



Volume and Issues Obtainable at Center for Business Research and Consulting,
IBMAS, The Islamia University of Bahawalpur Pakistan

South Asian Review of Business and Administrative Studies

ISSN: 2710-5318; ISSN (E): 2710-5164

Volume 6, No.2, December 2024

Journal homepage: <https://journals.iub.edu.pk/index.php/sabas>

Investigation of the Dimensions and Measurement of Compensatory Consumption Behavior at Different Scales

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ARTICLE DETAILS

History

Revised format:

Nov 2024

Available Online:

Dec 2024

Keywords

Compensatory

Consumption

Behavior,

Symbolic, Hedonic,

Emotional

Restorative,

Resilience.

Symbolic,

Enhancement.

ABSTRACT

This paper uses a quantitative research method to explore the structural dimensions of compensatory consumption behavior. Based on the compensatory consumption theory and existing research results, the connotation and structure of compensatory consumption behavior are analyzed, and a measurement scale containing five dimensions is developed through exploratory and confirmatory factor analysis. The study shows that compensatory consumption behavior includes five dimensions: symbolic, enhancement, hedonic, emotional recovery, and resilience, with a total of 26 questions. The scale has been tested to have high reliability and validity, providing a powerful tool for evaluating compensatory consumption behavior. Although this study strives to be rigorous in its methodology, there are still some limitations. First, compensatory consumption behavior is diverse and complex. This study only covers some typical dimensions, and more potential dimensions can be further explored in the future. Second, although the sample selection is representative, it is limited by resources and social relationships. Future research can expand the sample source to enhance the universality of the conclusions. Finally, this study focuses on the measurement of compensatory consumption behavior. In the future, it can be combined with specific situations and individual differences of consumers to further explore its occurrence mechanism and market impact.



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DOI: <https://doi.org/10.52461/sabas.v6i2.3716>

Introduction

Over the last several years, my country's economy has had consistent growth, leading to an increase in both the consumption level and capacity of its citizens. This growth has been characterized by customized and diverse consumption patterns, as well as the quick development of new consumption formats. Based on statistics from the National Bureau of Statistics, the Engel coefficient has consistently decreased for eight years in a row, ensuring a life free from concerns

about basic necessities such as food and clothes. The ratio of consumption dedicated to fulfilling essential physiological demands is decreasing, while consumption for the sake of pleasure and personal growth is steadily rising. Consumers are increasingly seeking pleasure beyond the basic functionality of products, placing more significance on psychological and spiritual fulfillment. The rational person theory is no longer applicable to the intricate patterns of consumer behavior seen in contemporary society. Compensatory consumption demonstrates that consumers are not just seeking the practical benefits of things, but also place significance on their psychological worth. They see consuming as a substitute method and instrument to compensate for personal deficiencies and fulfill psychological desires. Conducting a thorough study on this topic may provide a more comprehensive understanding of current intricate consumer behaviors, provide valuable insights into consumer psychology, advance theoretical knowledge, and inform marketing strategies. Furthermore, ever since the onset of the COVID-19 pandemic in 2019, it has not only significantly affected the economy but also had a profound influence on individuals' psyche and spending patterns, leading to a regular occurrence of compensatory purchasing behaviors. According to surveys, around 90% of citizens impacted by the pandemic would participate in compensatory and retaliatory consumption, which includes purchasing clothing, and shoes, traveling, and watching movies (Ahlstrom et al., 2023). The occurrence of compensating consumption has grown in prevalence and has garnered the interest of several researchers, emerging as a prominent subject in the field of consumer behavior research. Current research primarily focuses on the study of compensatory consumption resulting from unique external cues within a particular environment. However, there is a lack of measurement and structural analysis of this behavior by researchers. This research utilizes the grounded theory technique to investigate the many aspects of compensatory consumption behavior, create and validate a measuring scale, and expand the potential for studying compensatory consumption behavior.

Literature Review

Definition of Compensatory Consumption Behavior

According to (Azevedo & Azevedo, 2023), the act of consuming goods or services to fulfill psychological demands, such as boosting self-esteem, is referred to as compensatory consumption behavior. Compensatory consumption is mostly a psychological consuming activity, as opposed to focusing on the functional value of things (Bi et al., 2023). For instance, persons who feel disregarded in society and have unmet belonging needs are more inclined to purchase high-end things that symbolize social status (Bunuel et al., 2023). According to the symbolic self-completion hypothesis, individuals tend to compensate for their weaknesses or limitations by engaging in behavior that represents their desired self-image. Products serve as an extension of one's self-concept, allowing people to communicate information about themselves and uphold their identity. Furthermore, scientists also consider compensatory consumption from the standpoint of self-concept threat, in addition to the viewpoint of psychological need deficit (Calcaterra et al., 2023). The term "self-concept" refers to a complex understanding of oneself, including knowledge about one's physical and mental attributes, as well as one's interpersonal connections (Chakraborty & Sadachar, 2023). It also involves assessing one's ideal self and comparing it to one's actual self. When people experience a discrepancy between their actual self and their desired self-due to certain stimuli, they will feel uneasy and then engage in the consumption of symbolic objects as a means of alleviating this discomfort. For instance, (Chowdhury & Swaminathan, 2023) discovered that having unfavorable thoughts about one's physical form leads to increased consumption of products or behaviors connected to appearance as a way to compensate. Indeed, several instances of dissatisfaction with demands may be attributed to the potential harm to one's self-concept. This occurs when people see a discrepancy between their desired self-image and their actual self, which in turn triggers their self-esteem, sense of belonging, and other psychological needs (Cruz-Rivera & Hafez, 2023). The danger to one's self-concept serves as a stimulant that drives customers to consistently fulfill their self-esteem, belonging, and other wants. Thus, the absence of needs and the endangerment of self-concept are interconnected, and the endangerment of self-concept might

motivate individuals to compensate more than the absence of psychological needs. It is the primary cause for stimulating compensatory eating. According to this study, compensatory consumption behavior occurs when consumers are informed that they lack certain qualities, causing a discrepancy between their actual and ideal selves (self-discrepancy). This discrepancy leads to psychological discomfort, which prompts consumers to compensate by buying or showcasing products in order to alleviate or eliminate this feeling of threat. The main features of this phenomenon are as follows: Its objective is to address self-discrepancy; consumption is used as a replacement mechanism (Dang & Bertrandias, 2023); The psychological benefit derived from consumption is highly regarded.

