

Article

Credit Card Use, Hedonic Motivations, and Impulse Buying Behavior in Fast Fashion Physical Stores during COVID-19: The Sustainability Paradox

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Abstract: The health crisis caused by COVID-19 has affected consumption and payment patterns worldwide. Consumers have had to change their habits and deal with new sanitation guidelines and have often struggled with lengthy infrastructure closures. These factors significantly influenced both the choice of payment methods and purchase decisions made by consumers. Still, consumption patterns during the pandemic as a new social situation have not yet been thoroughly investigated. As the unsustainable consumption of resources is an important issue, this paper aims to analyze the relationship between credit card use, hedonic motivations, and its impact on the impulsive buying behavior in physical fast fashion stores during the COVID-19 pandemic in Spain. For this purpose, an online survey was conducted on a sample of 300 regular fast fashion buyers in physical stores. Structural equation modelling was used for the data analysis. The results show that there is a significant relationship between credit card use and impulse buying behavior for fast fashion in physical stores, as well as between credit card use and social shopping. It is also observed that hedonic motivations such as gratification shopping, value shopping, novelty-seeking shopping, and adventure-seeking shopping are related to impulse buying behavior. Therefore, this evidences the unsustainable overconsumption, thereby having a higher negative environmental and social impact. With the increased popularity of cashless payment methods, including credit cards relaxing tighter budgets during the pandemic, fast fashion impulse buying should be considered an important issue in individual, social and environmental well-being. Consequently, the need for more responsible consumption and sustainability-focused value orientation arises so as to mitigate the environmental impact of the fast fashion industry.

Keywords: credit cards; fast fashion; hedonic motivations; impulsive buying; physical stores; sustainability



Citation: Gawior, B.; Polasik, M.; del Olmo, J.L. Credit Card Use, Hedonic Motivations, and Impulse Buying Behavior in Fast Fashion Physical Stores during COVID-19: The Sustainability Paradox. *Sustainability* **2022**, *14*, 4133. <https://doi.org/10.3390/su14074133>

Academic Editor: Ioannis Nikolaou

Received: 16 February 2022

Accepted: 29 March 2022

Published: 30 March 2022

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1. Introduction

The COVID-19 pandemic, recognized by the WHO in March 2020, affected worldwide daily routines, from the way we interact and relate to others to the way we work or shop, influencing socioeconomic behavioral patterns [1–3].

During the pandemic, consumption patterns changed [1,4–6], mainly due to the sanitary measures and imposed restrictions such as lockdowns, physical store closures, limited opening hours and stores' reduced capacity and social distancing [7–9]. At the same time, the payment market has changed, as cash payments were identified as a potential carrier of the virus. Due to that, the card payment acceptance infrastructure has been dynamically developing and consumers have been encouraged to use it [10,11].

Fear of contagion and restrictions imposed over a prolonged period have caused economic, social, and even psychological problems [1,3], having a significant impact in

the context of sustainable consumption. Panic and social anxiety became the main reason for the change in consumption behavioral patterns [11], which often translated into making ill-considered and hasty purchasing decisions. Since the pandemic outbreak, consumers' reactions have evolved, from the impulsive buying of basic products [1,12] to avoiding shopping in physical stores [12], causing fluctuations between the demand and supply sides.

It needs to be highlighted that the consumption patterns developed during the COVID-19 health crisis have been unusual and are unknown so far, according to retail experts [13], and go far beyond the impulse buying of staple products [12]. The health crisis has also increased consumers' awareness and commitment to environmental issues, mindful consumption, and sustainability. For this reason, it is important to investigate the phenomenon of impulse buying in the new social situation of the COVID-19 pandemic.

The main purpose of this research is to investigate credit card usage as a trigger for fast fashion impulse buying [14–17] during the COVID-19 pandemic. For the purposes of the work, the following research questions were developed:

RQ1: Is there a relationship between the use of credit cards and impulsive buying behavior among consumers during the pandemic?

RQ2: What hedonic motivations are affecting impulsive buying behavior during the pandemic?

RQ3: Is there a relationship between the use of credit cards and hedonic motivations affecting impulsive buying behavior?

In the first part of the paper, the authors have conducted a literature review on cashless payments, motivations for impulse buying, and the impact of fashion consumption on sustainable development. The main part of the work is devoted to the presentation and quantitative analysis of results of an online survey of 300 regular fast fashion buyers in physical stores in 2020. In addition to the core of this investigation, hedonic motivations in fast fashion and their relationship with credit card use are analyzed, as well as the relationship between hedonic motivations and impulse buying in fast fashion [18]. The work ends with a discussion and presentation of conclusions from the conducted research.

