

## AN EMPIRICAL STUDY ON THE IMPULSIVE PURCHASING OF ANIMATION DERIVATIVES IN KUNMING, CHINA

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### Abstract

The purposes of this paper are (1) to explore the influences of individual consumer's characteristics, external situational factors, and marketing stimuli on the impulsive purchase behavior of animation derivatives; (2) to test whether impulsive purchase intention mediates the relationship between each influencing factor and impulsive buying behavior of animation derivatives; and (3) to construct a model of impulsive buying behavior of animation derivatives. This research used a quantitative design by developing online questionnaires to collect data through the convenience sampling approach from 536 Chinese consumers who had a shopping experience with animation derivatives products within the past six months in Kunming city. They were students, aged 19-22, had a bachelor's degree and had a low monthly income. The findings show that individual consumer's characteristics (including impulsive purchase propensity and emotional purchase propensity), external situational factors (both time pressure and brand effect), and marketing stimuli (product, price, and promotional advertising) are significantly and positively related to impulsive purchase behavior of animation derivatives. Moreover, the mediating effect of impulsive purchase intention was significant for both the above latent variables and impulsive purchase behavior.

**Keywords:** Anime Derivatives, Impulse Purchase, Individual Characteristics, Marketing Stimuli, Situational Factors

### Introduction

The animation and comic industry refer to "cultural creativity" as the core, with animation and comics as the main form of expression, including cartoons, comic books, videos, newspapers, movies, stage plays, and other specific products, and also includes the design, development, publication,

broadcasting, sales, and other modern communication technologies of animation products. It is also known as the "emerging sunrise industry" (Cheng, 2015). China's animation industry has just started, and the market for animation derivatives is still in the development stage. Still, with the support of national policies, the animation industry is

developing rapidly, with key indicators such as the number of screenings of animated films, box office, and the number of people watching them all standing out (Research and Markets, 2019). Along with the continuous development of the anime industry, the scope of anime derivatives is also expanding and appearing more and more in daily life. From stationery, books, clothing, food packaging, office supplies, daily necessities, home appliances, music albums, etc., which were first developed on the basis of anime prototypes, to themed restaurants, dance halls, bars, clubs, shopping malls, KTVs, parks, squares, amusement parks, etc., which now incorporate anime elements, anime derivatives have evolved into a complete industrial chain in the market (Sha, 2020). The comic and animation derivatives have penetrated into all aspects of people's food, clothing, housing, transportation, and play, and can be seen everywhere in life. Coupled with the innovative marketing methods used by businesses to induce people's desire to shop by using price reductions, issuing gifts and special festivals, customers' impulse buying behaviour occurs frequently. For merchants, consumers' impulse buying behaviour can effectively increase business volume. For this reason, in the animation derivatives market, it is significant to understand consumers' impulse buying behavior, to study the factors that influence this behavior, and how it is stimulated to arise.

## Objectives

1. To construct a model of impulse buying behavior of animation derivatives;
2. To investigate the impulse buying behavior of animation derivatives and its influencing factors separately, and to explore which of these factors plays the most important role in impulse buying behavior;
3. To test whether impulse purchase intention mediates the relationship between each influencing factor and impulse buying behavior of animation derivatives.

## Literature Review

Dholakia (2000) has sorted out all the influencing factors of impulse buying based on previous research on impulse buying theory and finally constructed an integrated model of impulse spending. He summarized the factors influencing buyers' impulse purchases into three categories: market stimuli (e.g., product displays, price reductions, promotions, etc.), situational factors (e.g., time available, money available, reference groups, etc.) and individual impulse traits. Of these three categories of influences, either one of them or any two or more of them together may trigger the consumer's urge to buy. When this impulse is not limited by some impediment, the impulse is transformed into actual purchase. Xiong and Jing (2010) also proposed a model of factors influencing the generation of impulse buying behavior, which analyses the influence of three aspects: marketing stimuli, situational

factors, and individual traits on impulse buying behavior. Therefore, the author proposes a theoretical model for this study based on numerous references.

