

Examining the Relationship between Impulse Purchase Tendency and Post-Purchase Consumer Regret among Chinese Consumers through Questionnaire-Based Analysis

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Abstract: Impulse purchase and post-purchase consumer regret are always the cores of research analysis on consumers' behaviours and emotions. This study discusses stimuli that trigger impulse purchase and post-purchase consumer regret based on conceptual theories of fear of missing out (FOMO), heuristic bias, dual process, and decision justification in psychology and management. Impulse purchase factors can differ into lack of planning, cognition, and hedonism, and post-purchase consumer regret is due to four aspects: over-consideration, under-consideration, a change in significance, and foregone alternatives. Furthermore, quantitative data is collected through a questionnaire and analysed for investigation among different groups of samples. By data processing, this study finds the relationship between impulse purchase tendency and post-purchase consumer regret and the impacts of demographic factors (gender, age group, average monthly consumption level, and education level) on both subjects among Chinese consumers.

Keywords: Impulse Purchase Tendency; PostPurchase Consumer Regret; Chinese Consumers; QuestionnaireBased Analysis; Consumer Behavior

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1. Introduction

Jellycat's online shelves were cleaned out as soon as they were refilled. The iPhone 16 had just been released, and the official app and website were immediately crowded with consumers. Soon after, complaints about its product performance problems were made. To date, marketing personnel have gradually gotten a deeper understanding of consumers' behaviours and, hence, have generated a range of marketing strategies to stimulate consumers to buy (Kahn & Wilson, 2025). Purchase is a comprehensive symptom of humans' rational and irrational behaviours, and impulse purchase manifests as irrational. Tinne (2010) defines impulse purchase as "a purchase that is unplanned, the result of an exposure to a stimulus, and decided on the spot. After the purchase, the customer experiences emotional and/or cognitive reactions". A series of factors can trigger this, yet researchers have concluded that it is internal and external stimuli. Internal stimuli are individual manifestations, such as demographic traits and some individual features. The external ones include the situational aspects, that is, the environment consumers are in, such as considering time, interactions, and credit cards available (Khan et al., 2015; Lo et al., 2016; Huang & Suo, 2021). Antecedent research shows that impulse purchases can account for 40% to 80% of purchases up to product categories (Amos et al., 2014). Likewise, 68.3% of consumers experience post-purchase regret for various reasons (Secapramana et al., 2021). Boruah &

Goswami (2021) suggest a definition of post-purchase consumer regret as a negative emotion that arises within a consumer out of evaluation between factual and counterfactual experiences. The reason why consumers regret after purchase can differ in what they bought (outcome) and how they bought it (process) (Zeelenberg & Pieters, 2006; Lee & Cotte, 2009).

Researchers demonstrate a keener interest in impulse purchase and post-purchase regret; nevertheless, previous studies indicate several limitations. Most research in the past concentrated on Western countries, whereas, as one of the world's largest and most energetic markets, more studies are required on both themes in developing countries, such as China (Redine et al., 2022). Very few studies research the relationship between impulse purchase tendency and post-purchase regret (Sarwar et al., 2019). Therefore, based on psychology and marketing, unlike prior studies, this study aims to bridge these gaps and investigates the relationship between impulse purchase tendency and post-purchase consumer regret among Chinese consumers by conducting quantitative methods.

The structure of this research is as follows. Firstly, a literature review on impulse purchase and post-purchase consumer regret, based on the existing literature, is made to establish the foundations from a multi-perspective view and put forward the hypothesis. Secondly, quantitative studies using a questionnaire collect data and then conduct data analysis with the help of statistical software to investigate the relationship between impulse purchase tendency and post-purchase consumer regret. Finally, the limitations of this study will be discussed, and directions for further research will be proposed.

2. Literature Review

2.1 Impulse Purchase

As defined above, impulse purchase is a complicated phenomenon, and its related research has transformed significantly over time. At first, Stern (1962) argues that impulse purchase, rather than merely the unplanned buying in the previous perception, can be divided into planned, unplanned, and substituted types. With further research development, researchers scrutinise that there are not only external factors, such as unplanned situations and time dimension, but also individual emotions and cognition, like hedonism, causing impulse purchases (Piron, 1991). Park et al. (2006) find that impulse purchase is a distinct trait of hedonism. Moreover, an individual's cognition can play a crucial role in contributing to the impulse purchase. Hence, lack of planning, hedonism, and cognition are the three significant factors of impulse purchase, and the scale is composed to measure the impulse purchase tendency from both internal and external aspects in this study.

As an external factor, lack of planning is considered one of the most significant contributing factors ever (Verplanken & Herabadi, 2001; Lee & Song, 2011; Nyrhinen et al., 2024). This lack of planning not only takes shopping list planning into account but also considers consumers' planning for future financial prospects. Consumers who lack planning or are unplanned always have no or little specific target when buying either online or offline. Then, they are more easily affected by situational stimuli such as sales promotion and novelty display of goods. Hence, they may buy such goods impulsively and randomly, relying on immediate thoughts and emotions due to the absence of a preset purchase list other than buying according to their own actual needs (Gao et al., 2022). Mainly, when marketing strategies like discounts target them, there is an illusion of cost performance in this product. In contrast, consumers are unaware of it at the moment and generate FOMO (fear of missing out). Then, unnecessary impulse purchase is done to attain immediate gratification and ignore the long-term consequences (Rachman et al., 2024). In addition, the use of credit cards can also be regarded as a trigger of impulse purchases due to a lack of planning. Gawior et al. (2022) propose that unplanned consumers are inclined to buy using credit cards since they do not clearly project their future financial condition and loosen their budget constraints, resulting in overspending.

Hedonism, this term is also used to describe triggers of impulse purchases underlying consumers' inner psychology and, hence, hedonic shopping motivation usually specifies that consumption is not purely based on utilitarian considerations and meeting needs but also for consumers to seek entertaining, thrilling value and newfangled experiences (Babin et al., 1994; Overby & Lee, 2006). Research shows that hedonism is significantly correlated with impulse purchase tendency (Rook, 1987; Silvera et al., 2008), so impulse purchases can function as a mediator to regulate emotions, pursuing positive emotions and preventing negative ones. According to studies by Herabadi et al. (2009) and Lins et al. (2013), impulse purchase always brings high arousal or positive emotions like excitement, while low arousal and rational consideration are experienced by consumers who make non-impulse purchases. Also, rather than happening under joyful circumstances, impulse purchases

may relieve negative emotions, such as low self-esteem, anxiety, and pressure. For example, consumers can improve their temporary emotions by buying impulsively, enabling impulse purchases to become a way to gain self-gift.

Nevertheless, cognition that evaluates the decision-making process and logical thinking is a prominent determinant of impulse purchases. The idea that human behaviours are shaped by more than one process attracts researchers to investigate. Kahneman (2013) uncovered the cognitive system within our mind. According to his further exploration of the dual process theory, the cognitive core of impulse purchase is explained. Daniel Kahneman introduces that there are two cognitive thinking systems within our mind: System 1 is fast and intuitive, whereas System 2 is slow, rational, and logical. Cognition involves processing and understanding information, which is in charge of system 2. When consumers think carefully about buying, they must consider the price, practicality, appearance, etc. However, the operation of system 2 requires more cognitive load and energy. When consumers experience a state of fatigue, stress, or distraction, the function of system 2 will be undermined, which enables system 1 to dominate this process. This implies that impulse purchase is activated by system 1, and this type of purchase is prompt, affected by instant emotion, thought, or environment rather than thoughtful consideration.