2. Literature Review

2.1. Contactless Payment and Credit Card Use

Today, consumers have at their disposal a myriad of technological solutions that enable cashless payments through physical credit cards or digital credit cards on smartphones or smartwatches [19]. At the same time, a plethora of factors affect what payment method will be chosen by consumers to fulfil transactions [20], among them the speed of transaction [21] and perceived characteristics of the payment method in terms of, for example, ease of use or safety [22].

A study performed in 2019 on payment behavior in the European area realized by European Central Bank [23] shows that Spain is a country with generally substantial cash usage. About 83% of the number of transactions and 66% in terms of value were performed using cash. It should be noted, however, that during 2020 (during the COVID-19 pandemic), 50.2% of Spaniards adopted more cashless behavior [10]. However, the increase in cashless payment use has not been uniform across all industries. For instance, the overall credit card use in both physical stores and online fast fashion stores during the restriction period in Spain fell by 27% [24]. This may be related to the fact that many people lost their jobs or had a reduced income during the pandemic. Therefore, it can be assumed that consumption expenditure may have encountered budgetary constraints.

2.2. Impulse Buying

Impulsive buying is unplanned, thoughtless, spontaneous, and hedonically complex buying behavior [25]. Impulsivity reveals the consumer's willingness to make purchases unintentionally, unreflectively, immediately, and based on internal and/or external stimuli [26,27]. Among these stimuli, internal motivations classified into hedonic and utilitar-

ian [28] influence the purchase decision process [29]. In addition, the relationship between fast fashion and consumers' hedonic motivations to purchase the latest trends has a tremendous negative impact on sustainability, causing environmental damage [30]. The issue of impulsive buying is the subject of research by many researchers around the world [3,25,31–35]. As part of some research conducted by many researchers, it has been found so far that the most important factors influencing impulsive buying are credit card use [3,14,16,17,36], gratification shopping [3,31,37] and novelty-seeking shopping [3,30,38–40]. Therefore, it can be assumed that some of those factors might also apply in the COVID-19 pandemic, leading to unsustainable decisions among consumers. Limited budgets, prolonged quarantines, and lockdowns could translate into the need for social or gratification impulsive shopping (need of social interaction), and usage of credit cards (relaxing budgetary constraints). Still, there are not many papers that directly address the situation related to the COVID-19 pandemic. Chauhan, Banerjee and Dagar [3] have attempted to explain changes in behavior of conducting fashion purchases online. The lack of available research on changes in purchases at physical stores was one of the factors influencing the authors' decision to undertake this research.

2.3. Hedonic Shopping Motivations

Hedonic motivations are internal factors that seek to satisfy needs for pleasure, enjoyment, searching for experiences, entertainment, excitement, and socialization during the shopping process [31]. Additionally, some claim that hedonic motivations are positively related to impulsive buying behavior [32].

Arnold and Reynolds [37] proposed an inventory of six types of hedonic buying motivations:

1. Gratification shopping relieves stress, improves mood, and provides emotional gratification [41,42].
2. Idea or novelty shopping satisfies the need to keep up with fashion trends and triggers impulsive buying [33,38].
3. Adventure-seeking shopping is related to the excitement and stimulation produced by the act of shopping and may be a trigger for impulsive buying [39,40,43].
4. Value shopping refers to getting more value at a lower price [36] and relates positively to impulsive buying behavior [26].
5. Social shopping refers to motivations based on the need for social interactions and can trigger impulsive buying, according to several authors [34,35].
6. Role shopping is motivated by the mere enjoyment of shopping for others.

2.4. Fashion Consumption and Sustainability

As behavioral economists point out, the act of shopping for fashion provides consumers with satisfaction and personal fulfilment [44]; the latter is strongly rooted in hedonic motivations such as the search for emotional satisfaction, aesthetic criteria, amusement, symbolic meaning, sensory stimulation, socialization, or expression of social status [39].

Therefore, shopping for fashion, or fast fashion in particular, is related to hedonic motivations and to the hedonic value and pleasure experienced when shopping [45]. Clothing, footwear, and jewelry are products with high symbolic value, as they express and define shoppers' identity, personality, appearance, and mood [46].

Four aspects of sustainability relate to fashion industry: (i) sustainable production, (ii) green marketing, (iii) green information sharing, and (iv) green attitude and education. Our interest focus on the last one, inherent to customer behavior [47–51].

Sustainability within the fast fashion sector was a challenge even before the COVID-19 pandemic [52]. The idea of fast fashion and sustainability is quite paradoxical as the fast fashion accelerated business model relies on a globalized supply chain, low prices and speed in production and distribution, features that do not apply to sustainable practices and are contrary to the fast fashion business model itself. Consequently, fast fashion brands replenish stocks and introduce new trendy items on a weekly basis, making fashion con-

sumers keep coming back [53]. Some researchers point out that consumers feel concerned about sustainability and do believe that their behavior has a positive impact, but this knowledge does not influence their buying decision [54]. This so called “intention-behavior gap” is particularly conspicuous in fast fashion and within consumer attitudes to sustainability.