Ajzen (1991) states that consumers must have the intention to buy before they can take actual action. Studies by Zhang et al. (2014) and Yi (2014) show a positive relationship between consumers' purchase intentions and their purchase behavior. For this reason, consumers' impulsive purchase intention is an essential indicator to measure whether their purchase behavior will be generated or not, and to decide whether they will implement impulsive purchase behavior. This paper argues that impulse purchase intention is the extent to which consumers suddenly develop a desire to obtain a certain derivative in the purchase of anime derivatives. From the existing research literature, it is clear that there is a significant positive relationship between consumers' impulse purchase intention and their impulse purchase behavior. If the consumer's impulse purchase intention is stronger, the greater the likelihood that he or she will implement impulse purchase behavior (Beatty & Ferrell, 1998; Dholakia, 2000). Li (2007) also suggests that consumers develop impulse buying behavior before they experience a strong willingness to buy. Based on the above analysis, this paper proposes the following hypothesis.

H1: There is a positive significant relationship between consumers' impulsive purchase intentions and impulsive purchase behavior.

### Individual Characteristics

The probability that a consumer is likely to make an impulse purchase is strongly influenced by the consumer's propensity to make impulse purchases. This paper considers impulse buying as the tendency of consumers to purchase unplanned anime derivatives while being less self-controlled, less thoughtful and less likely to evaluate the consequences of their purchases. Rook and Fisher (1995) find that shoppers' impulse purchase propensity significantly influenced impulse buying behavior if they felt it was appropriate. Kacen and Lee (2002) point out that, under certain conditions, consumers' impulse purchase propensity predicted impulse buying behavior, and that shoppers with a stronger shopper with a stronger propensity to purchase are more likely to trigger impulse buying behavior throughout the consumption process. Youn and Faber (2000) have shown that consumers are more responsive to external stimuli if they are more impulsive and therefore more likely to elicit impulse purchases. Scholars such as Hoch and Loewenstein (1991), Beatty and Ferrell (1998) have noted that consumers' impulse purchase propensity can effectively predict their impulse purchase behavior. The more likely a shopper is to implement impulse buying behavior if he or she has a stronger propensity to buy. Zhang and Zhang (2015) confirmed that consumers' impulsive traits led to enhanced word-of-mouth communication of products, which in turn influenced their impulse buying behavior. Li (2012) found that if shoppers are more impulsive, they have

a stronger willingness to make frequent impulse purchases compared to the average purchaser. This is because, firstly, the stronger the impulse purchase propensity, the longer consumers spend browsing and gathering information when buying a product, which makes them more likely to trigger a strong impulse to buy and to carry out impulse buying behavior; secondly, compared to other consumers, consumers with impulse purchase propensity are more likely to have positive feelings about the product they are browsing and make overly optimistic comments, thus having a stronger willingness to make impulse purchases. Based on the above analysis, the following hypothesis is proposed.

H2a: There is a positive significant relationship between consumer impulse purchase propensity and impulse purchase behavior of anime derivatives.

H2b: Impulsive purchase intention mediates the relationship between impulse purchase propensity and impulse purchase behavior.

Psychologically speaking, emotion or affection is a feeling that a person has. In general, emotion is an attitude that arises from an individual's ability to satisfy his or her own needs for things or objects. Pugh (2001) argues that if a shopper receives a positive stimulus when purchasing a product, their emotional response will be positive; if they receive a negative stimulus, they will have a negative emotional response. Arnold et al. (2005) argue that positive consumer emotion positively influences consumers and makes shoppers

feel happy, thus increasing their willingness to buy and ultimately generating purchase behavior. Weinberg and Gottwald (1982) confirmed that consumers who make impulse purchases have stronger feelings of joy, pleasure, excitement and delight. Li (2007) argues that shoppers' pleasant purchase emotions can have a significant impact on their impulse buying behavior. Rook (1987) states that impulsive buying behavior may occur when consumers experience a sudden and strong emotional response to immediately purchase an item. Gardner and Rook (1987) confirmed that consumers with positive emotions are more likely to make impulse purchases. Chen (2002) points out that a variety of stimuli may lead to the occurrence of impulsive buying behavior, where consumers trigger an intense emotional response as a result of a stimulus, and this emotional response, when it reaches its upper limit, causes shoppers to become willing to make impulsive purchases. Yue (2005) also confirms that shoppers' emotional responses have a direct impact on their purchase intentions. Buyers are influenced by their purchase emotions throughout the process of purchasing anime derivatives. Liu et al. (2017) found that the higher the level of pleasure, the more impulsive purchases would be made when studying the influence of website characteristics on consumers' online impulse purchases. Consumers' pre-shopping emotions will affect the formation of emotions during shopping. If consumers are interested in a certain anime derivative before purchasing,