2.2 Post-Purchase Consumer Regret

Regret is defined as “an aversive emotion that we experience when we realise or imagine that our current situation would be more favourable if we had chosen differently” (Zeelenberg & Pieters, 2007). Consumers often experience post-purchase regret after impulse purchases, as evidenced by negative comments, sales returns, and similar behaviours. The essence of post-purchase consumer regret is the negative evaluative reflection on decision-making, accompanied by self-blame and counterfactual thinking (Sugden, 1985; Gilovich & Medvec, 1994). It is a complex cognitive and emotional outcome in which consumers compare what they previously and ideally think, see, and perceive with existing resultant manifestations (Zeelenberg & Pieters, 1999).

Lee & Cotte (2009) establish a scale based on decision justification theory suggesting that post-purchase consumer regret can be due to regret for the process (rationality of decision-making process) and for the outcome (worse outcome than what is expected) (Connolly & Zeelenberg, 2002), precisely four dimensions: under-consideration, over-consideration, change in significance, and foregone alternatives.

Most consumers experience regret after the purchase due to the outcome (foregone alternatives and change in significance). Regret is usually provoked by the association between factual outcomes and the best alternatives that could have been done. The concept of counterfactual thinking contributes largely to regret since consumers may imagine what could have been (Roese, 1997). Research shows that regret can also be affected by the perception of foregone alternatives rather than merely what consumers actually buy (Roese & Olson, 1995). Surprisingly, there has been an undiscovered dimension ever since Lee & Cotte (2009), which is a change in significance. When a person buys one product, his/her expectation of this product is fixed. However, if some changes happen to the situation, leading this product to lower practicality, individuals will regret the change in significance of the product. Although foregone alternatives and change in significance these two dimensions look similar, it is worth noting that foregone alternatives are the horizontal dimension, while change in significance is the longitudinal one. The former does not involve horizontal comparison among different alternatives, despite the second one being the vertical variation.

Even if the buying outcome is good, the process (under/over-consideration) may also bring regret since consumers may regret it due to their effort in the buying process and the information they received. According to the dual process theory mentioned above, consumers who over-considered burn too much energy while seeking too much information and comparing a series of options and then fall into analysis paralysis. As a result, they have difficulty deciding, thus hurriedly buying a good due to time pressure or burnout, choosing an unsuitable product instead (Talbert, 2017). Such excessive consideration makes consumers generate an idealism of foregone options in their minds, thereby magnifying doubts about selected products and, hence, feeling regret. On the other hand, under-considerate people fall into the trap of heuristics (Sampath, 2021), in which our minds will simplify complex judgments. However, this can mislead decisions, lowering the quality of decision-making.

By taking the review and discussion above into this study, the concepts of impulse purchase and post-purchase consumer regret are highly related. Thus, the following hypothesis is proposed: there is a positive correlation between impulse purchase tendency and post-purchase regret among Chinese consumers.

3. Methods

3.1 Materials

In order to test the hypotheses proposed above, the questionnaire mainly covers two parts: the demographic information part (gender, age group, average monthly consumption amount, and education level) and the scale part. Since this study aims to find the relationship between impulse purchase tendency and post-purchase regret, a scale combining the impulse purchase tendency scale (MERDİN UYGUR, 2018) and the post-purchase consumer regret scale (Lee & Cotte, 2009) was formed. This scale contains 26 items: 10 items for impulse purchase tendency from three dimensions, which are cognition, lack of planning, and hedonism, and the remaining 16 items for post-purchase regret from four reasons, that are regret due to forgone alternatives, a change in significance, under-consideration, and over-consideration. All items are measured on a 5-point Likert scale, ranging from 1 to 5 (“1” represents strongly disagree and “5” represents strongly agree). However, these original scales are expressed in English version, and the population in this study that is being investigated is basically Chinese consumers, so the questionnaire in this study is translated into Chinese preliminarily and, after that, checked by four people selected from an international high school (one male student, female student, male teacher, and female teacher), which means all of them possess fluent both Chinese and English abilities. In addition, the original English version of the two scales is written under every line of Chinese (see Appendix A) so as to ensure that respondents can accurately understand the meaning of each question as far as possible.

3.2 Data Collection

The cross-sectional study, considering Chinese as the respondents, handed out questionnaires through WeChat, REDnote, and Micro-Blog, these three major social media in China (Zhang, 2024), using a convenience sampling (non-probability sampling) method. Respondents’ participation in the research is voluntary and confidential. All participants were informed thoroughly of the aim of the study and given the right to withdraw. Initially, 343 pieces of answers are collected within five days (January 22 to January 26, 2025). After eliminating 15 based on their illogical answer and 8 according to the filling time, finally, valid data contains 320 pieces of questionnaires.

4. Results

4.1 Demographic profiles

Table 1 shows the demographic information of participants in the study. In 320 valid data sets, females (53.75%) are slightly more than males (46.25%). Most participants are 14~50 years old, and only 7.19% are below 14 or above 50 years old. The distribution of average monthly consumption amount is relatively uniform as there are at least 15% in each of the four groups, and the majority of participants (39.06%) spend RMB 1,000~3,000 monthly. Participants generally have a relatively high degree, among which the undergraduates account for 39.38%, the most significant proportion. The current situation of samples in this study is displayed in Table 2 below. Samples answer between “Neutral” and “Agree” and are more inclined to choose “Agree” in all dimensions; meanwhile, there are no reversely expressed items, which exhibits samples that tend to make impulse purchase and experience a post-purchase regret. Hence, this study proposing countermeasures to relieve post-purchase regret and suggesting how to buy things less impulsively is of great significance.

Table 1. Descriptive statistics of sample distribution

Variable	Operationalisation	Frequency	Percentage
Gender	Male	148	46.25%
	Female	172	53.75%
Age group	<14 years	10	3.13%
	14-18 years	33	10.31%
	19-30 years	125	39.06%
	31-40 years	102	31.88%
	41-50 years	37	11.56%
	>50 years	13	4.06%

Variable	Operationalisation	Frequency	Percentage
Average monthly consumption amount	<RMB 1,000	49	15.31%
	RMB 1,000-3,000	120	37.50%
	RMB 3,000-5,000	102	31.88%
	>RMB 5,000	49	15.31%
Education level	Junior high school or below	18	5.63%
	Senior high school/technical secondary school	67	20.94%
	Junior college	88	27.50%
	Undergraduate college	126	39.38%
	Master degree or above	21	6.56%

Table 2. Current situation of samples in this study

Dimension	Minimum	Maximum	Mean	Std. Deviation
Cognition	1	5	3.891	0.886
Lack of planning	1	5	3.803	0.847
Hedonism	1.25	5	3.953	0.836
Foregone alternatives	1.25	5	3.862	0.911
Change in significance	1	5	3.923	0.861
Under-consideration	1.25	5	3.871	0.829
Over-consideration	1.25	5	3.905	0.822

4.2 Reliability and Validity Analysis

IBM SPSS Statistics was used to conduct reliability analysis for seven dimensions of the impulse purchase tendency scale and post-purchase consumer regret scale, each scale itself, and the combined scale. As shown in Table 3, Cronbach's alpha coefficient of each dimension is higher than 0.7, except for the "cognition" dimension, which illustrates satisfactory internal consistency. Moreover, Cronbach's alpha coefficient of the "cognition" dimension is 0.621, which is greater than 0.6 and, hence, is acceptable as this scale is tentatively examined on Chinese consumers in an exploratory stage, indicating moderate reliability (Nunnally, 1978).