2.5. Fast Fashion and Impulsive Buying Behavior

The fast fashion business model provides luxury fashion imitations at a low price and with a short shelf life [55,56]. The sense of urgency when purchasing fast fashion relies on recurrent consumption and impulse buying. As a consequence, fast fashion consumption enhances the consumer behavioral pattern of buying more but using items less frequently, which leads us to question its social and environmental impacts [57]. Moreover, the behavioral pattern of fast fashion consumers has a detrimental impact on the environment, where the waste of outdated or unwanted outfits accounts for some 17 million tons, according to the figures from the Environmental Protection Agency. Therefore, fast fashion is one of the most polluting industries as it requires an important quantity of raw materials, generates water pollution and accounts for 10% of global CO₂ emissions through both its “just-in-time” production model and its supply chain [58].

The Spanish brand Zara is recognized as the fast fashion company par excellence, followed by two other brands, the Swedish brand H&M and the Dutch brand C&A [59–61]. Retailers such as Zara and H&M can offer up to 24 collections per year, encouraging so called “throwaway fashion” and over-consumption [62].

Fast fashion products, due to their high degree of symbolism, are considered as hedonic and can trigger impulsive buying behavior, as pointed out by several authors [18,45].

Internal variables involved in the impulsive buying of fast fashion include emotions produced by the mere act of shopping for fashion [45], emotional gratification [63], generation of positive mood states [36], and fashion involvement [64]. Therefore, interest in fashion trends is directly related to fast fashion impulsive buying behavior [65].

2.6. Mediating Role of Credit Card Use in Impulsive Buying

Credit card availability and use are positively related to consumer spending and stimulate impulsive buying behavior [66–68]. Several investigations point out that credit card use accelerates the decision-making process and increases consumer satisfaction [69] in fast fashion impulsive buying [16,17]. Therefore, credit card use in fast fashion is a trigger for impulse buying behavior and has a detrimental impact on sustainability and on responsible consumption.

3. Research Hypothesis

This investigation seeks to determine the relationship between credit card use as a trigger for the impulsive buying of fast fashion products during the COVID-19 pandemic, as well as the relationship between credit card use and hedonic motivations (see Section 2.3 for a description of the terms used within hypotheses). Based on the analyzed theory and according to the hypotheses formulated, the theoretical model is presented in Figure 1.

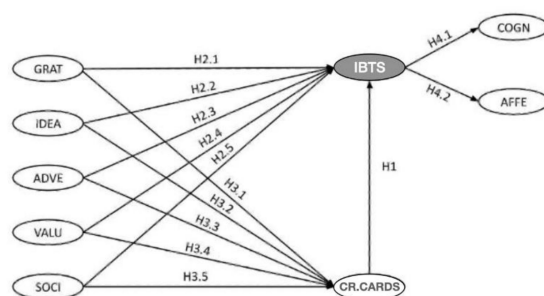


Figure 1. Hypothetical relationships between credit cards use, hedonic motivations, and fast fashion impulsive buying.

From these relationships, the following hypotheses, presented in Table 1, emerge.

Table 1. Hypothesis.

H1.	There is a positive relationship between credit card use and impulsive buying of fast fashion products in physical stores during COVID-19.
H2.1.	There is a positive relationship between gratification shopping and credit card use in fast fashion purchases in physical stores during COVID-19.
H2.2.	There is a positive relationship between idea shopping and credit card use in fast fashion purchases in physical stores during COVID-19.
H2.3.	There is a positive relationship between adventure-seeking shopping and credit card use in fast fashion purchases in physical stores during COVID-19.
H2.4.	There is a positive relationship between value-seeking and credit card use in fast fashion purchases in physical stores during COVID-19.
H2.5.	There is a positive relationship between social-shopping motivations and use of credit cards in fast fashion purchases in physical stores during COVID-19.
H3.1.	There is a positive relationship between gratification-seeking shopping and impulsive purchases of fast fashion in physical stores during COVID-19.
H3.2.	There is a positive relationship between idea shopping and impulsive purchases of fast fashion in physical stores during COVID-19.
H3.3.	There is a positive relationship between adventure-seeking motivations and impulsive purchases of fast fashion in physical stores during COVID-19.
H3.4.	There is a positive relationship between value-seeking shopping and impulsive purchases of fast fashion in physical stores during COVID-19.
H3.5.	There is a positive relationship between social shopping motivations and impulsive fast fashion purchases in physical stores during COVID-19.
H4.1.	Impulsive purchases of fast fashion can be measured through the cognitive subscale of the impulse purchase measurement scale in fast fashion.
H4.2.	Impulsive purchases of fast fashion can be measured through the affective subscale of the impulse purchase measurement scale in fast fashion.

4. Methodology

In this research, quantitative techniques have been used to analyze the relationship between the chosen variables of fast fashion impulsive buying in physical stores in Spain between the months of June and July 2021.