and if they are influenced by some stimulating factors during browsing, they are likely to form impulsive purchase intentions and thus implement impulsive purchase behaviors. Based on the above analysis, this paper proposes the following hypothesis.

H2c: There is a positive significant relationship between consumers' emotional purchase propensity and impulse purchase behavior of anime derivatives.

H2d: Impulsive purchase intention mediates the relationship between emotional purchase propensity and purchase behavior.

### **Situational Factors**

Cangelosi and Dill (1965) were the first to investigate time pressure from an individual physiological perspective, suggesting that it causes individuals to respond with shortness of breath and increased heart rate. Ariely and Zakay (2001) argue that it is the individual's perceived time constraint, along with a change in psychological state, that constitutes time pressure. Time pressure in this study is the process by which consumers feel that time is short and will miss out on opportunities, lose something, etc., if they do not buy within the limited time available in the purchase of anime derivatives. Rieskamp and Hoffrage (2008) found that consumers with limited time perceive an opportunity cost, which influences the choice of consumer strategy. The greater the time pressure, the greater the opportunity cost perceived by shoppers, resulting in a range of emotions such as urgency, anxiety, and regret not buying. To mitigate these incongruities, consumers rely more on intuition

and experience to make decisions. This makes them susceptible to intuitive bias, prone to bias in searching for and receiving information, with perceived benefits magnified and the presence of possible risks overlooked; and actively seeking strong examples to support their approach, paying less attention to or ignoring the presence of evidence that does not support their ideas, and making impulse purchases. Zhao et al. (2015) have proposed that the impulse buying behavior of shoppers can be easily triggered under high time pressure. Zhou et al. (2017) found that with high time pressure, the informational influence of the reference group made it easier for purchasers to make impulse purchases; with low time pressure, the normative influence of the reference group made it easier for shoppers to make impulse purchases. Consumers usually lack rationality, neglecting to make a reasonable assessment of their behavior, and therefore make impulse purchases more readily if they have a limited time to do so (Zeng, 2006). Based on the above analysis, this paper proposes the following hypothesis. H3a: There is a positive significant relationship between consumer time pressure and impulse purchase behavior of anime derivatives.

H3b: Impulsive purchase intention mediates the relationship between time pressure and impulsive purchase behavior.

Brands are individual states or combinations of names, symbols, terms, patterns, or marks that enable consumers or groups of consumers to distinguish the products and services of different companies (Kotler,

2003). The branding effect cannot be achieved without the establishment of a successful brand image. Generally speaking, the better the brand image of anime derivatives, the better the consumer's perception, evaluation and attitude towards the product, and the correspondingly higher the willingness to purchase, resulting in a relatively high level of purchase. Wang (2014) found a positive relationship between brands and shoppers' consumption behavior. Hou et al. (2015) found that the brand effect is a key factor in stimulating consumers' impulsive buying behavior. When consumers recognize a brand, they will pay attention to it from time to time, become curious about it, develop a willingness to buy, and will not hesitate to make a purchase when they need to. If the post-purchase feeling is good, the consumer is to produce a stronger willingness to buy and more active behavior. Yoo et al. (2000) state that brand image positively influences shoppers' choices, preferences and purchase intentions, making them willing to pay higher prices for goods and happily introduce them to others around them. There are still relatively few studies on brand effects and purchase intention and purchase behavior. This paper introduces the brand effect into the impulse buying behavior of anime derivatives, following the psychological activity process of inducement intention-behavior generation, to reveal the influence of the brand effect on consumers' impulse buying behavior. Based on the above analysis, the following hypotheses are proposed.

H3c: There is a positive significant relationship between brand effect and impulse purchase behavior of anime derivatives.

H3d: Impulsive purchase intention mediates the relationship between brand effect and impulsive purchase behavior.

