1.2. Internal Consistency Reliability and Convergent Validity

To assess the internal consistency reliability, Composite Reliability and Cronbach's Alpha were calculated. The composite reliability refers to the degree to which indicators represent the latent construct in common and higher values generally indicate higher levels of reliability (Hair et al., 2013). According to several researchers, it is estimated that values between 0.60 and 0.70 are considered acceptable in the exploratory research, whereas values between 0.70 and 0.95 are considered satisfactory (Hair et al., 2019). Having this in consideration, based on table 2, all constructs have satisfactory composite reliability, ranging from 0.904 to 0.956. In the context of Cronbach's Alpha, although it assumes similar thresholds, it produces lower valued than composite reliability since the items are unweighted. To have a satisfactory alpha value, researchers suggest a minimal Cronbach alpha of 0.7 (Hair et al., 2019). In the present study, all constructs have values above 0.7, ranging from 0.787 to 0.940. In addition to this, Convergent Validity was measured using the Average Variance Extracted (AVE) from each construct and respective items. The AVE should be 0.5 or higher to be acceptable (Hair et al., 2019). This parameter indicates a sufficient degree of convergent validity. In the present study, all AVEs are above 50% for all latent variables.

5.1.3. Discriminant Validity

Once assessed the reliability of the individual item and the convergent validity of the measurement model, the next step was to evaluate the discriminant validity. The discriminant validity determines to what extent a construct is empirically distinct from other contracts in the path model (Hair et al., 2019). According to Fornell and Larker (1991) cited in

Hair et al. (2019), the square root of AVE in each latent variable indicates discriminant validity if this value is higher than the correlation values with the other latent variables.

The correlation matrix in Table 3 shows that the discriminant validity was established for all seven constructs and moderating effect:

Table 3. Discriminant validity

	FSM	MS	PCE	PN	PS	PI
Fresh Start Mindset (FSM)	0.857					
Moral Satisfaction (MS)	0.472	0.918				
Perceived Consumer Effectiveness (PCE)	0.522	0.555	0.808			
Perceived Naturalness (PN)	0.323	0.541	0.363	0.908		
Perceived Sustainability (PS)	0.340	0.672	0.309	0.624	0.898	
Purchase Intention (PI)	0.315	0.580	0.432	0.398	0.511	0.948

5.2. ESTIMATION OF THE STRUCTURAL MODEL

The demonstrated results on the previous point showed that the measurement model has a satisfactory individual item reliability, convergent validity and, also, discriminant validity. This measurement model assessment showed sufficient robustness to test the relationship between latent variables and dependent variable. Thus, the next step in evaluating PLS-SEM results is to evaluate the structural model to, not only define its exploratory strength, but also to test the research hypothesis described preciously.

5.2.1. Collinearity (VIF)

To evaluate the collinearity of the indicators, the Variance Inflation Factor (VIF) was used in this study. According to Hair et al., (2019), the level of collinearity is greater when VIF values are higher, being the tolerance level is 0.20 or below and 5 and above shows indicates collinearity issues among the constructs. In the present study, the VIF values for all indicators range between 1.727 and 4.777 — these VIF values demonstrate that the results are not affected by collinearity problems.

Table 4. Collinearity (VIF)

Construct	Indicators	Collinearity (VIF)
Fresh Start Mindset (FSM)	FSM 1	2.263
	FSM 2	3.073
	FSM 3	2.396
	FSM 4	2.831
	FSM 5	2.286

Perceived Naturalness (PN)	PN 1	1.727
	PN 2	1.727
Perceived Sustainability (PS)	PS 1	2.884
	PS 2	4.777
	PS 3	3.033
	PS 4	3.761
	PS 5	4.177
Perceived Consumer Effectiveness (PCE)	PCE 1	1.921
	PCE 2	2.072
	PCE 3	3.675
	PCE 4	3.000
	PCE 5	3.397
	PCE 6	2.196
Moral Satisfaction (MS)	MS 1	3.391
	MS 2	4.019
	MS 3	3.798
	MS 4	3.902
Purchase Intention (PI)	PI 1	2.765
	PI 2	2.765

5.2.2. Coefficient of Determination (R^2)

With the collinearity being assessed and determinate that it is not an issue, the next step was the examining of the Coefficient of Determination (R^2). The R^2 measures the variance which is explained in each of the endogenous constructs and represents the model's explanatory power (Joseph F. Hair et al., 2019). The coefficients of determination ranges from 0 to 1, with higher values indicating a greater explanatory power, and, according to researchers the ones with values of 0.75, 0.5 and 0.25 are considered substantial, moderate and weak, respectively.