4.1. Sample and Data Collection

The data were collected through a self-administered online questionnaire using the Survey Monkey platform on a sample of regular fast fashion consumers who reported having shopped in physical fast fashion stores (Zara, H&M, C&A, Primark) between June 2020 and July 2021. The chosen period corresponds to the reopening of physical stores, unconstrained mobility across all Spanish provinces and the end of strict lockdown. The sample was made up of 300 participants, aged between 18 and 55 years old, living in the urban areas of Madrid and Barcelona and shopping in physical stores in one of the main fast fashion brands: Zara, H&M, Primark or C&A. A total of 289 valid responses were obtained.

4.2. Instruments

The self-administered questionnaire of four blocks of questions included sociodemographic variables, the impulse buying tendency scale (IBTS) [70], the hedonic motivations scale [37] and the credit card use scale [71]. Sociodemographic variables included age, sex, marital status, level of education, as well as the payment methods used during purchase.

The IBTS [70] was used to find the propensity of impulsive buying of fast fashion products in physical stores. The IBTS has been used and validated by, e.g., Dawson and Kim [26] and Činjurević et al. [72]; it measures affective (AFFE) (10 items) and cognitive (COGN) (10 items) components of impulsive buying tendency. A version adapted to

impulsive buying in physical fast fashion stores was created through expert consensus (Delphi technique) and was subjected to be reviewed to determine its validity.

Hedonic shopping motivations [37] were measured through a six-factor hedonic shopping motivations scale (gratification-seeking shopping motivations (GRAT), novelty-seeking (idea) shopping motivations (IDEA), value-seeking shopping motivations (VALU), adventure-seeking shopping motivations (ADVE), social shopping motivations (SOCI), and role shopping motivations). In this investigation, the role-shopping factor was removed after determining it was irrelevant. The hedonic motivations scale was used and validated by Nguyen et al. [28] and Özen and Kodaz [73].

The credit card use scale [71] measures the level of payment responsibility, credit risk, and extravagance–prudence. The credit card use scale was used and validated by, e.g., Khare [74]. For this research, 10 questions were selected to measure the credit card use among fast fashion shoppers in physical stores in Spain during the COVID-19 sanitary crisis (4 for risk measurement, 4 for extravagance–prudence, and 2 for card payment).

5. Results

The collected data were processed and analyzed using structural equation models (SEMs). Valid data from 289 consumers were collected according to the established criteria (Table 2).

Table 2. Descriptive data.

Category	Variable	Percentage
Gender	Male	27.40%
	Female	72.60%
Age	18–25 years	10.00%
	26–34 years	15.17%
	35–40 years	11.72%
	41–47 years	30.34%
	Over 47 years	32.76%
Marital status	Single	35.86%
	Married	55.17%
	Widowed	1.03%
	Other	7.93%
Educational level	Primary studies	1.37%
	Secondary studies	6.85%
	Vocational training	15.07%
	University studies	71.23%
	Other	5.48%
Payment method	Credit card	50.84%
	Debit card	40.76%
	Cash	8.40%
Type of payment instrument	Cash	8.40%
	Physical credit card	34.03%
	Credit card on smartphone	15.97%
	Credit card in wearable device	0.84%
	Physical debit card	27.31%
	Smartphone debit card	12.61%
	Debit card in wearable device	0.84%

5.1. Validity and Reliability

Once the descriptive analyses were accomplished for all the measurement scales and considered valid, exploratory factor analysis was carried out. In particular, the suitability of the data for subsequent factor analysis was analyzed, as along with dimensionality and reliability.

It was found that in the sample, the determinant of the correlation matrices was minimal and close to 0, while in the anti-image correlation matrices, the elements that were not part of the diagonals were close to 0 or less than 0.3 and the values of the diagonals were close to 1 or greater than 0.8.

The Kaiser–Meyer–Olkin (KMO) test for the scales shows values greater than 0.5, and, in the case of Bartlett’s sphericity, the degree of significance was $p < 0.001$ (***)

Three psychometric properties of the scale dimensionality were evaluated: (i) number of extracted factors (must be 1), (ii) loading factor (must be greater than 0.5), and (iii) variance explained by each extracted factor (must exceed 60%).

The scale reliability showed Cronbach’s Alpha greater than 0.7, and the total item correlation was greater than 0.3.

5.2. Exploratory Factor Analysis of the Hedonic Motivations

The results of the validity and reliability tests of the Hedonic Motivations Scale are presented in Table 3.

Table 3. Results of the exploratory factor analysis of hedonic motivations scale.