Table 3. Reliability analysis

Dimension	Cronbach's alpha	Number of items
Cognition	.621	2
Lack of planning	.764	4
Hedonism	.779	4
Impulse purchase tendency scale	.888	10
Foregone alternatives	.823	4
Change in significance	.789	4
Under-consideration	.757	4
Over-consideration	.767	4
Post-purchase consumer regret scale	.931	16
Overall	.954	26

Since scale items in this study adopt two mature prior scales, and both of them were processed by an exploratory factor analysis (EFA) to distinguish the inherently dimensional structure and a confirmatory factor analysis (CFA) to verify the

results of EFA, this study employed Amos 26 processing CFA to validate the previous dimensional partition. The path model of CFA is exhibited in Appendix B. The results of this questionnaire's CFA model fit measurement entirely adhere to the thresholds: CMIN/DF=1.008, RMSEA=0.005, NFI=0.934, TLI=0.999, CFI=0.999, which manifest the suitable model fit level (Byrne, 2001). Furthermore, under the premise of good model fit, each dimension's average variance extracted (AVE) and composite reliability (CR) are measured, as shown in Appendix C, to evaluate the convergent validity. Every dimension has an AVE greater than 0.4 along with a CR greater than 0.6, reflecting a reasonable verification consistency to the same trait, that is, convergent validity (Carmines & Zeller, 1979; Fornell & Larcker, 1981). The following section operates a series of confirmatory analyses to assess the discriminant validity among the seven dimensions. This method compares the original model (Model 1) with the other ten reconstructed models (Model 2-11) that combine any factors. Appendix D presents the corresponding results indicating that the original model carries the best data among the eleven models ($X^2=280.337$, $df=278$, $NFI=0.934$, $CFI=0.999$, $RMSEA=0.005$). Simultaneously, all models pass a significance test with a significant level of 0.01, and all reconstructed models give significantly worse expressions in terms of chi-square difference tests and model fit indices. Hence, each dimension can effectively and individually measure the information that it is supposed to do, and the scale items of the questionnaire in this research hold discriminant validity (Chen et al., 2016).

4.3 ANOVA and T-test

In order to investigate how the differences in demographic factors among all dimensions in scales of impulse purchase tendency and post-purchase consumer regret, independent samples T-test and one-way analysis of variance (ANOVA) were used in the research. First, according to the results of independent samples T-test, each dimension does not exist a statistically significant difference in gender as p -value=0.396, 0.607, 0.834, 0.642, 0.186, 0.596, 0.157 correspondingly for cognition, lack of planning, hedonism, foregone alternatives, change in significance, under-consideration, and over-consideration dimension, which are apparently more significant than the 0.05 verge (Cumming, 2012). Then, a one-way ANOVA was used to compare the effect of age group, average monthly consumption amount, and education level on these three factors of multiple groups of classifications on impulse purchase tendency and post-purchase regret. In age, seven dimensions all appear to have significant differences since significance testing results are 0.005, <0.001, 0.005, <0.001, <0.001, <0.001, <0.001, respectively, and are clearly less than 0.05. Appendix E sums up the ANOVA outcomes of age groups in each dimension. According to the LSD post hoc test results, samples under 18 years of age scored lower in all dimensions than those over 18 years of age. These outcomes reveal that people over 18 years old are more likely to purchase impulsively and experience post-purchase regret than those who are under 18 years old. However, such significant differences do not remain in the average monthly consumption amount this factor considering the p -value=0.172, 0.098, 0.147, 0.184, 0.173, 0.187, 0.053 separately, and are greater than 0.05, similar to the presentation shown in gender. Besides, samples with different education levels show significant differences in scores on the seven dimensions, as $p=0.039$ in the cognition dimension and $p<0.001$ in the other six dimensions. After multiple comparisons (see Appendix F), people with senior high school/technical secondary school backgrounds scored significantly lower than those with junior and undergraduate college backgrounds in the cognition dimension. Nevertheless, in the lack of planning dimension, senior high school/ technical secondary school or below scored lower than junior college, and undergraduate college or above scored higher than senior high school/ technical secondary school. Accordingly, in the rest of the dimensions, senior high school/ technical secondary school scored relatively lower than junior college or above. Consequently, these comparisons overall reflect a trend that people with higher degrees always buy things more impulsively and are inclined to encounter a post-purchase regret than those with lower degrees, and there is a clear demarcation point between senior high school and junior college (Dunnett, 1955).

4.4 Correlational Analysis

A Pearson correlation coefficient was computed to assess the linear relationship between every two dimensions. By calculation, there is a strong positive correlation between every two dimensions in the scale, as the Pearson coefficients are greater than 0.6. These correlations are significantly proved by evidently passing the $p=0.01$ borderline, as shown in Appendix G (Cohen, 2013).

4.5 Linear Regression

Under the hypothesis of this study to investigate how impulse purchase tendency affects the post-purchase regret level, simple linear regression was used to test alongside the three dimensions of the impulse purchase tendency scale (i.e. cognition, lack of planning, and hedonism) as the predictors and post-purchase regret level as the dependent variable. Table 4 concludes the results of this simple linear regression, which demonstrates that these three predictors account for 78.7% of the variation in post-purchase consumer regret ($R^2=0.787$), referring to the well-fitted regression model overall. There is no multicollinearity between the three predictors as three VIF values are all lower than 5, and the regression equation is significant ($F=389.694$, $p<.001$), which means there is at least one predictor can significantly influence the dependent variable post-purchase regret level. On account of the values of β and p ($\beta=0.113, 0.398, 0.375>0$ respectively, $p<0.001$ for all three), cognition, lack of planning, and hedonism dimension all can significantly and positively affect post-purchase regret level (Chatterjee & Hadi, 2015). Subsequently, the following regression equation is obtained between the variables:

Post-purchase regret level= $0.451+0.113*\text{cognition}+0.398*\text{lack of planning}+0.375*\text{hedonism}$

Table 4. Results summary of linear regression

Model	Unstandardised Coefficients		Standardised Coefficients	t	p	VIF
	B	Std. Error	Beta			
(Constant)	0.451	0.104		4.341	<.001	
Cognition	0.113	0.032	0.131	3.556	<.001	2.007
Lack of planning	0.398	0.038	0.439	10.503	<.001	2.59
Hedonism	0.375	0.037	0.408	10.076	<.001	2.434
	R^2			0.787		
	F			389.694		
	p			<.001		

Dependent variable: post-purchase regret level

Note: VIF=variance inflated factor

5. Discussion

This study has offered a series of insights into the research in impulse purchase and post-purchase consumer regret and has bridged the research gap found before. The results derived from data analysis correctly support the research hypothesis proposed in this study, which is that impulse purchase tendency is positively correlated with the level of post-purchase regret for Chinese consumers. This indicates that Chinese consumers with higher impulse purchase tendencies always experience more significant post-purchase regret and vice versa. The finding is in line with a large number of similar studies done before in other countries (Kumar et al., 2020; Saleh, 2012; Secapramana et al., 2021). Based on the simple linear regression model suggested above, impulse purchase tendency, mainly due to a lack of planning and hedonism dimensions other than the cognition dimension, can prominently influence the level of post-purchase regret.