In the present research, results for Perceived Naturalness and Perceived Consumer Effectiveness (PCE) have weak R^2 values, being 0.104 and 0.272, respectively (see table 5.). However, the value for PCE is acceptable since this research belongs to the area of consumer behaviour, where, according to Hair et al., (2013), $R^2 = 0.2$ is considered satisfactory.

Table 5. Coefficient of determination (R^2)

Construct	Coefficient of determination (R^2)
Perceived Naturalness (PN)	0.104
Perceived Sustainability (PS)	0.411
Perceived Consumer Effectiveness (PCE)	0.272
Moral Satisfaction (MS)	0.600

Purchase Intention (PI)	0.337
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5.2.3. Cross-validated Redundancy (Q^2)

In addition to the coefficient of determination, to assess the structural model the blindfolding-based cross-validated redundancy measure (Q^2) was also determined for each construct. This allows to evaluate the accuracy of the model. According to Hair et al. (2011), when the Q^2 value is larger than zero, it means that latent constructs exhibit predictive relevance, in other words, the relevance of the paths in the model is acceptable.

In the present study, the Omission Distance used was 7, which is the default value in PLS-SEM. The results shows that values above zero are related to constructs Perceived Naturalness (0.081), Perceived Sustainability (0.328), Perceived Consumer Effectiveness (0.172), Moral Satisfaction (0.498) and Purchase Intention (0.299). The results presented show that the model of this research have relevant paths.

5.2.4. Effect Size (F^2)

Within the present research, the effect size, also known as Cohen's indicator, was also tested. According to Hair et al. (2013), this test assesses how much a construct is useful for the model fit. The author also describes the analysis rules of this criteria, by citing Cohen (1988) — values higher than 0.02, 0.15, and 0.35 depict small, medium, and large F^2 effect sizes (Cohen, 1988). The results show that the relationships $MS > PI$ (0.580), $PN > PS$ (0.574) and $PS > MS$ (0.479) represent great utility for model adjustment (see table below).

Table 6. Effect size (F^2)

	FSM	MS	PCE	PN	PS	PI
Fresh Start Mindset (FSM)		0.117	0.522	0.322	0.155	
Moral Satisfaction (MS)						0.580
Perceived Consumer Effectiveness (PCE)		0.313				
Perceived Naturalness (PN)		0.091			0.574	
Perceived Sustainability (PS)		0.479				
Purchase Intention (PI)						

5.3. MODEL VALIDATION

The main evaluation criteria for the structural model is the level and significance of the path coefficients. To assess this Bootstrapping was used (see figure 3). Table 7 presents the results of this test, revealing the statistical significance of the paths, where T Statistics must be greater than 1.96 and P values smaller than 0.05 in other for the hypothesis to be statically valid (Hair et al., 2013). In addition to this, figure 3 presents the results of the Bootstrapping test, which present values greater than 1.96.