### **Marketing Stimuli**

Product is the influencing factor that triggers consumers to implement impulse buying behavior, and the role of this factor is maximized by the value of the product. The value of the product includes the quality, shape, function and type of the product. In this study, the product refers to the characteristics of the animation derivative itself, including its style, quality, color, packaging, and symbolic meaning, which can fully attract customers' attention. (Bellenger et al., 1978). Dittmar et al. (1995) have confirmed that different categories of products and their packaging induce different levels of impulse buying. Consumers love anime derivatives because of their cute or quirky shapes that attract their attention. They are spiritual and have a story background, fulfilling the function of a carrier and making their "human" characteristics appear naturally. The most important feature of anime derivatives is that they represent various symbols, with all the characteristics of popular favorites, endowed with various emotions that make people desire to own them and cannot wait to take them home and keep them around. Based on the above analysis, this paper puts forward the following hypothesis.

H4a: There is a positive significant relationship between product and impulse purchase behavior of anime derivatives.

H4b: Impulsive purchase intention mediates the relationship between product and impulse purchase behavior.

Price incentives are a way for businesses to give away a portion of their profits to consumers through various forms of price reductions and inform consumers widely about price reductions on products or services, ultimately influencing shoppers' purchasing behavior (Yin & Huang, 2014). As a result of price incentives, consumers either buy goods that they did not plan to buy or buy more than they planned (Zeithaml, 1988). Stern (1962) and Bellenger et al. (1978) confirm that consumers' impulse buying behavior is significantly influenced by lower prices. When the price is lower, the consumer could pay less money and is, therefore, more likely to be motivated to make an impulse purchase. More expensive products, on the other hand, require a higher amount of money and consumers usually gather information and evaluate them before making a purchase decision to consider whether to make a purchase. Chuang et al. (2005) point out that among the many factors that may stimulate consumers' purchase intentions, price is most likely to influence shoppers' behavior and trigger their impulse buying behavior. Zhao et al. (2016) noted that monetary cues or stimuli can have an impact on consumers' intention to make impulse purchases. Wang, Yao and Ye (2014) found that

impulse buying is more likely to occur when the price discount is high and the number of people buying is high. When consumers feel that the price of a product is beneficial to them, it is easy to cause satisfaction, and this is when they are likely to implement impulse buying behavior. Based on the above analysis, this study proposes the following hypotheses.

H4c: There is a positive significant relationship between price and impulse purchase behavior of anime derivatives.

H4d: Impulsive purchase intention mediates the relationship between price and impulse purchase behavior.

The purpose of advertising is to make shoppers aware of the existence of a product or to fully understand a product, which in turn stimulates shoppers' demand (Kotler, 2003). This article argues that promotional advertising is a way for businesses to make consumers aware of the existence of anime derivatives and understand the basic characteristics of their shapes, colors, prices, and what they represent. The more persuasive and appealing the message is, the more likely the consumer is to be attracted to it and thus be motivated to buy. Stern (1962) states that consumers' impulse buying behavior is heavily influenced by mass advertising. Agee and Martin (2001) define those businesses often send advertising messages to make consumers aware of the existence of a product and how it differs from other products, which in turn arouses consumers' desire to buy. Heilman et al. (2002) also confirm that consumers' impulse buying behavior is influenced by promotions. Akram

(2018) found that promotions had a significant impact on online impulse purchases. There are many forms of promotional advertising. Advertisements that succeed in attracting the attention of shoppers, creating an impulse to buy and ultimately making an impulse purchase are characterized by a clear and memorable theme, specific images and simple, easy-to-understand text. Based on the above analysis, this study proposes the

following hypotheses.

H4e: There is a positive significant relationship between promotional advertising and impulse purchase behavior of anime derivatives.

H4f: Impulsive purchase intention mediates the relationship between promotional advertising and impulse purchase behavior.