Surprisingly, the ANOVA and T tests provided some findings that were beyond expectations. First, gender differences do not exist in each dimension of impulse purchase tendency and post-purchase regret among Chinese consumers. According to prior studies by Tifferet & Herstein (2012) and Guha (2023), in Israel and India, women have significantly higher impulse purchase tendencies than men, whereas this study rejects such findings. The reason inside can originate from gender consumption equality, based on the Global Gender Gap Index (GGGI) Economics score 2024; China has a higher GGGI Economics score than the other two countries, which means gender differences in consumption are less in China. Hence, the fact that China has no significant gender difference in impulse purchase tendency is reasonable. In addition, insignificant gender differences in post-purchase regret levels are a new finding that has bridged the gap in this particular question. Secondly, there is an apparent boundary for the difference between impulse purchase and post-purchase regret. Particularly, Chinese consumers over 18 years of age have a higher impulse purchase tendency and greater post-purchase regret than

those under 18 years of age. It is common to think that people of older age have higher cognitive ability and more buying experience; hence, they tend to make rational decisions like planned buying. However, such thoughts are too reckless to ignore cultural influence. Compared with Western culture, Chinese parents always control their minor children consistently (Zhai et al., 2023). Individuals who are under 18 years old are often at school all day, so they have less opportunity to contact with purchases, which causes less impulse purchase tendency. As China is experiencing a period of fast social and economic transition, people's lives pace is accelerated. A lot of Chinese adults are stressed out since they require the multiple pressures of career and family (Peng & Ren, 2024). They often need to buy things impulsively so as to improve their instant emotion when dealing with stress. In addition, online shopping mode is quite popular in China; online sales promotional activities like Double Eleven and 618 Shopping Festival stimulate consumers, especially adults, because it is difficult for minors to access the Internet and to buy impulsively through promotion means, such as discounts. Moreover, as a representative of collectivist countries, China attaches more importance to social norms than individualistic countries. Others' comments allow such collectivist consumers to always have higher satisfaction by reducing decision uncertainty and fitting to self-concept (Lee & Kacen, 2008). Thus, Chinese consumers have a barrier of 18 years old in impulse purchase tendency and post-purchase regret. In terms of average monthly consumption amount as a demographic factor, there is no significant difference between average monthly consumption amount and impulse purchase tendency, average monthly consumption amount and post-purchase regret, respectively. This finding contradicts conclusions drawn by Saleh (2012) and Desai (2020). As China becomes the largest e-commerce market (Buchholz, 2025), sales promotion has become frequent, which leads Chinese consumers to adapt. Impulse purchases have been a part of their life; hence, the relationship between average monthly consumption amount and impulse purchase tendency has been diluted. Besides, a loose sales return policy, such as a 7-day unconditional return, decreases purchase risk perceived by consumers and, therefore, makes post-purchase regret comparatively insignificant (Rokonuzzaman et al., 2021). Lastly, for the education level, it also subverts previous understanding. Previously, researchers believed that people with higher education levels would evaluate the necessity of buying to make a more cautious purchase decision rather than impulse purchase (Desai, 2020). However, Chinese consumers who participated in this study showed an unbelievable result: Consumers with higher educational backgrounds are more likely to buy impulsively and experience post-purchase regret. Chinese niche environment, psychological theory, and neuroscience offer their various yet consistent justifications. Highly educated people represent higher socioeconomic status; in China, such a highly collectivist country, these people are going to buy luxury goods and new products to emphasise their status, whereas, once the goods they buy cannot express their status, these people are more likely to experience post-purchase regret. Additionally, the overconfidence effect gives the justification that highly educated consumers always over-assess their own judgments, leading to faster decisions than deep analysis (Moore & Schatz, 2017). In the case of consumption, such overconfidence will transform into erroneous judgment, causing impulse purchases. These highly educated people often actively seek product information to make a purchase. However, too much information can trigger decision fatigue, enabling impulse purchases and resulting in post-purchase regret. Another explanation is the booming night economy. People with higher education always work for a longer time in order to obtain higher salaries, which leads them to buy at nighttime during workdays. However, at night, the limbic system that is responsible for emotion regulation will be more active, and the frontal lobe related to decision-making is weakened, so people tend to make emotional decisions at night rather than rational ones (Tubbs et al., 2022).

6. Conclusion

The sample consideration, which depicts the general situation among Chinese consumers, including various individuals with different profiles, reflects the undiscovered and unexpected position of China as a unique economy compared with other countries. This study scrutinises the relationship between impulse purchase tendency and post-purchase regret. It dissects how demographic factors (i.e. gender, age group, average monthly consumption amount, and education level) affect impulse purchase tendency and post-purchase regret. In addition, this study truly fills the gap in similar research in China and brings meaningful insights. However, certain unavoidable limitations and future directions for research should also be considered. First and foremost, though this study includes samples from various demographic backgrounds, the sample distribution is uneven, which is also a drawback of convenience sampling. For example, most (71%) of the samples are concentrated in age

between 19 and 40 years old, and the distribution of other age groups is relatively small. Hence, future research should make sample distribution as average as possible using an appropriate sampling method like systematic sampling. Secondly, this study uses only one research method, a questionnaire, which is composed of multiple-choice questions and leads participants to respond without detail and deep communication. The scales used in this study are translated from English, so lost in translation is hard to avoid even though this is checked by four people with fluent English and Chinese. These give further directions for research: first, a study that combines questionnaire and interview can be conducted to investigate not only such quantitative findings but also qualitative insights, such as reasons why regret after purchase among Chinese consumers; second, a study that aims to develop a scale in Chinese can be conducted to better test Chinese consumers' impulse purchase tendency and post-purchase regret. Besides, there is a little deficiency in the reliability test. For the cognition dimension, Cronbach's alpha coefficient is below 0.7, and the reason for this might be that there are only two questions in this dimension. Although it is acceptable for a few standards, it might be addressed by adding some valuable questions to increase overall consistency further. From this study, many unprecedented situations are found in China, which indicates that such a country is worthy of further investigation into the topics of impulse purchases and post-purchase regret.

Appendix A. Translated questionnaire

Dear participants, hello! Thank you for participating in this questionnaire on the relationship between impulse purchase tendency and post-purchase consumer regret. The purpose of this questionnaire is to explore the relationship between impulsive purchasing behaviours and regrets after purchasing. Please choose the answer that best suits you according to your true feelings. The questionnaire is completed anonymously, and your responses will be kept strictly confidential and used for academic research purposes only. Your participation is entirely voluntary, and you can opt out at any time without any consequences. If you have any questions or need further information, please feel free to contact us. Thanks for your support and cooperation!