	Factor	Bartlett sph. Test	KMO Index	% Explained Variance	Alpha Cronbach	Deter. Correlation Matrix
GRAT		383.816	0.701	76.55%	0.846	0.846
Factorial load GRAT_1	0.897					
Factorial load GRAT_2	0.904					
Factorial load GRAT_3	0.821					
IDEA		445.398	0.723	79.89%	0.874	0.206
Factorial load IDEA_1	0.891					
Factorial load IDEA_2	0.869					
Factorial load IDEA_3	0.920					
ADVE		350.562	0.703	75.47%	0.837	0.289
Factorial load ADVE_1	0.831					
Factorial load ADVE_2	0.902					
Factorial load ADVE_3	0.872					
VALU		316.089	0.651	71.67%	0.801	0.326
Factorial load VALU_1	0.752					
Factorial load VALU_2	0.903					
Factorial load VALU_3	0.876					
SOCI		452.426	0.734	80.47%	0.878	0.201
Factorial load SOCI_1	0.885					
Factorial load SOCI_2	0.917					
Factorial load SOCI_3	0.888					

5.3. Exploratory Factor Analysis of Impulsive Buying Scale and Credit Card Use

The first evaluation of dimensionality and reliability for the Impulsive Buying Tendency Scale and Credit Card Use Scale did not meet the required parameters for the factor loadings of 10 items (from a total of 45 items), as well as for the variance and Cronbach’s Alpha for the Use of a Credit Card Scale and cognitive section of the Impulsive Buying Tendency Scale. To address these non-compliances, items were removed from those scales, and dimensionality and reliability analyses were repeated. After these analyses, the factorial loads, variances, and Cronbach’s Alpha met the necessary established parameters, maintaining their suitability.

It should be noted that the values of the variance obtained were 58.16%, 58.78%, and 57.21% for the COGN, AFFE, and CREDIT CARD scales, respectively. Although these values are slightly below the established limit of 60%, according to Hair et al. [73] in the field of social sciences, such slightly lower values can be admitted. Therefore, these values validate the dimensionality analysis.

Once the second exploratory factor analysis has been carried out, it is confirmed that both scales are unidimensional and have sufficient reliability to continue with their subsequent confirmatory and structural analysis (Table 4).

Table 4. Exploratory factor analysis: IBTS and credit card use scale.

	Factor	Bartlett sph. Test	KMO Index	% Explained Variance	Alpha Cronbach	Deter. Correlation Matrix
COGN		701.931	0.850	58.16%	0.854	0.082
Factorial load COGN_1	0.634					
Factorial load COGN_2	0.809					
Factorial load COGN_4	0.729					
Factorial load COGN_5	0.856					
Factorial load COGN_6	0.780					
Factorial load COGN_8	0.748					
AFE		950.041	0.889	58.78%	0.881	0.033
Factorial load AFPE_1	0.801					
Factorial load AFPE_2	0.848					
Factorial load AFPE_5	0.668					
Factorial load AFPE_7	0.789					
Factorial load AFPE_8	0.807					
Factorial load AFPE_9	0.661					
Factorial load AFPE_10	0.774					
CREDIT CARDS		663.133	0.765	57.21%	0.797	0.095
Factorial load CC_3	0.516					
Factorial load CC_4	0.575					
Factorial load CC_5	0.823					
Factorial load CC_6	0.911					
Factorial load CC_7	0.897					

5.4. Confirmatory Factor Analysis of Measurement Models

Once the model was identified, the goodness of fit, reliability, convergence, and discriminant validity was analyzed.

A confirmatory factor analysis was carried out to demonstrate that the IBTS was a multidimensional variable. For this purpose, the correct identification of the measurement model was corroborated, verifying that the number of degrees of freedom was greater than zero. It was confirmed that the structure does not have contradictory estimates. The goodness of fit results are shown in Table 5.

Table 5. IBTS model: parsimonious fit.

Index		Index		Index	
Absolute Adjustment		Incremental Adjustment (Minimum Value: 0.9)		Parsimonious Adjustment (Minimum Value: 0.5)	
X2/d.f. (<5.0)	1.843	AGFI	0.914	PGFI	0.622
GFI (>0.9)	0.943	TLI	0.962	PNFI	0.722
SRMR (<8.0)	0.052	NFI	0.939	PCFI	0.747
RMSEA (<8.0)	0.054	CFI	0.971		
		IFI	0.971		

The reliability analysis and its convergent validity are shown in Table 6.

The model's discriminant validity analysis data are shown in Table 7.

Confirmatory factor analysis results corroborate that the IBTS scale can be considered a multidimensional scale of the second order. The correct identification of the measurement model was verified along with the goodness of fit (Table 8).

Table 6. IBTS: reliability and convergent validity.