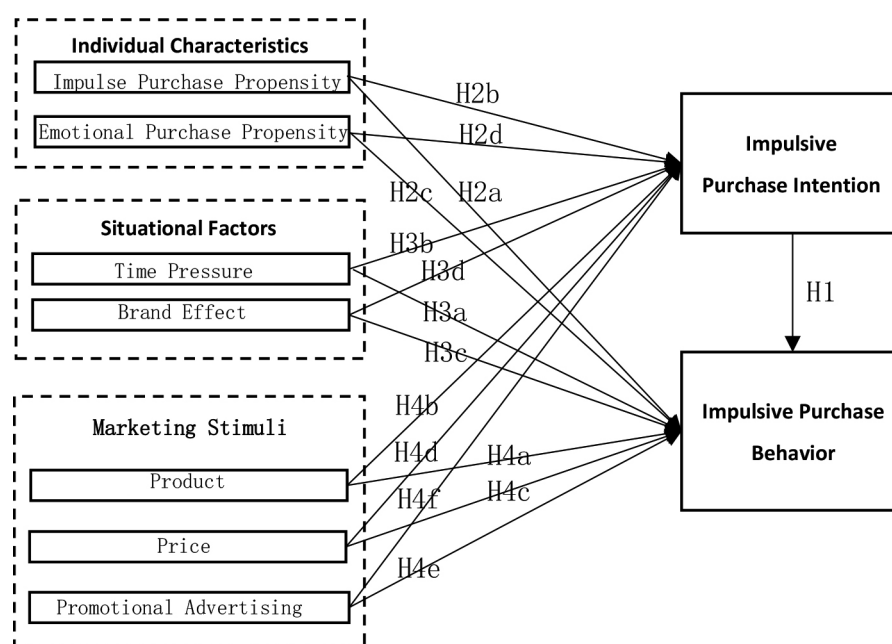


Figure 1 Conceptual Framework

## Methodology

The population comprises consumers in Kunming City, Yunnan province, China, who have had a shopping experience with anime derivatives products within the past six months. The sample size was calculated using Cochran's formula at a confidence level and error term of 95% and 5 %, respectively (Cochran, 1977). The sample size was 385 after calculating. A web-based online survey

was used to collect the data through the convenience sampling approach. A total of 640 questionnaires were returned. After removing all the responses with invalid answers (e.g., giving the same answers to all questions) and data cleaning and 536 were valid finally.

All the measurement items used in this study are adopted from previous research studies. For the measurement of impulse purchase propensity, this paper refers to the

relevant scales by Rook and Fisher (1995). In this study, the PAD (pleasure-arousal-control) scale developed by Mehrabian and Russell (1974) was used in the measurement of emotional purchase propensity. For the measurement of situational factors, time pressure was referred to Zeng (2006) and He (2007), and brand effects to Beatty and Ferrel (1998). For the measurement of marketing stimuli, product characteristics are mainly based on the study by Rook and Fisher (1995); promotional advertising is based on the scale proposed by Dittmar et al. (1996), and the price is based on the scales proposed by Rook and Fisher (1995) and Dittmar et al. (1996).

## Data Analysis and Finding

### Descriptive Analysis

There were more female than male respondents among 536 valid samples. The majority of the respondents were students aged 19 to 22 years old with bachelor's degrees and low monthly income.

### Reliability and Validity

The Cronbach's alpha was used to measure the reliability of the measures. As per Hair et al. (2013) the value of Cronbach's alpha coefficient of 0.7 was taken as the threshold

level to ensure the stability and consistency of the instruments. According to Table 1, the Cronbach's alpha value of all constructs was above 0.7. Hence, the reliability of the construct is established. Validity focuses on identifying, the extent to which the research concept is correctly represented by the measures (Hair et al., 2013). Construct validity was measured by utilizing convergent validity and discriminant validity. Convergent validity was assessed with Composite Reliability (CR), Factor Loadings, and Average Variance Extracted (AVE). If the value of CR reached 0.7 or above, and the value of factor loadings and AVE both reached 0.5 or above, the measurement model has good convergence validity (Hair et al., 2013). As per Table 1, all indicators met the standard, indicating that the measurement model in this study had good convergent validity. To determine discriminant validity, the square root of the AVE of each construct was compared to the squared correlations of other constructs. From Table 2, it is evident that the square root of the AVE value of each construct is greater than the squared correlations of this construct to any other construct. Hence, the discriminant validity is established (Hair et al., 2013).