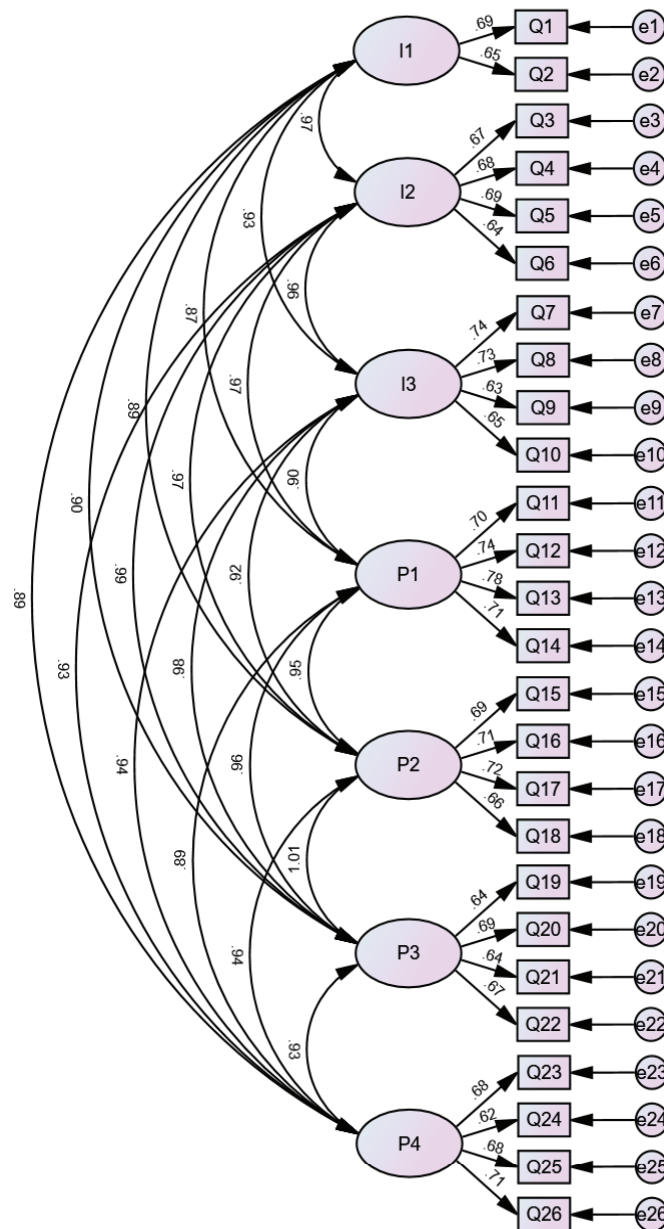
Table A Translated Questionnaire

Scale	Dimensions	Items	Options
/	Demographic information	I have read and understood the above content, and I agree to participate in this study and fill in the questionnaire according to my real thoughts.	Yes
			No
		Gender	Male
			Female
		Age group	<14 years
			14-18 years
			19-30 years
			31-40 years
			41-50 years
			>50 years
		Average monthly consumption amount	<RMB 1,000
			RMB 1,000-3,000
			RMB 3,000-5,000
			>RMB 5,000
		Education level	Junior high school or below
			Senior high school/technical secondary school
			Junior college
			Undergraduate college
			Master degree or above

Scale	Dimensions	Items	Options
Impulse purchase tendency scale	Cognition	I immediately buy a product / service if I believe it is useful.	5-point Likert scale from 1 to 5 ("1" is strongly disagree and "5" is strongly agree)
		If I believe I need to use it, I can buy a product / service immediately.	
	Lack of planning	I purchase more products / services on spot than I previously planned.	
		I buy things without any previous intention to buy it that day.	
		I buy things I never thought about at all before shopping.	
		Sales people make me buy a product / service I have not thought about, before.	
	Hedonism	It makes me happy to shop unplanned.	
		I buy a product / service to lift my mood that moment.	
		It is fun to buy things spontaneously.	
		I buy things according to how I feel at the moment.	
Post-purchase consumer regret scale	Regret due to fore-gone alternatives	I should have chosen something else than the one I bought.	
		I regret the product choice that I made.	
		I now realise how much better my other choices were.	
		If I were to go back in time, I would choose something different to buy.	
	Regret due to a change in significance	I regret getting the product because it was not as important to me as I thought it would be.	
		I wish I hadn't bought the product because it is now useless to me.	
		I regret my purchase because the product never served its purpose.	
		I regret my purchase because I did not need the product.	
	Regret due to under-consideration	With more information, I feel that I could have made a better decision.	
		I feel that I did not put enough consideration into buying the product.	
		With more effort, I feel that I could have made a better decision.	
		I regret not putting enough thought into my decision.	
	Regret due to over-consideration	I expended too much effort in making my decision.	
		I wasted too much time in making my decision.	
		I think I put too much thought in the buying process.	
		I feel that too much time was invested in getting this product.	

Appendix B. Path diagram of confirmatory factor analysis

Figure B Path Diagram of Confirmatory Factor Analysis



Note: I1=cognition, I2=lack of planning, I3=hedonism, P1=foregone alternatives, P2=change in significance, P3=under-consideration, P4=over-consideration.

Appendix C. Convergent validity analysis

Table C Convergent Validity Analysis

Scale	Dimension	Path relationship	Estimate	AVE	CR
Impulse purchase tendency	Cognition (I1)	Q1 <--- I1	0.692	0.452	0.622
		Q2 <--- I1	0.652		
	Lack of planning (I2)	Q3 <--- I2	0.669	0.448	0.764
		Q4 <--- I2	0.676		
		Q5 <--- I2	0.69		
		Q6 <--- I2	0.642		

Scale	Dimension	Path relationship			Estimate	AVE	CR
Impulse purchase tendency	Hedonism (I3)	Q7	<---	I3	0.736	0.473	0.781
		Q8	<---	I3	0.735		
		Q9	<---	I3	0.626		
		Q10	<---	I3	0.648		
		Q11	<---	P1	0.705		
Post-purchase consumer regret	Foregone alternatives (P1)	Q12	<---	P1	0.741	0.538	0.823
		Q13	<---	P1	0.779		
		Q14	<---	P1	0.707		
		Q15	<---	P2	0.687		
	Change in significance (P2)	Q16	<---	P2	0.711	0.483	0.788
		Q17	<---	P2	0.716		
		Q18	<---	P2	0.665		
		Q19	<---	P3	0.644		
	Under-consideration (P3)	Q20	<---	P3	0.691	0.438	0.756
		Q21	<---	P3	0.644		
		Q22	<---	P3	0.667		
		Q23	<---	P4	0.678		
	Over-consideration (P4)	Q24	<---	P4	0.618	0.452	0.767
		Q25	<---	P4	0.681		
		Q26	<---	P4	0.711		

Note: AVE=average variance extracted, CR=composite reliability.