Classification of Compensatory Consumption Behavior

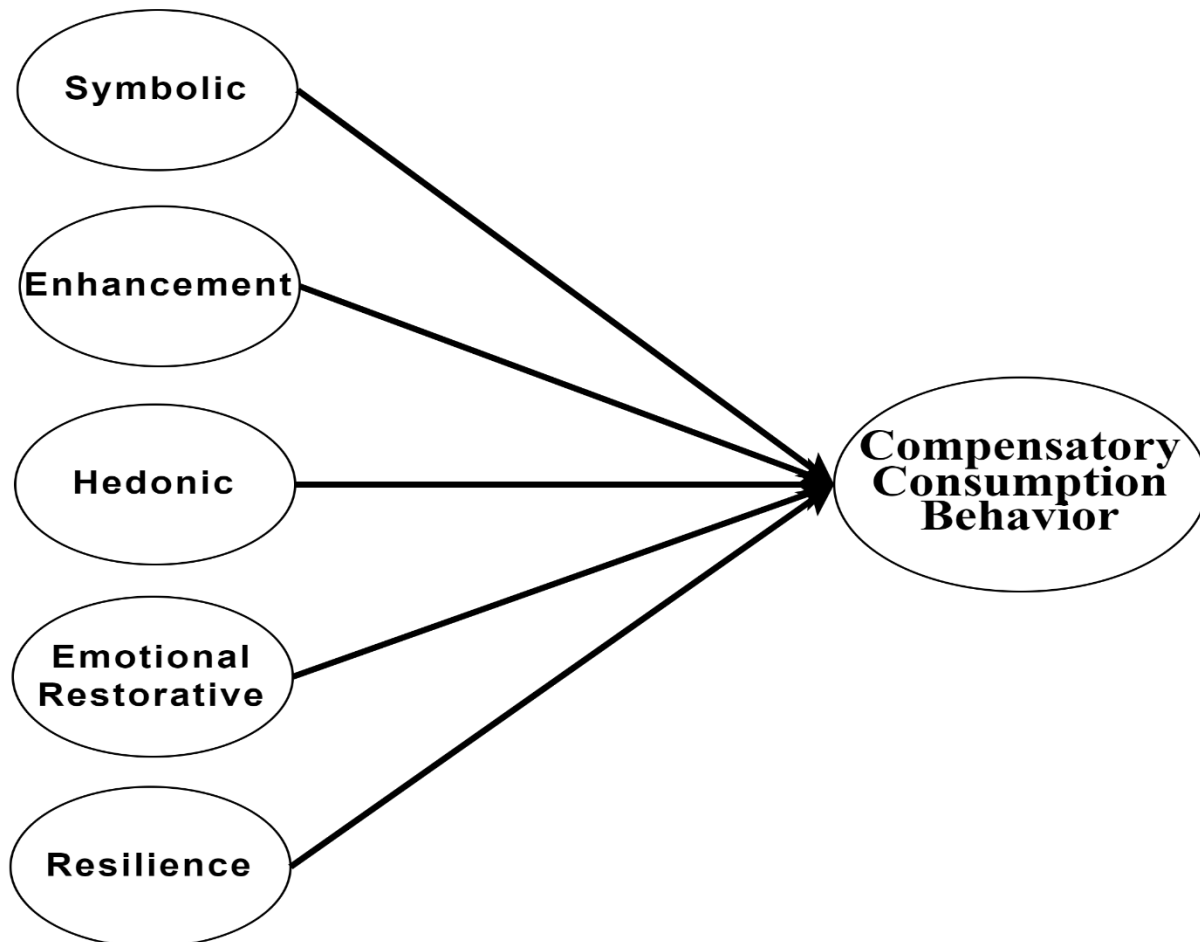
Compensatory consumption can be categorized based on different factors. Firstly, from a temporal perspective, it can be classified as reactive or proactive, depending on whether it is in response to past threats or to prevent future ones (Gong et al., 2023). Secondly, from the viewpoint of the source of the threat, compensatory consumption can be divided into three types: self-esteem threat, lack of control, and lack of belonging (Goodwin-Groen et al., 2023). Thirdly, it can be differentiated based on the degree of relevance between the product and the individual's self-concept, categorized as intra-domain (within the same domain) or extra-domain (outside the usual domain) compensation (Hao et al., 2023). Lastly, compensatory consumption can be observed in various forms such as retail therapy, compulsive shopping, impulse buying, hedonistic shopping, and conspicuous consumption. Compensatory consumption behavior has been categorized by scholars from many angles, providing a valuable examination of the intricate circumstances and limitations under which it happens. This classification aids in comprehending its meaning and scope. Nevertheless, do many forms of compensatory consuming practices exhibit shared traits? What are the defining attributes of these? Due to the lack of a universally accepted framework for categorizing compensatory consumption behavior and the reliance on experimentally created stressors in most research, there has been little advancement in identifying and measuring its common features. Further study is required to investigate the use of scientific approaches for exploring and quantifying compensatory consumption behavior.