Table 7. Hypothesis testing for relationships among constructs

Hypothesis	Path	Beta	T Statistics	P Values	Decision
H1	Fresh Start Mindset → Perceived Naturalness	0.323	5.368	0.000	Supported
H2	Fresh Start Mindset → Perceived Sustainability	0.155	3.117	0.000	Supported
H3	Fresh Start Mindset → Perceived Consumer Effectiveness	0.522	8.813	0.000	Supported
H4	Fresh Start Mindset → Moral Satisfaction	0.117	2.252	0.025	Supported
H5	Perceived Naturalness → Perceived Sustainability	0.574	13.287	0.000	Supported
H6	Perceived Naturalness → Moral Satisfaction	0.098	2.055	0.040	Supported
H7	Perceived Sustainability → Moral Satisfaction	0.498	7.715	0.000	Supported
H8	Perceived Consumer Effectiveness → Moral Satisfaction	0.365	7.305	0.000	Supported
H9	Moral Satisfaction → Purchase Intention	0.526	9.036	0.000	Supported

Table 7 presents and summarizes the empirical results in relation to the hypotheses. First, the empirical results support all of the hypothesis because the coefficients of the paths are relevant. The H1 ($\beta=0.323$; $p<.001$; $t=5.368$) supports that the value of FSM positively influences the perceived naturalness. Also, H2 ($\beta=0.155$; $p<.001$; $t=3.117$) indicates that the value of FSM positively influences the perceived sustainability and H3 ($\beta=0.522$; $p<.001$; $t=8.813$) indicates that the value of FSM also influences the PCE. In addition to this, the H4 ($\beta=0.117$; $p<.01$; $t=2.252$) supports that the value of FSM influences Moral Satisfaction. The H5 ($\beta=0.574$; $p<.001$; $t=13.287$) supports the positive relationship of the fluence of perceived naturalness on perceived sustainability. The H6 ($\beta=0.098$; $p<.05$; $t=2.055$), H7 ($\beta=0.498$; $p<.001$; $t=7.715$) and H8 ($\beta=0.365$; $p<.001$; $t=7.305$) support that perceived naturalness, perceived sustainability and PCE, respectively, have positive impact on moral satisfaction. Regarding the effects on purchase intention, the H9 ($\beta=0.526$; $p<.001$; $t=9.036$) proves that the value of moral satisfaction positively influences it.

Thus, the model presented brings together the theory that consumers with Fresh Start Mindset make consumer-inferences on sustainability, naturalness and consumer effectiveness, affecting moral satisfaction and, consequently, the purchase intention of the product with sustainable paper-based packaging.