Appendix D. Discriminant validity analysis

Table D Discriminant Validity Analysis

Number	Model	X ²	df	X ² /df	NFI	CFI	RMSEA	Model comparison	ΔX^2	Δdf
1	Original model	280.337	278	1.008	0.934	0.999	0.005			
2	Six-factors model	306.696	284	1.08	0.928	0.994	0.019	2 vs 1	26.359***	6
3	Five-factors model 1	309.894	289	1.072	0.928	0.995	0.015	3 vs 1	29.557**	11
4	Five-factors model 2	312.252	289	1.08	0.927	0.994	0.016	4 vs 1	31.915**	11
5	Four-factors model 1	314.027	293	1.072	0.927	0.995	0.015	5 vs 1	33.69**	15
6	Four-factors model 2	317.142	293	1.082	0.926	0.994	0.016	6 vs 1	36.805**	15
7	Three-factors model 1	321.966	296	1.088	0.925	0.993	0.017	7 vs 1	41.629**	18
8	Three-factors model 2	318.978	296	1.078	0.925	0.994	0.016	8 vs 1	38.641**	18
9	Two-factors model 1	322.415	298	1.082	0.925	0.994	0.016	9 vs 1	42.078**	20
10	Two-factors model 2	330.28	298	1.108	0.923	0.992	0.018	10 vs 1	49.943***	20
11	One-factor model	333.505	299	1.115	0.922	0.991	0.019	11 vs 1	53.168***	21

Note: X^2 =chi-square, df=degree of freedom, NFI=normed fit index, CFI=comparative fit index, RMSEA=root mean square error of approximation, ** $p \leq 0.01$, *** $p \leq 0.001$

Six-factors model: I1, I2, I3+P1, P2, P3, P4

Five-factors model 1: I1, I2+I3+P1, P2, P3, P4

Five-factors model 2: I1, I2, I3+P1+P2, P3, P4

Four-factors model 1: I1+I2+I3+P1, P2, P3, P4

Four-factors model 2: I1, I2+I3+P1+P2, P3, P4

Three-factors model 1: I1+I2+I3+P1+P2, P3, P4

Three-factors model 2: I1, I2+I3+P1+P2+P3, P4

Two-factors model 1: I1+I2+I3+P1+P2+P3, P4

Two-factors model 2: I1, I2+I3+P1+P2+P3+P4

One-factor model: I1+I2+I3+P1+P2+P3+P4

Appendix E. Multiple comparisons between different age groups

Table E Multiple Comparisons Between Different Age Groups

Scale	Dimension	Age group	Mean	Std. deviation	F	p	Multiple comparisons
Impulse purchase tendency scale	Cognition	<14 years	3.25	1.21	3.46	0.005	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.48	1.14			
		19-30 years	3.88	0.83			
		31-40 years	4.01	0.81			
		41-50 years	4.01	0.89			
		>50 years	4.23	0.44			
	Lack of planning	<14 years	3.2	1.48	4.997	<.001	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.27	1.09			
		19-30 years	3.82	0.78			
		31-40 years	3.99	0.75			
		41-50 years	3.82	0.75			
		>50 years	4	0.35			
Post-purchase consumer regret scale	Hedonism	<14 years	3.1	1.36	3.462	0.005	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.68	1.06			
		19-30 years	4.02	0.74			
		31-40 years	4.01	0.78			
		41-50 years	3.96	0.86			
		>50 years	4.25	0.46			
	Foregone alternatives	<14 years	2.88	1.4	6.5	<.001	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.34	1.16			
		19-30 years	3.86	0.85			
		31-40 years	4.01	0.76			
		41-50 years	4.01	0.9			
		>50 years	4.35	0.4			

Scale	Dimension	Age group	Mean	Std. deviation	F	p	Multiple comparisons
Post-purchase consumer regret scale	Change in significance	<14 years	3.15	1.24	6.16	<.001	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.33	1.13			
		19-30 years	3.97	0.76			
		31-40 years	4.07	0.75			
		41-50 years	4	0.91			
		>50 years	4.19	0.43			
	Under-consideration	<14 years	3.03	0.98	6.368	<.001	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.32	0.98			
		19-30 years	3.96	0.79			
		31-40 years	4	0.71			
		41-50 years	3.89	0.9			
		>50 years	3.96	0.47			
	Over-consideration	<14 years	2.93	1.15	5.104	<.001	1<3, 1<4, 1<5, 1<6, 2<3, 2<4, 2<5, 2<6
		14-18 years	3.55	0.99			
		19-30 years	3.97	0.75			
		31-40 years	4	0.71			
		41-50 years	3.92	0.96			
		>50 years	4.21	0.41			

Note: 1 is <14 years, 2 is 14-18 years, 3 is 19-30 years, 4 is 31-40 years, 5 is 41-50 years, 6 is >50 years.

Appendix F. Multiple comparisons between different education levels

Table F Multiple Comparisons Between Different Education Levels

Scale	Dimension	Education level	Mean	Std. Deviation	F	p	Multiple comparisons
Impulse purchase tendency scale	Cognition	Junior high school or below	3.69	1.23	2.558	0.039	2<3, 2<4
		Senior high school/technical secondary school	3.62	1.11			
		Junior college	4.02	0.71			
		Undergraduate college	3.97	0.79			
		Master degree or above	3.90	0.85			
		Junior high school or below	3.58	0.97	6.219	<.001	1<3, 2<3, 2<4, 2<5
	Lack of planning	Senior high school/technical secondary school	3.40	1.10			
		Junior college	4.01	0.66			
		Undergraduate college	3.90	0.75			
		Master degree or above	3.83	0.59			
		Junior high school or below	3.88	1.14			
	Hedonism	Senior high school/technical secondary school	3.54	1.13	5.638	<.001	2<3, 2<4, 2<5
		Junior college	4.09	0.57			
		Undergraduate college	4.06	0.72			
		Master degree or above	4.11	0.67			

Scale	Dimension	Education level	Mean	Std. Deviation	F	p	Multiple comparisons
Post-purchase consumer regret scale	Foregone alternatives	Junior high school or below	3.75	0.90	7.447	<.001	2<3, 2<4, 2<5
		Senior high school/technical secondary school	3.38	1.23			
		Junior college	4.13	0.70			
		Undergraduate college	3.93	0.76			
		Master degree or above	3.95	0.76			
	Change in significance	Junior high school or below	3.83	0.83	5.933	<.001	2<3, 2<4, 2<5
		Senior high school/technical secondary school	3.49	1.19			
		Junior college	4.07	0.71			
		Undergraduate college	4.04	0.70			
		Master degree or above	4.06	0.70			
	Under-consideration	Junior high school or below	3.75	0.80	8.392	<.001	2<3, 2<4, 2<5
		Senior high school/technical secondary school	3.39	1.07			
		Junior college	4.04	0.64			
		Undergraduate college	3.98	0.74			
		Master degree or above	4.12	0.63			
	Over-consideration	Junior high school or below	3.82	0.96	6.062	<.001	2<3, 2<4, 2<5
		Senior high school/technical secondary school	3.49	1.13			
		Junior college	4.03	0.65			
		Undergraduate college	4.03	0.66			
		Master degree or above	4.00	0.69			

Note: 1 is Junior high school or below, 2 is Senior high school/technical secondary school, 3 is Junior college, 4 is Undergraduate college, 5 is Master degree or above