Quantification of Compensatory Consumption Behavior

Methods of measurement conduct tests to create a sense of self-threat, and then assess the respondents' inclination towards compensating items as a measure of compensatory consumption. For instance, (Jin et al., 2023) conducted a study to measure the desire to consume chocolate beans as a representation of unhealthy compensatory consumption. They approached compensation as a research perspective to examine whether a particular consumption, under specific circumstances, has a compensatory impact. This was primarily done by assessing consumer motivation or psychological needs associated with compensatory consumption. For instance, when examining the acquisition of gaming items, compensation is assessed by quantifying the fulfillment of recognition and belonging demands (Khandeparkar et al., 2024). 3 Quantify the distinct categories of compensating consumption. For instance, (J. Kim et al., 2024) precisely categorized compensatory spending into conspicuous consumption and compulsive consumption for the purpose of measuring. 4 Compensatory consumption is evaluated using self-compiled goods, taking into account their meaning. As an illustration (J. Y. Kim et al., 2024), developed a set of three questions to assess the motivation for compensation, focusing on the idea of compensatory consumption as either "self-damage or threat" or "self-compensation through consumption". Similarly, (Kim & Chang, 2023) created a set of three questions to measure the extent of symbolic compensation. To summarize, there are several shortcomings in the assessment of compensatory consumption behavior: Embedded consumption mechanism is shown via product selection rather than direct measurement, making it difficult to determine which compensating characteristics buyers prioritize. Compensation is shown via psychological demands, such as self-esteem and a sense of belonging, as well as through certain types of compensatory expenditure, such as ostentatious consumerism.

The current analysis lacks a concise overview and rigorous measurement of the fundamental attributes of compensatory spending. The assessment of compensatory consumption under certain circumstances is highly focused and less generalizable. Furthermore, whereas prior research has generally held the belief that compensatory consumption has negative effects, contemporary academics have shown that compensatory consumption might also have favorable effects (Lee & Lalwani, 2024). However, this positive aspect has not been well examined in existing assessments. Hence, it is essential to investigate the structural aspects and measurement components of compensatory consuming behavior using a quantitative methodology.

Figure 1: Conceptual Framework



Source: Developed by author

Research methods

Data Collection and Sample Situation

Interview Data Collection and Sample

Scenario using the existing literature, an interview outline was created. Prior to the actual interview, two experts in consumer behavior and three graduate students were asked to hold focus group discussions in order to make adjustments to the template (F. Li et al., 2024). The interview questions mostly include, however are not limited to: Have you ever made a purchase without taking into account the practical usefulness of the item? Could you provide a concise overview of the circumstances throughout that period? Are you familiar with the concept of compensating consumption? What is your understanding of compensatory consumption? (M. Li et al., 2024) (Note: If you are unfamiliar with a phrase, please provide an explanation based on its meaning) Have you engaged in any recent instances of compensating consumption? Could you provide a concise overview of the purchasing process throughout that period? What specific characteristics of

this product appeal to you? What benefits may the acquisition of this product bring to you? What were your emotions upon purchasing this product? What do you believe to be the most significant distinction or characteristic between compensatory consumption and general consumption? What demographic do you believe is most inclined to engage in compensatory consumption behavior? This research performed in-depth questionnaire with 35 customers who had extensive online buying expertise and have lately participated in compensating consumption (Ma & Coelho, 2024). The participants in the interview consisted of a total of 10 undergraduate and graduate students, 15 workers from various companies, 5 instructors, 3 physicians, and 2 freelancers (Marcos et al., 2023). Among them, there were 15 men and 17 females, with ages ranging from 21 to 48 years old (Marder et al., 2024). The duration of the interview was limited to a range of 15 to 35 minutes. After gaining the interviewee's assent, the whole interview process was videotaped and more than 40,000 words of interview manuscripts were retrieved after sorting (Maylor et al., 2023).

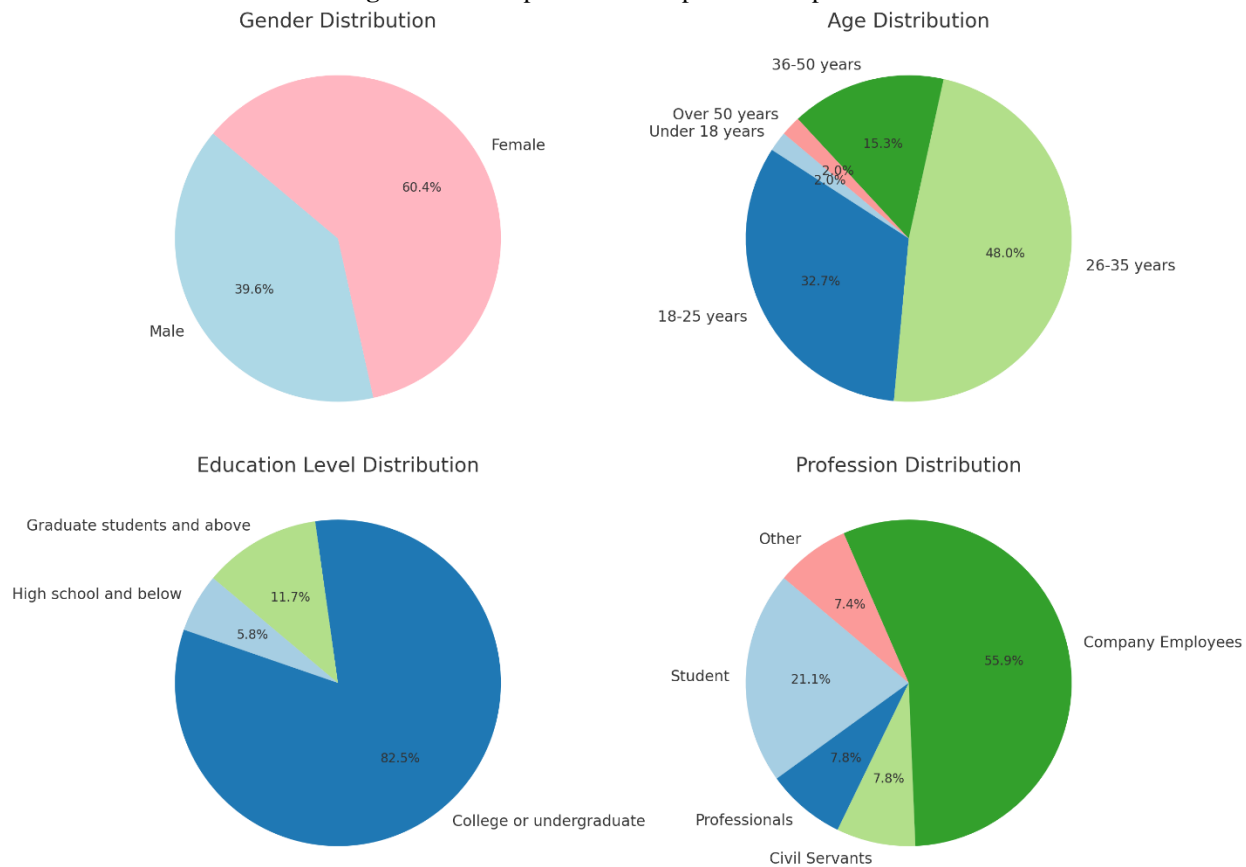
Collection of data the test and description of the sample circumstance