	Standardized Load (Values > 0.5)	Composite Reliability (Values > 0.7)	Analysis of the Extracted Variance (> or Very Close to 0.5)
COGN			
COGN_1	0.524	0.852	0.496
COGN_2	0.777		
COGN_4	0.667		
COGN_5	0.858		
COGN_6	0.714		
COGN_8	0.636		
AFFE			
AFFE_1	0.734	0.880	0.516
AFFE_2	0.807		
AFFE_5	0.631		
AFFE_7	0.752		
AFFE_8	0.770		
AFFE_9	0.566		
AFFE_10	0.736		

Table 7. Discriminant validity of the model.

	COGN	AFFE
COGN	0.704	-
AFFE	0.543 ***	0.718

*** Denotes statistical significance at 1%.

Table 8. Goodness of fit of the measurement model.

Index		Index		Index	
Absolute Adjustment		Incremental Adjustment (Minimum Value: 0.9)		Parsimonious Adjustment (Minimum Value: 0.5)	
X2/d.f. (<5.0)	1.416	AGFI	0.852	PGFI	0.730
GFI (>0.9)	0.877	TLI	0.957	PNFI	0.782
SRMR (<8.0)	0.037	NFI	0.884	PCFI	0.851
RMSEA (<8.0)	0.038	CFI	0.962		
		IFI	0.963		

The GFI (absolute fit) parameter value of 0.877 does not reach the established limit of 0.9. However, according to Subhash [75,76], this parameter can be considered valid above 0.8. The parameters of AGFI (0.852) and NFI (0.884) do not reach 0.9. However, these parameters can also be considered valid above 0.8 [76] or 0.85 in the case of AGFI [77].

The convergent validity and reliability analysis are shown in Table 9.

Table 9. Reliability and convergent validity measurement model (AFC3).

	Standardized Load (Values > 0.5)	Composite Reliability (Values > 0.7)	Analysis of the Extracted Variance (> or Very Close to 0.5)
IBTS			
COGN	0.524	0.852	0.496
AFFE	0.777		
GRAT			
GRAT_1	0.849	0.853	0.661
GRAT_2	0.877		
GRAT_3	0.703		

Table 9. Cont.

	Standardized Load (Values > 0.5)	Composite Reliability (Values > 0.7)	Analysis of the Extracted Variance (> or Very Close to 0.5)
IDEA_1	0.836	IDEA 0.877	0.705
IDEA_2	0.792		
IDEA_3	0.888		
ADVE_1	0.709	ADVE 0.841	0.640
ADVE_2	0.860		
ADVE_3	0.823		
VALU_1	0.552	VALU 0.813	0.602
VALU_2	0.920		
VALU_3	0.809		
SOCI_1	0.817	SOCI 0.880	0.710
SOCI_2	0.898		
SOCI_3	0.809		
CC_3	0.513	CREDIT CARD 0.815	0.504
CC_4	0.498		
CC_5	0.737		
CC_6	0.939		
CC_7	0.916		

Although the estimate of the standardized load should be greater than 0.5, in the case of the item CC_4, it was 0.498. However, given the proximity of the value to the recommended minimum and the correct validation of the rest of the parameters analyzed for this scale, it can be considered acceptable and, therefore, maintained for the following phases. The data from the discriminant validity analysis of the model are shown in Table 10.

Table 10. Discriminant validity analysis.

	IBTS	GRAT	IDEA	ADVE	VALU	SOCI	CC
IBTS	0.813	-	-	-	-	-	-
GRAT	0.737 ***	0.813	-	-	-	-	-
IDEA	0.614 ***	0.546 ***	0.839	-	-	-	-
ADVE	0.707 ***	0.784 ***	0.636 ***	0.800	-	-	-
VALU	0.478 ***	0.384 ***	0.396 ***	0.428 ***	0.776	-	-
SOCI	0.319 ***	0.333 ***	0.306 ***	0.532 ***	0.302 ***	0.842	-
CC	0.383 ***	0.263 ***	0.176 *	0.291 ***	0.165 *	0.304 ***	0.710

*** Denotes statistical significance at 1%. * Denotes statistical significance at 10%.

According to the results of the variance test, it is observed that the square root of the AVE of each factor is always higher than the correlations of that factor with the rest of the factors.

5.5. Structural Equation Model

Once the model was identified, its goodness of fit was analyzed, as well as its nomological validity. The goodness-of-fit model was analyzed and found to be almost identical to the goodness of fit of the measurement model. Therefore, the modification indices do not justify the need to eliminate any additional item (Table 11).

Table 11. Goodness of fit of the model (SEM).

Index		Index		Index	
Absolute Adjustment		Incremental Adjustment (Minimum Value: 0.9)		Parsimonious Adjustment (Minimum Value: 0.5)	
X2/d.f.	1.403	AGFI	0.854	PGFI	0.730
GFI	0.878	TLI	0.959	PNFI	0.781
SRMR	0.037	NFI	0.885	PCFI	0.850
RMSEA	0.038	CFI	0.964		

6. Results: Conceptual Summary

The scheme of the structural model is presented in Figure 2. The factorial loads of the different causal or measurement relationships and the acceptance or not of their corresponding hypotheses are shown.