Appendix G. Pearson correlation analysis between dimensions

Table G Pearson Correlation Analysis Between Dimensions

Dimension	Correlation	Cognition	Lack of planning	Hedonism	Foregone alternatives	Change in significance	Under-consideration	Over-consideration
Cognition	Pearson Correlation	1						
Lack of planning	Pearson Correlation	.673**	1					
Hedonism	Pearson Correlation	.647**	.741**	1				
Foregone alternatives	Pearson Correlation	.619**	.766**	.722**	1			
Change in significance	Pearson Correlation	.626**	.753**	.730**	.766**	1		
Under-consideration	Pearson Correlation	.623**	.751**	.755**	.760**	.783**	1	
Over-consideration	Pearson Correlation	.610**	.706**	.731**	.703**	.731**	.708**	1

** . Correlation is significant at the 0.01 level (2-tailed).

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Reference

- [1] Amos, C., Holmes, G.R. and Keneson, W.C. (2014) 'A meta-analysis of consumer impulse buying', *Journal of Retailing and Consumer Services*, 21(2), pp. 86–97. doi:10.1016/j.jretconser.2013.11.004.
- [2] Babin, B.J., Darden, W.R. and Griffin, M. (1994) 'Work and/or fun: Measuring hedonic and utilitarian shopping value', *Journal of Consumer Research*, 20(4), p. 644. doi:10.1086/209376.
- [3] Boruah, A. and Goswami, S. (2021) 'Post Purchase Consumer Regret-A Qualitative Study in case of Online Purchases of White Goods, Brown Goods and Consumer Electronics', *Turkish Online Journal of Qualitative Inquiry*, 12(3), pp. 2763–2771.
- [4] Buchholz, K. (2025) Chart: China leads the global e-commerce market | statista, statista. Available at: <https://www.statista.com/chart/32159/revenues-in-the-e-commerce-segment-by-country/> (Accessed: 27 March 2025).
- [5] Byrne, B.M. (2001) *Structural equation modeling with Amos basic concepts, applications, and programming*. Mahwah: Lawrence Erlbaum Associates.
- [6] Carmines, E. and Zeller, R. (1979) Reliability and validity assessment [Preprint]. doi:10.4135/9781412985642.
- [7] Chatterjee, S. and Hadi, A.S. (2015) *Regression analysis by example*. 5th edn. Somerset: Wiley.
- [8] Chen, M., Chen, C.C. and Sheldon, O.J. (2016) 'Relaxing moral reasoning to win: How organizational identification relates to unethical pro-organizational behavior.', *Journal of Applied Psychology*, 101(8), pp. 1082–1096. doi:10.1037/apl0000111.
- [9] Cohen, J. (2013) *Statistical Power Analysis for the behavioral sciences* [Preprint]. doi:10.4324/9780203771587.
- [10] Connolly, T. and Zeelenberg, M. (2002) 'Regret in decision making', *Current Directions in Psychological Science*, 11(6), pp. 212–216. doi:10.1111/1467-8721.00203.
- [11] Cumming, G. (2012) *Understanding the new statistics: Effect sizes, confidence intervals, and meta-analysis*. New York: Routledge, Taylor & Francis Group.
- [12] Desai, A. (2020) 'Impulse buying – demographic aspect', *Journal of Management Research and Analysis*, 5(3), pp. 236–238. doi:10.18231/2394-2770.2018.0037.
- [13] Dunnett, C.W. (1955) 'A multiple comparison procedure for comparing several treatments with a control', *Journal of the American Statistical Association*, 50(272), pp. 1096–1121. doi:10.1080/01621459.1955.10501294.
- [14] Fornell, C. and Larcker, D.F. (1981) 'Structural equation models with unobservable variables and measurement error: Algebra and statistics', *Journal of Marketing Research*, 18(3), pp. 382–388. doi:10.1177/002224378101800313.
- [15] Gao, X., Jiang, Y. and Zhang, D. (2022) 'An exploration of the relationship between consumption plans and impulse buying through the lens of framing effect', *Advances in Social Science, Education and Humanities Research*, pp. 3340–3355. doi:10.2991/978-2-494069-31-2_393.
- [16] Gawior, B., Polasik, M. and del Olmo, J.L. (2022) 'Credit card use, hedonic motivations, and impulse buying behavior in fast fashion physical stores during COVID-19: The sustainability paradox', *Sustainability*, 14(7), p. 4133. doi:10.3390/su14074133.
- [17] Gender equality by country 2025. Available at: <https://worldpopulationreview.com/country-rankings/gender-equality-by-country> (Accessed: 26 March 2025).
- [18] Gilovich, T. and Medvec, V.H. (1994) 'The temporal pattern to the experience of regret.', *Journal of Personality and Social Psychology*, 67(3), pp. 357–365. doi:10.1037//0022-3514.67.3.357.
- [19] Guha, S. (2023) 'Relationship between gender differences and impulse buying behaviour: A case of college-going students in Kolkata', *International Journal of Development Research*, 13(6), pp. 62962–62966. doi:10.37118/

ijdr.26851.06.2023.