This research conducted an assessment of the primary measurement tool (Medeiros et al., 2023). A total of 273 questionnaires were gathered using a mix of online and offline approaches.

Table 1: Demographic Statistics

Category	describe	Numeric
Gender	Proportion of male participants	39.6%
	Proportion of female participants	60.4%
Age distribution	Under 18 years old	2%
	18-25 years old	33%
	26-35 years old	48.5%
	36-50 years old	15.5%
	Over 50 years old	2%
Education	High school and below	6%
	College or undergraduate	85%
	Graduate students and above	12%
Profession	student	21.5%
	Professionals (such as doctors, lawyers)	8%
	Civil servants	8%
	Company Employees	57%
	other	7.5%

Source: Developed by author

Figure 2: Descriptive statistics pie charts representation

Source: Developed by author

This demographic table 1 summarizes the gender, age distribution, educational background and occupation information of the respondents, providing basic data for analyzing the differences in compensatory consumption behavior among different populations.

Out of these, 252 questionnaires were considered legitimate, resulting in an efficiency rate of 83.40%. Regarding gender, males comprised 39.6% of the group while females comprised 60.4%. In terms of age distribution, individuals under 18 years old accounted for 2%, those aged 18 to 25 accounted for 33%, those aged 26 to 35 accounted for 48.5%, those aged 36 to 50 accounted for 15.5%, and those aged 50 and above accounted for 2%. In terms of education, 6% had a high school education or below, 85% had an undergraduate or junior college education, and 12% had a graduate or higher education. In terms of occupation, students accounted for 21.5%, professionals (such as doctors or lawyers) accounted for 8%, public officials accounted for 8%, company employees accounted for 57%, and others accounted for 7.5% as seen in figure 2.

Research Methods

This research primarily use grounded theory and statistical analytic techniques to investigate the structure of compensatory consumption behavior and then constructs a scale based on the findings. (1) Methods of Grounded Theory Grounded theory is a systematic approach that involves collecting, summarizing, analyzing, and comparing original data. It utilizes data coding techniques to extract ideas and categories related to specific events or situations. Through this process, theories are constructed and developed. Given the mostly exploratory nature of the current literature on compensating consumption behavior and the intricate nature of its production, it is suitable to use the grounded theory research approach to investigate its structural features. (2) Methods for Statistical Analysis The questionnaire data is assessed for reliability and validity using SPSS,

including factor analysis. The measuring scale is then examined, tested, and refined to achieve a high level of reliability and validity.

Results

Interview coding results and analysis

Open coding

Open coding is the first stage of grounded theory. The process involves iteratively decomposing and comparing a substantial volume of textual data. It then integrates the data in a novel manner by assigning ideas and codes, followed by giving them a code label that may effectively describe the relevant instance. The coding was conducted using the operational procedure outlined. Initially, the study team was split into two factions, each consisting of three people. Following the principle of natural emergence, the coding process involved coding sentence by sentence in a consecutive manner. Additionally, the primary codes from two groups were sorted and merged based on their similar or identical meanings, resulting in 77 initial concepts. Finally, by considering the attributes and meaning of each initial concept and combining it with the original sentence meaning, the concept was elevated to a category and given an abstract name. This process led to the formation of 22 initial categories. Instances of open coding.

Axial coding

Axial coding involves a thorough examination and consolidation of the initial categories and ideas identified during open coding. It aims to identify the primary logical relationships between these categories. Ultimately, a total of five primary categories were established: symbolic, enhancement, Emotional Restorative, hedonic, and stress Resilience.

Selective coding

The primary purpose of selective coding is to investigate the possible relationships between the key categories and to examine the core categories derived from these main categories. Through ongoing comparison study, the concept of "compensatory consumption" was identified as the central category, including five distinct dimensions: symbolic, enhancement, emotional restoration, hedonic, and stress resilience.