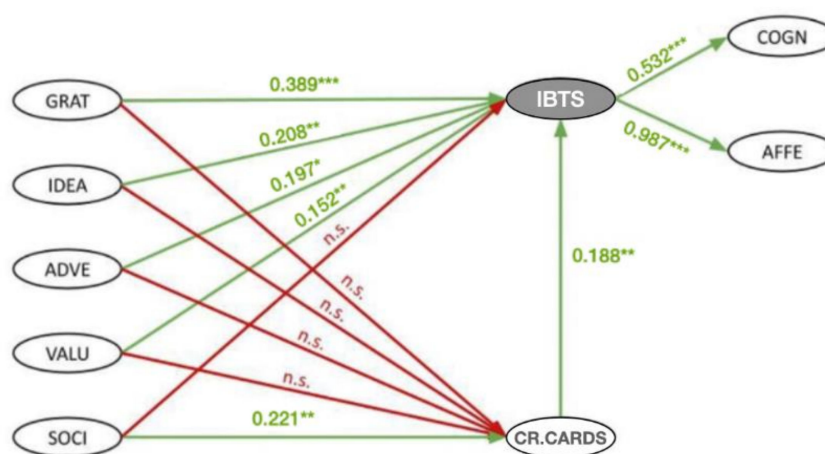


Figure 2. SEM diagram with factorial loads of the causal relationships between the variables. *** Denotes statistical significance at 1%. ** Denotes statistical significance at 5%. * Denotes statistical significance at 10%.

A summary with the details of each of the research hypotheses related to causal and measurement relationships is shown in Table 12.

Table 12. Summary of the hypotheses related to causal relationships.

Hypothesis	Relation	Type of Relation	Standardized Load	Significance Level
H1.	IBTS $\geq$ CC	Causal	0,188 **	ACCEPTED
H2.1.	GRAT $\geq$ CC	Causal	ns	REJECTED
H2.2.	IDEA $\geq$ CC	Causal	ns	REJECTED
H2.3.	ADVE $\geq$ CC	Causal	ns	REJECTED
H2.4.	VALU $\geq$ CC	Causal	ns	REJECTED
H2.5.	SOCI $\geq$ CC	Causal	0.221 **	ACCEPTED
H3.1.	GRAT $\geq$ IBTS	Causal	0.389 ***	ACCEPTED
H3.2.	IDEA $\geq$ IBTS	Causal	0.208 **	ACCEPTED
H3.3.	ADVE $\geq$ IBTS	Causal	0.197 *	ACCEPTED
H3.4.	VALU $\geq$ IBTS	Causal	0.152 **	ACCEPTED
H3.5.	SOCI $\geq$ IBTS	Causal	ns	REJECTED
H4.1.	IBTS $\geq$ COGN	Measurement	0.532 ***	ACCEPTED
H4.2.	IBTS $\geq$ AFPE	Measurement	0.987 ***	ACCEPTED

*** Denotes statistical significance at 1%. ** Denotes statistical significance at 5%. * Denotes statistical significance at 10%.

7. Discussion

This investigation aims to shed light on credit card use and its relationship with hedonic motivations and impulsive buying behavior in fast fashion physical stores in Spain during the COVID-19 era and its impact on responsible consumption of fast fashion mitigating environmental damages.

Answering research question RQ1, the findings of this study indicate that credit card use has a positive relationship with fast fashion impulsive buying ($H1: 0.188$), in line with previous findings on impulsive buying behavior and especially on fashion impulsive buying [3,14,16,17,36]. Having a credit card, in the case of a reduced budget and rising prices as a result of COVID-19, gave consumers an apparent sense of financial security and satisfaction while shopping.

Contrary to the above, there is no statistically significant relationship between credit card use and hedonic motivations such as gratification shopping ($H2.1$), adventure-seeking shopping ($H2.2$), novelty-seeking shopping ($H2.3$), and value-seeking shopping ($H2.4$). This means that the use of a credit card is not directly related to most hedonic motivations. However, there is a positive relationship between social shopping motivations ($H2.5: 0.221$) and credit card use, possibly due to the strong need for social interactions and entertainment after a prolonged period of stay-at-home orders, curfews, quarantines, and social distancing. The data above can be clearly considered a response to research question RQ3. A sudden social and economic change in the form of a pandemic had a significant and negative impact on the mentality of society. After opening stores, consumers could unload their emotions through socialization and shopping with a tool that allows them to deceptively expand their wallets, resulting in unsustainable purchases.

Answering research question RQ2 regarding hedonic motivations as a trigger for fast fashion impulsive buying behavior, the results show that during COVID-19, gratification shopping motivations are the strongest ($H3.1: 0.389$); therefore, the need for mood enhancement or comfort during this time of distress is positively related to the impulsive buying of fast fashion products [41,42,72]. Similar results on gratification shopping motivations have been presented in previous studies by many authors [3,31,37]. This means that even during the COVID-19 pandemic, gratification seeking is an important trigger for fast fashion impulsive and reckless shopping.