Sustainable Packaging: The Impact of Fresh Start Mindset on Consumer Inferences

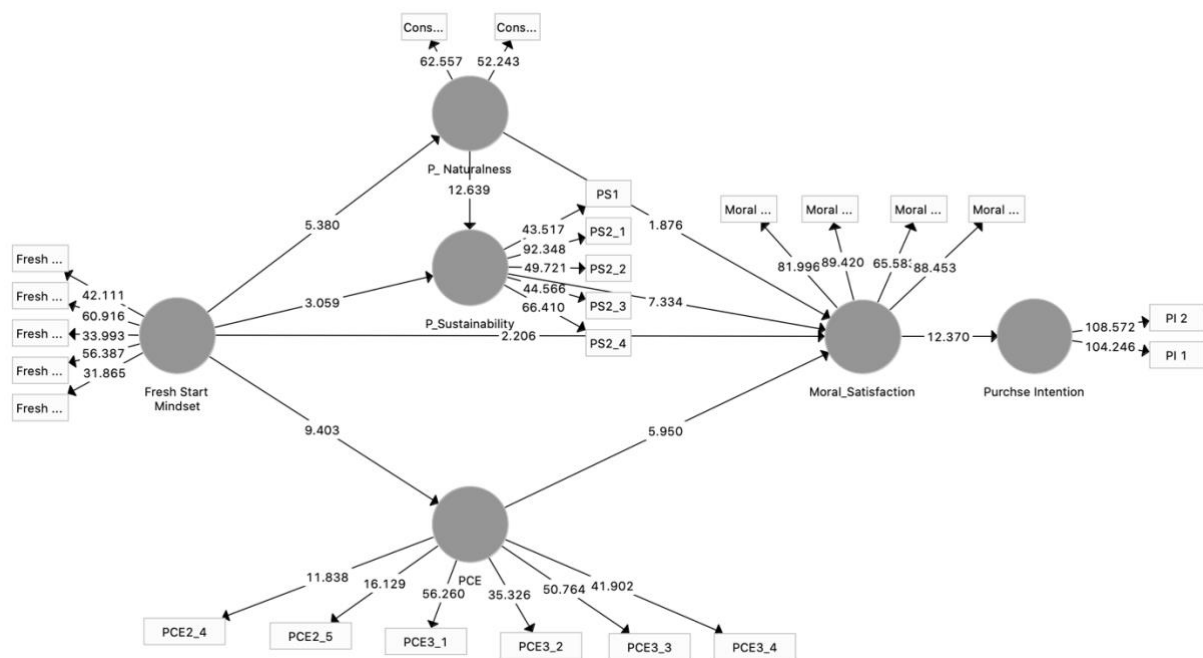


Figure 3. Bootstrapping

6. DISCUSSION

6.1. THEORETICAL DISCUSSION

This study combined psychological mindset to explain consumer's response and intention to buy products with sustainable packaging. Specifically, the current research presents a study to understand consumers with a fresh start mindset perceptions, inferences and intentions on sustainable packaging, in specific paper-based packaging., in other words to understand the impact of fresh start mindset on consumer behaviour towards sustainable packaging. Thus, the findings and insights of the current study contribute to the domain of sustainable marketing and packaging in several ways. In particular, this study contributes to the literature by relating a psychological mindset – fresh start – with consumer's inference-making and response towards sustainable packaging options. Once the PLS-SEM analysis was performed, the conditions are now favourable to provide a concise answer to the research question. The results show that all hypotheses are supported, and the study also provides new insights into how psychological mindset can influence consumers inference making and response.

The research model validates the relationship between fresh start mindset and consumer inference making towards paper-based packaging. Specifically, the model explains 10,4% of the variation in perceived naturalness and 40,1% of the variation in perceived sustainability. Thus, the findings demonstrate how the impact of this psychological mindset when perceiving paper-bases packaging options as natural and, specially, as sustainable. Besides this, the hypotheses also derived from fresh start mindset to explain perceived consumer effectiveness. The model explains 27,2% of the variation in perceived consumer effectiveness, this means that, when activated, consumers with fresh start mindset realize that their efforts in terms of individual action makes positive difference and that they are being able to contribute to the environment in a specific consumption episode, in this case, the paper-based packaging. The research model explains 60% of the variation in moral satisfaction. Based on this result, it is possible to argue that fresh start mindset and consumer inference making (perceived naturalness, perceived sustainability and perceived consumers effectiveness) leads to consumers feeling morally satisfied, when perceived a sustainable paper-based packaging. Results also indicate that perceived sustainability and perceived consumers effectiveness have a bigger and greater impact on moral satisfaction than fresh start mindset and perceived naturalness. Consequently, moral satisfaction impacts purchase intention, which the research model explains 33,7% of its variation. To maximize the changes of the consumer actually purchases a product with paper-based packaging, moral satisfaction should be the go-to feeling consumers must have and this happens when the packaging is perceived, specially, as sustainable, followed closely with perceive of consumer effectiveness.

To sum up, the results of the structural model testing analysis confirm the full relationship between the psychological mindset and inference making to consumer's intention to purchase products, impacting significantly and positively.

These results extend the recent work and literature on sustainable consumer behaviour by focusing on the sustainable packaging by paper-based materials. In addition to this, the current study also extends the studies on Consumer Behaviour focused consumer-inference making by showing that Naturalness does not have an important impact on consumers perceptions towards product packaging. In other hand, it shows that moral satisfaction is an important aspect to continue studying, since it shows that it has an important impact on sustainable consumption.

Last, the study also adds to literature on fresh start mindset, specially by Price et al. (2018), by situating it as a trait that influences consumers inferences, responses and intentions towards packaging sustainable materials. Thus, this study provides new insights into how a psychological mindset can impact and influence consumer behaviour, because – to best of my knowledge – this is the first study that situates fresh start mindset as an influence aspect on consumers behaviour towards sustainable options.