Theoretical Saturation Test

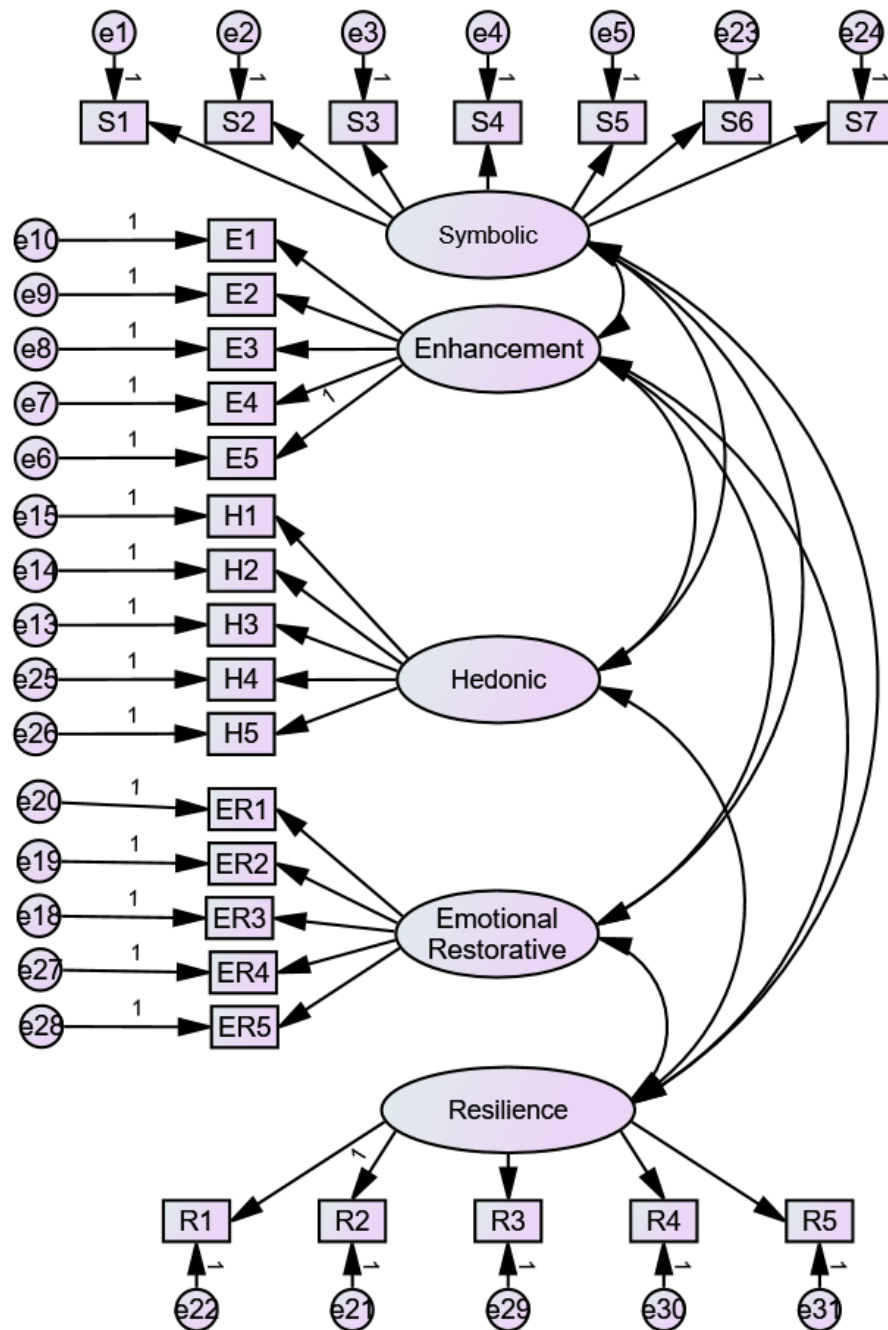
Based on the aforementioned methodologies and procedures, this research obtained 11 interview data for the purpose of conducting a theoretical saturation test. Following the phases of open coding, axial coding, and selective coding, the textual data was organized, contrasted, and reassessed, revealing no new ideas or categories. Thus, it is widely accepted that the hypothesis derived from this research is fully saturated.

Coding Results

The coding findings indicate that compensatory consumption behavior mostly encompasses the following five aspects. (1) The use of symbols to represent ideas or qualities. Compensatory consumer behavior is the act of people buying, using, and showcasing certain things that have symbolic significance. This behavior serves the purpose of expressing their self-worth, safeguarding their self-image, and communicating information to both themselves and others. Symbolism is a significant attribute of compensatory consumption behavior. Multiple studies have shown that in compensatory consuming behavior, people's desires for things that convey elevated status, authority, and intelligence are all rooted in the symbolic worth of the objects. Individuals have the ability to convey symbolic signals in certain areas or other areas where self-distinction is relevant, indicating their exceptional proficiency in a given component without delving into the underlying reason of this phenomenon. The product's ability to convey emotions and ideas is a significant factor that motivates consumers to purchase these things as a means of managing their sense of uniqueness. (2) Improvement Compensatory consumption behavior is the act of

individuals using specific products to enhance their physical and mental well-being, with the aim of improving certain aspects of their self-concept, self-perception, and how others evaluate them. This behavior serves as a way to compensate for the negative effects of evaluation. In their study, put out five solutions that might be used to address compensatory consumption behavior. One approach is to address the issue directly by acquiring items that may enhance and rectify the characteristics that are being threatened, so facilitating the decrease of self-discrepancy. For instance, if a person perceives dissatisfaction with their physique, they may choose to purchase exercise programs with the intention of enhancing their body form. In the proactive compensatory consumption model described, augmentation is a crucial element. For instance, if someone foresees the possibility of failing an upcoming test, they would purchase books as a means to manage the exam and assist themselves in overcoming the probable challenge. Hence, augmentation is a crucial aspect of compensatory consuming behavior. (3) Emotional Restorative The concept of compensatory consumption behavior refers to the phenomenon when people engage in purchasing and consuming things in order to alleviate unpleasant feelings and achieve emotional restoration. Many people engage in compensatory consumption behavior as a means to repair their feelings. Following a self-threat, people tend to engage in denial or avoidance of facts pertaining to their own deficiencies in order to redirect their focus and safeguard their self-concept. They will purchase things that may assist folks in expressing their negative feelings, in order to momentarily redirect their focus away from self-doubt. This is often shown via the act of consuming food and purchasing experience-based items. Retail therapy and compensatory nutrition are common examples of compensatory consumption behavior, which demonstrate the Emotional Restorative effect of compensatory consumption.