- [20] Herabadi, A.G., Verplanken, B. and Van Knippenberg, A. (2009) 'Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations', *Asian Journal of Social Psychology*, 12(1), pp. 20–31. doi:10.1111/j.1467-839x.2008.01266.x.
- [21] Huang, Y. and Suo, L. (2021) 'Factors affecting Chinese consumers' impulse buying decision of live streaming e-commerce', *Asian Social Science*, 17(5), p. 16. doi:10.5539/ass.v17n5p16.
- [22] Kahn, B.E. and Wilson, A.V. (2025) 'More than 50 years of consumer behavior research: What will the future look like?', *Journal of Business Research*, 186, p. 115027. doi:10.1016/j.jbusres.2024.115027.
- [23] Kahneman, D. (2013) *Thinking, fast and slow*. New York: Farrar, Strauss and Giroux.
- [24] Khan, N. et al. (2015) 'Impulse buying behaviour of generation Y in fashion retail', *International Journal of Business and Management*, 11(1), p. 144. doi:10.5539/ijbm.v11n1p144.
- [25] Kumar, A. et al. (2020) 'Impulse buying and POST-PURCHASE regret: A study of shopping behaviour for the purchase of grocery products', *INTERNATIONAL JOURNAL OF MANAGEMENT*, 11(12). doi:10.34218/ijm.11.12.2020.057.
- [26] Lee, J.A. and Kacen, J.J. (2008) 'Cultural influences on consumer satisfaction with impulse and planned purchase decisions', *Journal of Business Research*, 61(3), pp. 265–272. doi:10.1016/j.jbusres.2007.06.006.
- [27] Lee, S. and Song, E. (2011) 'Influences of time perspective on impulsive purchase tendency', *Journal of Global Scholars of Marketing Science*, 21(4), pp. 210–217. doi:10.1080/21639159.2011.9726524.
- [28] Lee, S.H. and Cotte, J. (2009) 'Post-Purchase Consumer Regret: Conceptualization and Development of the Ppcr Scale', *Advances in Consumer Research*, 36, pp. 456–462.
- [29] Lins, S. et al. (2013) 'To think, to feel, to have: The effects of need for cognition, hedonism and materialism on impulse buying tendencies in adolescents', *Journal of European Psychology Students*, 4(2), p. 25. doi:10.5334/jeps.bh.
- [30] Lo, L.Y.-S., Lin, S.-W. and Hsu, L.-Y. (2016) 'Motivation for online impulse buying: A Two-factor theory perspective', *International Journal of Information Management*, 36(5), pp. 759–772. doi:10.1016/j.ijinfomgt.2016.04.012.
- [31] MERDİN UYGUR, E. (2018) 'Consumer impulsive buying tendency scale development using mixed methodology', *Beykoz Akademi Dergisi*, 6(2), pp. 125–141. doi:10.14514/byk.m.26515393.2018.6/2.125-141.
- [32] Moore, D.A. and Schatz, D. (2017) 'The three faces of overconfidence', *Social and Personality Psychology Compass*, 11(8). doi:10.1111/spc3.12331.
- [33] Nunnally, J.C. (1978) *Psychometric theory*. 2nd Edition. New York: McGraw-Hill.
- [34] Nyrhinen, J. et al. (2024) 'Online antecedents for young consumers' impulse buying behavior', *Computers in Human Behavior*, 153, p. 108129. doi:10.1016/j.chb.2023.108129.
- [35] Overby, J.W. and Lee, E.-J. (2006) 'The effects of utilitarian and hedonic online shopping value on consumer preference and intentions', *Journal of Business Research*, 59(10–11), pp. 1160–1166. doi:10.1016/j.jbusres.2006.03.008.
- [36] Peng, J. and Ren, H. (2024) 'The Association of Physical Activity and leisure-time sedentary behavior with perceived stress among Chinese adults: A cross-sectional study based on the Chinese Health and Nutrition Survey Data', *Preventive Medicine Reports*, 45, p. 102829. doi:10.1016/j.pmedr.2024.102829.
- [37] Piron, F. (1991) 'Defining Impulse Purchasing.', *Advances in Consumer Research*, 18(1), pp. 509–514.
- [38] Rachman, A., Efawati, Y. and Anmoel, J.T. (2024) 'Understanding the role of Fomo (fear of missing out) in impulse purchase for smes', *Riset*, 6(2), pp. 117–134. doi:10.37641/riset.v6i2.2109.
- [39] Redine, A. et al. (2022) 'Impulse buying: A systematic literature review and future research directions', *International Journal of Consumer Studies*, 47(1), pp. 3–41. doi:10.1111/ijcs.12862.
- [40] Roese, N.J. (1997) 'Counterfactual thinking.', *Psychological Bulletin*, 121(1), pp. 133–148. doi:10.1037//0033-2909.121.1.133.
- [41] Roese, N.J. and Olson, J.M. (1995) 'Outcome controllability and counterfactual thinking', *Personality and Social Psychology Bulletin*, 21(6), pp. 620–628. doi:10.1177/0146167295216008.
- [42] Rokonzaman, M., Iyer, P. and Harun, A. (2021) 'Return policy, no joke: An investigation into the impact of a retailer's

- return policy on consumers' decision making', *Journal of Retailing and Consumer Services*, 59, p. 102346. doi:10.1016/j.jretconser.2020.102346.
- [43] Rook, D.W. (1987) 'The buying impulse', *Journal of Consumer Research*, 14(2), p. 189. doi:10.1086/209105.
- [44] Saleh, M.A. (2012a) 'An investigation of the relationship between unplanned buying and post-purchase Regret', *International Journal of Marketing Studies*, 4(4). doi:10.5539/ijms.v4n4p106.
- [45] Saleh, M.A. (2012b) 'An investigation of the relationship between unplanned buying and post-purchase Regret', *International Journal of Marketing Studies*, 4(4). doi:10.5539/ijms.v4n4p106.
- [46] Sampath, V.S. (2021) 'Caught in a cognitive trap? an examination of student heuristics and debiasing when analyzing an accounting restatement case study', *Journal of Forensic Accounting Research*, 6(1), pp. 360–388. doi:10.2308/jfar-2021-002.
- [47] Sarwar, M.A., Awang, Z. and Habib, M.D. (2019) 'Consumer purchase regret: A systematic review', *International Journal of Academic Research in Business and Social Sciences*, 9(9). doi:10.6007/ijarbss/v9-i9/6307.
- [48] Secapramana, L.V., Magdalena, G.J. and Yuwanto, L. (2021) 'Impulsive buying, post-purchase regret, and credit card', *Advances in Economics, Business and Management Research* [Preprint]. doi:10.2991/aebmr.k.210510.002.
- [49] Silver, D.H., Lavack, A.M. and Kropp, F. (2008) 'Impulse buying: The role of affect, social influence, and subjective wellbeing', *Journal of Consumer Marketing*, 25(1), pp. 23–33. doi:10.1108/07363760810845381.
- [50] Stern, H. (1962) 'The significance of impulse buying today', *Journal of Marketing*, 26(2), pp. 59–62. doi:10.1177/002224296202600212.
- [51] Sugden, R. (1985) 'Regret, recrimination and rationality', *Theory and Decision*, 19(1), pp. 77–99. doi:10.1007/bf00134355.
- [52] Talbert, B. (2017) 'Overthinking and other minds: The analysis paralysis', *Social Epistemology*, 31(6), pp. 545–556. doi:10.1080/02691728.2017.1346933.
- [53] Tifferet, S. and Herstein, R. (2012a) 'Gender differences in brand commitment, impulse buying, and hedonic consumption', *Journal of Product & Brand Management*, 21(3), pp. 176–182. doi:10.1108/10610421211228793.
- [54] Tifferet, S. and Herstein, R. (2012b) 'Gender differences in brand commitment, impulse buying, and hedonic consumption', *Journal of Product & Brand Management*, 21(3), pp. 176–182. doi:10.1108/10610421211228793.
- [55] Tinne, W.S. (2010) 'Impulse Purchasing: A Literature Overview', *ASA University Review*, 4(2), pp. 65–73.
- [56] Tubbs, A.S. et al. (2022) 'The mind after midnight: Nocturnal wakefulness, behavioral dysregulation, and psychopathology', *Frontiers in Network Physiology*, 1. doi:10.3389/fnetp.2021.830338.
- [57] Verplanken, B. and Herabadi, A. (2001) 'Individual differences in impulse buying tendency: Feeling and no thinking', *European Journal of Personality*, 15(1_suppl). doi:10.1002/per.423.
- [58] Zeelenberg, M. and Pieters, R. (1999) 'Comparing Service Delivery to What Might Have Been Behavioural Response to Regret and Disappointment', *Journal of Service Research*, 2(1), pp. 86–97. doi:10.1177/109467059921007.
- [59] Zeelenberg, M. and Pieters, R. (2006) 'Looking backward with an eye on the futurepropositions toward a theory of regret regulation', *Judgments Over TimeThe Interplay of Thoughts, Feelings, and Behaviors*, pp. 210–229. doi:10.1093/acprof:oso/9780195177664.003.0012.
- [60] Zeelenberg, M. and Pieters, R. (2007) 'A theory of regret regulation 1.0', *Journal of Consumer Psychology*, 17(1), pp. 3–18. doi:10.1207/s15327663jcp1701_3.
- [61] Zhai, S. et al. (2023) 'Maternal control and children's inhibitory control in China: The role of child exuberance and parenting contexts', *Journal of Experimental Child Psychology*, 229, p. 105626. doi:10.1016/j.jecp.2023.105626.
- [62] Zhang, J. (2024) Chinese social media: Trending platforms, China Gravy. Available at: <https://chinagravy.com/chinese-social-media-platforms/> (Accessed: 22 February 2025).