6.2. MANAGERIAL IMPLICATIONS

This paper articulates the role of fresh start mindset in consumers when inferring and responding to sustainable packaging. While past studies have studied the effect of Fresh Start Mindset on Risk taking behaviour and its implications for environmentally friendly global brands, this study is unique in that it helps manage sustainable packaging, especially paper-based packaging, strategies based on psychological mindset of possible consumers and inferences that are formed. The current study suggests that people with fresh start mindset are likely to perceive paper-based packaging in a way that it impacts moral satisfaction and, consequently the purchase intention. Consumers with fresh start mindset are likely to perceive paper-based products packaging's in a way that influences their purchase intention

The current study offers many implications for decision-makers in the field of sustainable packaging and products' marketing and communication. Marketers involved in green consumption should recognize the significance of Fresh Start Mindset for a consumer. Thus, marketers should use and emphasize the positive contribution to green and sustainable behaviour while designing and producing marketing and communication strategies for this type of products through the information and emotions delivered in communication channels. These communication strategies can enhance the fresh start mindset through key messages and a specific tone of voice. For example, marketers can make use of a temporal landmark, such as the new year celebrations, to encourage consumers to set new goals and start a new oath in life by starting to consume more sustainable products in their daily lives.

It is also important to recognize the value of PCE for a consumer when communicating products with sustainable packaging. Marketers can increase PCE by providing a specific consumer group with marketing messages that show that their behaviours can effectively make a difference. For example, marketers and businesses can create a client loyalty

strategy with a gamification layer that allows consumers to know how they are improving their ecological footprint with every purchase of a sustainable products from the brand.

Summing up, brands of today are increasingly embracing sustainability and the current research proves some positive implications, especially for the field of marketing and communication through consumer behaviour.

6.3. LIMITATIONS AND FUTURE RESEARCH

Although the current study offers insightful findings on the relationship among fresh start mindset and consumer perceptions and behaviour, the results have some limitations and, consequently, avenues for future ones can be noted and distinguished.

First, the methodological limitations of this study are largely related to the single use of a stimuli from one product category (cosmetics), which may bias the results and limit the generalization of the inferences and consumers perceptions. Also, the stimuli used consisted of a common packaging and, for that reason, it had to be labelled as a “paper-based bottle” to indicate its properties. Future research should test the validity of such consumer inferences and perceptions for a variety of paper-based packaging’s from different categories. Also, in line with this, future research can also test these consumer inferences on different sustainable packaging materials options, such as bio- glass and bio-degradable plastic.

Second, and in addition to the above methodological limitation, there is one related to the data analysis method chose. The research analysis had an analytical approach through the PLS-SEM technique. Future researchers may consider adopting an Experimental approach when analysing the consumer inferences on sustainable packaging, since it will allow to have a more control over the variables and, consequently provides more specific conclusions, making possible to understand the validity of a sustainable product packaging.

Third, the thesis’s approached focused on perceptions and intentions regarding sustainable packaging, but it was not considered the retail environment which can affect the role of packaging sustainability in consumers perceptions. With this, further research is also recommended to explore whether the perceptions and inferences towards paper-based packaging vary depending on new contextual factors.

Fourth, the nature of the fresh start mindset construct is affected by the effects and the sociocultural context of the market in study. The current research only studied the Portuguese market, so there is a need for caution when transferring insights for to other cultures realities. According to Price et al., (2018) “for many cultures, particularly those with volatile historical trajectories, perceptions of change are likely to be more negative.” Thus, other cultures may reveal different results of perceived naturalness, sustainability and consumer effectiveness when activated through fresh start mindset. With this, it is important that further research explores and evaluates the effect and impact that fresh start mindset has on consumers inferences and behaviours in different markets other than a European one.

7. CONCLUDING REMARKS

The current research examines consumers response, perceptions and intentions towards sustainable paper-based packaging by empirically testing psychological, perceptual, inferential and attitudinal aspects of consumers decision making that arise from packaging material. The study finds support for the hypothetical relation through the modeling of structural equations PLS-SEM. Results suggest that fresh start mindset has powerful effects on consumers inferences and perceptions, and, by extent, sustainable paper-based packaging is morally accepted and satisfactory when it enhances perceptions of packaging naturalness, sustainability and consumer effectiveness. The current study also contributes by showing that consumers with fresh start mindset activated are more likely to have purchase intentions when perceiving products with paper-based packaging.