(4) Pleasurable quality Compensatory consuming behavior is driven by the hedonic desire of people to derive pleasure, reward themselves, and experience good sensory and emotional sensations via purchasing. Upon attaining significant accomplishments or milestones, people often experience a sense of satisfaction and want to indulge in retail therapy as a kind of self-reward. This phenomenon is a significant example of compensatory consumption as a method of gratification, including the elements of reward, celebration, and pleasure associated with consuming. Simultaneously, the hedonic character is also evident in the need for experiencing pleasure and consumption to get psychological gratification. Hedonic experiences may assist people in quickly diminishing the tendency to compare themselves to others, leading individuals to often engage in hedonic consumption as a means of reducing self-differences. (5) The quality of being able to recover quickly from difficulties or setbacks. Compensatory consumption behavior resilience pertains to people's capacity to adapt their consumption patterns in response to dangerous or stressful circumstances. Individuals will acquire or use things as a means of counteracting the detrimental effects of unfavorable circumstances, such as personal insecurity, threats to group identity, and social isolation. Compensatory consumption behavior is strongly associated with the concept of "threat." It occurs when individuals face threats and, as a result, develop a motivation to consume in order to cope with and overcome these threats. They do so by purchasing products that can assist them in resolving and resisting the threats, thereby preserving the equilibrium and stability of their personal and external circumstances. Hence, resilience is a crucial attribute of compensating consumption behavior.

Figure 3: Measurement model of CFA using SPSS AMOS

Source: Developed by author

Construction and testing of the compensatory consumption behavior scale**Construction and adjustment of the initial scale of compensatory consumption behavior**

Utilizing the study, pertinent literature, and in-depth questionnaire, a preliminary scale was developed to assess compensatory consuming behavior. This scale consists of a total of 27

questions as seen in figure 3. Subsequently, a panel of experts and consumers from relevant disciplines were recruited to conduct questionnaire, carefully analyzing the semantic expressions of the items many times. Table 2 displays the revised measurements and origins.

Table 2 initial scale	
Dimensions	Statements
Symbolic	S1 If a product can demonstrate its distinctiveness, I will choose to purchase it.
	S2 To bolster others' favorable perception of me, I often purchase a certain goods.
	S3 I am prepared to purchase a product if it has the ability to boost my interpersonal attractiveness.
	S4 I often purchase things that align with my own identity.
	S5 I will purchase a product based on its ability to convey social standing.
	S6 I will purchase the product since it can effectively demonstrate my financial prowess.
	S7 I am often more inclined to purchase products that symbolize accomplishment and prosperity.
Enhancement	E1 I am inclined to purchase a product if it has the ability to enhance my personal growth.
	E2 I am inclined to purchase a product if it has the potential to enhance my physical appeal.
	E3 I am willing to purchase a product if it has the ability to improve my self-esteem.
	E4 I am willing to purchase things that can improve my physical fitness.
	E5 I am inclined to purchase a product if it has the potential to enhance my skills or capabilities.
Hedonic	H1 To improve my connection with friends or family, I will purchase certain things.
	H2 I get great satisfaction from engaging in a shopping spree and like the experience of shopping in the company of others.
	H3 When I experience a high level of contentment with myself, I indulge in the act of purchasing things as a kind of self-reward.
	H4 To commemorate significant occasions, I want to purchase a certain product.
	H5 I will purchase certain things with the intention of acquiring experience and enjoyment.
Emotional Restorative	ER1 Purchasing and engaging with things might alleviate my negative mood when I am feeling down.
	ER2 Purchasing things often alleviates my bad feelings when I experience discomfort.
	ER3 When I encounter feelings of sorrow and grief, I find solace and diversion in purchasing items.
	ER4 Acquiring and using certain things may enhance my emotional well-being.
	ER5 Purchasing and using certain things might elicit the discharge of my bad feelings.
Resilience	R1 To mitigate the pain caused by my inconsistency with my ideal self, I shall alleviate it by acquiring certain things.
	R2 In instances when my self-esteem is diminished, the act of purchasing and using certain things might assist in bolstering my self-assurance.
	R3 In the face of others' disdain, I shall assert my power and social standing by eating certain things.
	R4 I am prepared to purchase any items that have the ability to diminish the risk associated with group identification.
	R5 I am willing to purchase things that may assist me in avoiding or mitigating dangers.

Source: Developed by author

Once the author established the first measuring scale for compensatory consumption behavior, they created a questionnaire and gathered data to carry out a pre-test of the scale. (1) Designing a questionnaire. The pre-test employs a questionnaire that has three distinct sections. Questionnaire instructions serve to concisely explain the objective of the questionnaire survey. The survey will collect basic information, such as the respondent's gender, age, education level, occupation, and average monthly amount spent on online shopping. The survey will also include a section where respondents will be asked to make choices based on their own shopping experience. Their responses will be scored using the Likert 7-point scale, with 1 representing "strongly disagree" and 7 representing "strongly agree".

Table 3: Statistical analysis of items (N=200)

Dimensions	Question	CITC	CAID	Cronbach's α
Symbolic	S1	0.611	0.882	0.883
	S2	0.677	0.853	
	S3	0.673	0.876	
	S4	0.568	0.848	
	S5	0.784	0.828	
	S6	0.758	0.876	
	S7	0.648	0.732	
Enhancement	E1	0.589	0.746	0.768
	E2	0.679	0.712	
	E3	0.638	0.754	
	E4	0.598	0.731	
	E5	0.639	0.791	
Hedonic	H1	0.721	0.713	0.791
	H2	0.683	0.738	
	H3	0.759	0.763	
	H4	0.712	0.717	
	H5	0.665	0.761	
Emotional Restorative	ER1	0.743	0.812	0.912
	ER2	0.578	0.854	
	ER3	0.601	0.801	
	ER4	0.712	0.876	
	ER5	0.723	0.861	
Resilience	R1	0.671	0.863	0.865
	R2	0.587	0.843	
	R3	0.688	0.846	
	R4	0.701	0.891	
	R5	0.633	0.834	

Source: Developed by author

(2) Test of reliability is a metric used to assess the dependability and consistency of measurement outcomes. The Cronbach's α coefficient is often used to assess the scale's reliability. A Cronbach's α value higher than 0.7 implies that the measurement questions of the scale exhibit strong internal consistency. The questionnaire has an overall reliability coefficient of 0.923. Table 2 displays the statistical analysis findings for the individual items. Table 3 demonstrates that the reliability of each dimension falls within the range of 0.768 to 0.912, showing that the questionnaire has strong overall reliability. Furthermore, the measurement items within each dimension exhibit satisfactory internal consistency.