Consumers who experienced idea or novelty-seeking motivations ($H3.2: 0.208$) show a very similar behavioral pattern in making impulsive purchases in physical fast fashion stores as gratification-seeking shoppers. These results are supported by previous findings on fashion interest and impulsive buying, where similar behavior was observed among consumers in Croatia [78].

Entertainment or adventure-seeking shopping also shows a positive relationship with fast fashion impulsive buying behavior in physical stores during the COVID-19 era ($H3.3: 0.197$). These results are undoubtedly consistent with previous studies related to the search for stimulation and new sensations during the shopping trip to a store [42,79].

Similarly, there is a positive relationship between value-seeking motivations while shopping and fast fashion impulsive buying ($H3.4: 0.152$), which is consistent with similar findings on these types of motivations triggering impulsive buying. The authors of previous studies indicated that value-seeking is one of the key factors influencing impulsive buying [72,80]. During COVID-19, many consumers may buy things they do not necessarily need just because of a seemingly good price.

Contrary to the above, the relationship between motivations for social shopping and impulsive buying of fast fashion products during COVID-19 was not statistically significant. The reason could be explained by the fear of contagion.

As for $H4.1$. and $H4.2$., the results suggest that the analyzed measurement relationships show the suitability of the IBTS, with which the fast fashion impulse buying construct has been measured. It is important to note that the results of the measurement relationship of the affective subscale (0.987) are notably higher than those of the cognitive subscale.

8. Conclusions

Based on the results obtained, it can be concluded that the use of credit cards positively influences the impulsive buying behavior for fast fashion products in physical stores, even with the limitations and restrictions imposed to avoid contagion during the COVID-19 health crisis. Therefore, the findings show that credit card availability and credit card use could be important triggers for impulse buying for fast fashion, a fact that raises concerns about the environmental, social, and ethical breaches caused by the fast fashion industry.

Similarly, of the five hedonic motivations, only social shopping motivations are positively related to credit card use during the COVID-19 era, pointing out the need for social interactions during the lockdown and social distancing period. As many people lost their jobs or had a reduced income, credit cards eased and relaxed their budgets, enabling social participation and interactions in stores.

However, it should be noted that aside from the social factor and use of credit card connection, other factors such as gratification shopping, adventure-seeking shopping, idea-seeking shopping, and value-seeking shopping motivations are also positively related to impulse buying of fast fashion products in physical stores during COVID-19. At this point, it should be emphasized that in the new social situation, which is the pandemic, consumers ignore the environmental costs of their shopping habits, emphasizing the magnitude of the problem.

This research has had among its limitations the restrictions caused by the COVID-19 pandemic, which has not only affected the shopping conditions for purchasing fast fashion products but also the selection of convenient sampling among Spanish fast fashion consumers in the urban areas of Madrid and Barcelona. Therefore, replication of this research is proposed as a future line of research once the COVID-19 pandemic is over.

The authors emphasize the need to continue investigating the consumer behavior and the adoption of cashless technology at the point of sale and its impact on impulsive buying behavior without the limitations imposed by restrictions due to COVID-19. As impulse buying and hedonic motivations are a buying trigger for fast fashion products, there is a need for changes in the fast fashion business model towards focusing on sustainable practices. Hedonic motivations could positively influence green attitudes as some consumers identify themselves with green trends as an expression of their self-concept and image [79–83]; nonetheless, there is still a gap between awareness of green attitudes and actual behavior. Future research should be conducted on a wider level globally, or at least at the interstate level. This would enable us to understand consumer attitudes towards sustainable fashion and delve deeper into how sustainability and sustainable practices influence customers' decision-making processes. The authors recommend further research which could influence the development of activities that, with the proper recommendations of governments and other stakeholders, could reduce the phenomenon of impulsive buying. The main tasks, taking into account COVID-19 changes, could include: (a) proper education on the rationality of purchasing, (b) proper education of credits and loans, or (c) offering financial planning tools (PFM). With those implemented, it will be possible to achieve a positive impact on sustainable development in the fashion sector not only in Spain, but all over the world.

Author Contributions: Conceptualization, B.G. and J.L.d.O.; methodology, B.G. and M.P.; validation, B.G., M.P. and J.L.d.O.; formal analysis, B.G. and M.P.; investigation, B.G. and M.P.; resources, J.L.d.O. and M.P.; data curation, B.G. and M.P.; writing—original draft preparation, B.G. and M.P.; writing—review and editing, B.G. and M.P.; visualization, B.G.; supervision, M.P. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the National Science Centre, Poland under Grant No. 2017/26/E/HS4/00858.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

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