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9. APPENDIX

Table 8. Scales and items used in the questionnaire

Construct	Scale	Items	References
Purchase Intention	7-point Likert	- How likely would you be to purchase the product you just saw?	White & Dahl, 2015
	7-point Likert	- How willing are you to purchase the product you just saw?	White & Dahl, 2015
	7 -point Likert	- Considering the packaging you saw, please indicate how sustainable you consider it to be	Steenis et al., 2018
Perceived Sustainability	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- The package is environmentally friendly - The package contributes to improve the environment - The package deserves to be labeled as environmentally friendly - This is a good example of an environmentally friendly packaging	Steenis et al., 2018
Perceived Naturalness	7 - point semantic differential scale	... Less organic / more organic	Gershoff & Frels, 2015; Page & Herr, 2002
Perceived Functionality	7 - point semantic differential scale	... functions better / functions worse ... will be fragile / more powerful ... performs worse / performs better ... is weaker / stronger	Gershoff & Frels, 2015; Page & Herr, 2002
Perceived Quality	7 - point semantic differential scale	... bad quality/excellent quality	Veryzer & Hutchinson, 1998
Attractiveness	7 - point semantic differential scale	... unattractive / attractive	Luchs et al., 2010
Moral Satisfaction	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	Buying a product in this packaging, instead of the current packaging ... - ... would feel like doing the morally right thing - ... would make me feel like a better person - ... would feel like making a personal contribution to something better - ... would give me a good feeling because I am supporting an ethically responsible practice	Steenis et al., 2018
Perceived Consumer Effectiveness	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- I base my purchase decisions on product and service quality, price, and convenience. I am not concerned with these issues, and I don't think about them when deciding what to buy. - I believe that these issues are important, but it is too difficult and time-consuming to base my purchase decisions on them. - When it is easy to do, I use information on these issues in my purchase decisions. - I make an effort to learn about these issues, and I am willing to pay more or sacrifice product quality in order to use these issues in my purchase decisions.	Webb et al., 2008; Joshi & Rahman, 2019

Sustainable Packaging: The Impact of Fresh Start Mindset on Consumer Inferences

	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- When I buy products, I try to consider how my use of them will affect the environment and other consumers - Each consumer behaviour can have a positive effect on society by purchasing products sold by socially responsible companies	Joshi & Rahman, 2019
	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- I believe that sustainable purchasing by me will help in reducing pollution and also help in improving the environment. - I believe that sustainable purchasing by me will help in reducing wasteful use of natural resources. - I believe that sustainable purchasing by me will help in conserving natural resources. - I feel good about myself when I involved in sustainable purchasing.	Joshi & Rahman, 2019
Environmental involvement	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- I am concerned about the environment. - The condition of the environment affects the quality of my life. - I am willing to make sacrifices to protect the environment. - My actions impact the environment.	(Cho, 2015)
Fresh Start Mindset	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- Regardless of present circumstances, someone can chart a new course in life. - Anyone can make a new start if they want to. It's always possible for someone to get a new beginning. - Whatever their past, people can look forward to a new future. - An individual can let go of the past and start anew. - When something bad happens, a person can choose to create a better life.	(Price et al., 2018)
Self-efficacy	7-point Likert <i>Strongly disagree;</i> <i>Strongly agree</i>	- I will be able to successfully overcome many challenges. - In general, I think that I can obtain outcomes that are important to me. - I am confident that I can perform effectively on many different tasks. - I will be able to achieve most of the goals that I have set for myself. - I believe I can succeed at most any endeavor to which I set my mind. - Even when things are tough, I can perform quite well. - When facing difficult tasks, I am certain that I will accomplish them. - Compared to other people, I can do most tasks quite well.	(Price et al., 2018)