(3) Primary purification via scaling down This research assesses the quality of scale measurement items and selects things by examining the correlation between the measurement items and the total (CITC) and the Cronbach's α coefficient (CAID) after removing items. The amalgamation of the two might serve as a foundation for evaluating the suitability of an item. Typically, the CITC coefficient employs a critical value of 0.4. Items that have a CITC coefficient below 0.4 and a CAID coefficient higher than the overall Cronbach's α coefficient of their respective dimension are removed. Consequently, A9 is removed. Table 2 demonstrates that the measuring items possess a

high overall quality, with CITC coefficients over 0.4 for all items. Additionally, each dimension exhibits strong internal consistency. (4) Factor analysis Validity is a term used to indicate the accuracy and consistency of the measurement information. In this context, exploratory component analysis is used to assess the construct validity of the scale. Prior to doing exploratory component analysis, it is necessary to assess the suitability of the scale by performing the KMO value and Bartlett sphericity test. The calculation results indicate that the KMO value is 0.921, and the estimated chi-square significance of the Bartlett sphericity test is $\text{Sig.} = 0.000 < 0.001$. This suggests that the scale constructs have a strong correlation and share common factors, making them acceptable for factor analysis. Exploratory factor analysis was used to further evaluate the measurement items. The principal component factor analysis approach was used to extract components based on the criterion of eigenvalues larger than 1 and the maximum variance method. The process of eliminating items adhered to the following three principles: Items with a factor loading below 0.5 were eliminated; Items with a cross-loading over 0.4 were eliminated to prevent ambiguity in measuring concepts; Items that formed a latent factor on their own were eliminated. Table 3 displays the findings of the exploratory factor analysis. Convergence was achieved after 6 cycles, resulting in the extraction of a total of 5 common components. All 26 items had factor loadings greater than 0.6, and the cumulative explained total variance was 66.686%. The factor aggregation structure aligned with the grounded expectation judgment.

Formal Test and Scale Adjustment

The formal test's scale was derived from the pre-test findings, consisting of 5 dimensions and 26 items in total. The outcomes of the data analysis are as follows. Analysis of reliability, the questionnaire had an overall reliability of 0.940. The reliability of the symbolic, enhancement, Emotional Restorative, hedonic, and stress Resilience aspects were 0.913, 0.821, 0.841, 0.912, and 0.865, respectively. All of these values above the criterion of 0.7. This demonstrates that both the questionnaire and each dimension exhibit strong internal consistency. (2) Factor analysis for exploration purposes Exploratory factor analysis is still conducted using SPSS in this stage. In the pre-test exploratory factor analysis, the KMO value is 0.921, and the estimated chi-square significance of the Bartlett sphericity test is $\text{Sig.} = 0.000$, which is less than 0.001. There were 5 common components found, which accounted for a total variation of 67.674%. These factors had a strong explanatory ability. The precise statistics are shown in Table 4. Each item has a factor loading of at least 0.6, and the cross loading is below 0.4. Upon comparing the findings of exploratory factor analysis in the pre-test, it was seen that the five components remain constant, indicating that the scale had an optimal structure.

Table 4 Exploratory factor analysis results (N=200)

Dimensions	Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Symbolic	S1	0.746				
	S2	0.721				
	S3	0.693				
	S4	0.747				
	S5	0.645				
	S6	0.723				
	S7		0.781			
Enhancement	E1		0.712			
	E3		0.732			
	E4		0.707			
	E5			0.681		
Hedonic	H1			0.692		
	H2			0.682		

	H3			0.712		
	H4			0.745		
	H5			0.715		
Emotional Restorative	ER1				0.743	
	ER2				0.754	
	ER3				0.765	
	ER4				0.661	
	ER5				0.714	
Resilience	R1					0.732
	R2					0.721
	R3					0.715
	R4					0.751
	R5					0.682

Source: Developed by author

Table 5 Exploratory factor analysis (N=420)						
Dimensions	Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Symbolic	S1	0.723				
	S2	0.710				
	S3	0.743				
	S4	0.753				
	S5	0.743				
	S6	0.765				
	S7	0.734				
Enhancement	E1		0.821			
	E3		0.712			
	E4		0.732			
	E5		0.776			
Hedonic	H1			0.723		
	H2			0.654		
	H3			0.661		
	H4			0.671		
	H5			0.682		
Emotional Restorative	ER1				0.734	
	ER2				0.776	
	ER3				0.726	
	ER4				0.732	
	ER5				0.738	
Resilience	R1					0.691
	R2					0.683
	R3					0.782
	R4					0.715
	R5					0.703

Source: Developed by author

Table 5 Comparison of fitting index of each model (N=420)							
Model	Factor	χ^2	df	χ^2/df	TLI	CFI	RMSEA
Five-factor Model	S, E, H, ER, R	612.534	277	2.271	0.873	0.933	0.061
Four-factor Model	S, E, H, ER+R	1034.232	299	3.575	0.954	0.779	0.068
Three-factor Model	S, E, H+ER+R	1212.120	289	4.575	0.845	0.848	0.082
Two-factor Model	S+E+H, ER+R	1941.4763	295	6.642	0.765	0.763	0.103
Single factor Model	S+E+H+ER+R	2603.751	288	8.466	0.711	0.713	0.144
Second-order factor Model		683.321	287	2.387	0.965	0.953	0.064
Note: S is Symbolic, E is Enhancement, H is Hedonic, ER is Emotional Restorative, and R is Resilience.							

Source: Developed by author

(3) Confirmatory factor analysis This research used AMOS software to do confirmatory factor analysis and thoroughly assessed the model's fit using several indicators. These included the goodness of fit index (χ^2 , df, $\chi^2/df < 3$), the relative fit index (TLI, CFI) which needed to be more than 0.9, and the absolute fit index (RMSEA) which needed to be less than 0.08. In addition, this research developed five models for testing with the aim of identifying the most suitable model. The fit index comparison results for each model are shown in Table 5. Table 5 demonstrates that the five-factor model is the most suitable, and all indicators match the required criteria. The load coefficient estimate findings for each indication on its respective dimension are shown in Table 6. Table 6 displays the standardized factor loadings for each item, ranging from 0.670 to 0.854. All of these loadings successfully passed the T test ($p < 0.001$), confirming the existence of the five dimensions of compensatory eating behavior. Simultaneously, this research also performed a second-order factor analysis of compensatory consumption behavior. The second-order factor model exhibits a strong match, indicating that compensatory consumption behavior is a construct with several dimensions. These five components are part of the higher-level aspect of compensating consumption behavior. (4) Convergent validity and discriminant validity refer to two different aspects of the validity of a measurement instrument. This research computed the composite reliability (CR) and average variance extracted (AVE) using confirmatory factor analysis. Testing just one of the scales is insufficient to establish the convergent validity of the scale. Consequently, this research used a criterion of $CR > 0.8$ and $AVE > 0.5$ to assess the convergent validity of the current scale. Additionally, two approaches were utilized to evaluate the discriminant validity of the present scale. The findings are shown in Table 7. Table 7 provides the following information: The aspects of symbolism, enhancement, emotional restoration, hedonism, and stress resilience have strong convergent validity. The standardized correlation coefficients between the dimensions are all less than the square root of the average variance extracted (AVE) of each dimension; Furthermore, during the confirmatory factor analysis in the previous article, it was observed that the fit index of the five-factor model outperformed the fit of alternative factor models, as shown by the model fit index in Table 5. The findings indicate that the scale's dimensions possess optimal discriminant validity. To summarize, a comprehensive assessment scale for compensatory consumption behavior was successfully developed via a rigorous approach. The scale consists of 5 dimensions and includes a total of 26 items. The measurement items are shown in Table 6, with the exception of E2 which was removed during the scale verification procedure. The scale has achieved a high degree of reliability and validity, making it suitable for use as a tool to evaluate compensatory consuming behavior in table 7.

Table 6 Estimation of the loading coefficient of each indicator in the corresponding dimension (N=420)					
Dimensions	Question	Standardized factor loadings	Dimensions	Question	Standardized factor loadings
Symbolic	S1	0.737	Emotional Restorative	ER1	0.831
	S2	0.788		ER2	0.812

Enhancement	S3	0.775	Resilience	ER3	0.754
	S4	0.782		ER4	0.788
	S5	0.728		ER5	0.774
	S6	0.776		R1	0.792
	S7	0.782		R2	0.726
	E1	0.792		R3	0.823
	E3	0.764		R4	0.793
	E4	0.678		R5	0.794
	E5	0.752			
	H1	0.682			
Hedonic	H2	0.783			
	H3	0.774			
	H4	0.753			
	H5	0.846			

Source: Developed by author

Table 7 Convergent and discriminant validity results

Variable	CR	AVE	Symbolic	Enhancement	Hedonic	Emotional Restorative	Resilience
Symbolic	0.912	0.595	(0.784)				
Enhancement	0.828	0.562	0.345	(0.753)			
Hedonic	0.882	0.582	0.527	0.392	(0.773)		
Emotional Restorative	0.863	0.672	0.512	0.346	0.524	(0.779)	
Resilience	0.876	0.682	0.532	0.316	0.523	0.6721	(0.786)

Source: Developed by author

Conclusion

According to the rigorous process of scale development, this research reaches the following conclusions: Compensatory consuming behavior encompasses five distinct dimensions: symbolic, enhancement, emotional restorative, hedonic, and resilience, with a total of 26 items. 2 Upon conducting tests, it has been shown that the scale exhibits high levels of reliability and validity, making it a very useful instrument for measuring. The study's contributions and inspirations: 1 The fundamental attributes of compensatory consumption behavior are methodically consolidated, so compensating for the absence of explanation about the phenomena of compensatory consumption behavior and broadening the scope of study on this theory within the realm of marketing. The five dimensions' features may be used individually or together, facilitating the examination of whether distinct or similar conditions elicit compensatory consumption of diverse characteristics. This approach also aids in examining the limits of various compensatory consumption practices. In the setting of social exclusion, consumers may engage in both Emotional Restorative compensatory consumption activities, such as eating, drinking, and shopping, as well as symbolic compensatory consumption behaviors, such as purchasing items with group logos. What are the factors influencing their divergent decisions? The behavioral motivation theory posits that individuals exhibit either an approach orientation or an avoidance orientation. From an approach orientation perspective, symbolism, enhancement, and hedonism can be understood as driving behavior towards pursuing positive outcomes and enjoyment, such as success, reward, and pleasure. On the other hand, emotional restoration and resilience can be seen as avoidance orientations aimed at avoiding negative outcomes. Hence, in the investigation of compensatory consumption behavior

resulting from avoidance orientation, Emotional Restorative and resilience may serve as metrics to assess such behavior, thereby facilitating a comprehensive examination of compensation from the standpoint of individual motivation. 2 This research expands the range of approaches for investigating compensatory consumption behavior, offers a powerful and universally applicable instrument for measuring it, and advances the understanding of abstract and intricate compensatory consumption behavior to a point where it can be broken down and assessed statistically. 3 The scale may be immediately used for customer assessment and serve as a fundamental foundation for marketing decision-making. By doing a thorough analysis of consumer psychology, including the intensity of customer compensatory behavior and the key reasons of concern, marketers may develop tailored marketing tactics. This research is also subject to the following constraints: 1 Compensatory consumption is a multifaceted consumer behavior that occurs in many situations. There are several aspects in this work that have not been adequately addressed and investigated. In the future, it is possible to perform a more comprehensive investigation of the many features of compensatory consuming behavior in different contexts. 2 Given the constraints of social relationships and limited resources, the interview data was gathered using a simple sampling approach. However, in order to enhance the depth and breadth of the data, it is necessary to expand the source of the sample data.

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