**Table 1** Results of Validity and Reliability Analysis

Factors	Indicators	Factor Loadings	AVE	CR	Cronbach's Alpha
Impulse Purchase Propensity (IPP)	IPP1	0.776	0.651	0.874	0.861
	IPP2	0.784			
	IPP3	0.762			
Emotional Purchase Propensity (EPP)	EPP1	0.735	0.628	0.739	0.853
	EPP2	0.768			
	EPP3	0.795			
Time Pressure (TP)	TP1	0.723	0.714	0.801	0.806
	TP2	0.793			
	TP3	0.746			
Brand Effect (BE)	BE1	0.712	0.729	0.842	0.814
	BE2	0.701			
	BE3	0.730			
Product (Pro)	Pro1	0.875	0.691	0.833	0.897
	Pro2	0.843			
	Pro3	0.806			
Price (Pri)	Pri1	0.813	0.785	0.807	0.855
	Pri2	0.794			
	Pri3	0.750			
Promotional Advertising (PA)	PA1	0.842	0.639	0.795	0.882
	PA2	0.851			
	PA3	0.864			
Impulsive Purchase Intention (IPI)	IPI1	0.726	0.774	0.805	0.904
	IPI2	0.709			
	IPI3	0.849			
	IPI4	0.833			
Impulsive Purchase Behavior (IPB)	IPB1	0.842	0.748	0.884	0.931
	IPB2	0.789			
	IPB3	0.811			
	IPB4	0.791			

Table 2 Discriminant Validity

Variable	1	2	3	4	5	6	7	8	9
IPP	<b>0.807</b>								
EPP	0.526	<b>0.792</b>							
TP	0.569	0.538	<b>0.845</b>						
BE	0.501	0.582	0.511	<b>0.854</b>					
Pro	0.485	0.536	0.596	0.701	<b>0.831</b>				
Pri	0.495	0.602	0.636	0.608	0.673	<b>0.886</b>			
PA	0.563	0.489	0.591	0.581	0.595	0.476	<b>0.799</b>		
IPI	0.624	0.608	0.633	0.627	0.646	0.668	0.522	<b>0.880</b>	
IPB	0.529	0.556	0.605	0.683	0.574	0.641	0.584	0.607	<b>0.865</b>

### Structural Model Analysis

Suppose the implied covariance structure of the model is similar to that of the sample data, as implied by the acceptable value of the goodness of fit index (GFI). In that case, the model is considered appropriate (Cheung & Rensvold, 2002). The authors firstly verified

and evaluated the measurement model and then analyzed and fitted the structural model. Table 3 shows the indices of the model all met the evaluation standard, indicating that the theoretical model presented in the study aligned with the actual survey data.

Table 3 Fit Indices of Measurement and Structural Models

Fit Indices	X <sup>2</sup> /df	GFI	AGFI	NFI	CFI	RMSEA
Recommended Values	<3	>0.9	>0.8	>0.9	>0.9	<0.05
Measurement Model	1.842	0.922	0.888	0.902	0.916	0.038
Structural Model	1.842	0.921	0.886	0.902	0.917	0.039

### Results

Table 4 shows the standardized path coefficient and path significance for each of the hypotheses. It indicates that all the hypotheses proposed in this paper were all supported. The results reveal that there is a positive significant relationship between consumers' impulsive purchase intentions and impulsive purchase behavior ( $\beta = 0.715$ ,

$p < 0.001$ ), Therefore, H1 is supported. With regard to H2a, H2c, it can be observed that a significant and positive correlation between individual characteristics, including IPP ( $\beta = 0.305$ ,  $p < 0.001$ ) and EPP ( $\beta = 0.512$ ,  $p < 0.001$ ) and impulse purchase behavior of anime derivatives, which means that H2a and H2c were supported. In support of H3, we find that situational factors, including time

pressure and brand effect, is significantly positively correlated with the consumers' impulse purchase behavior of anime derivatives (TP:  $\beta = 0.459$ ,  $p < 0.01$ ; BE:  $\beta = 0.410$ ,  $p < 0.01$ ) hence, H3a and H3c were supported. When H4a, H4c, and H4e were examined, it was

found that marketing stimuli factors including product ( $\beta = 0.564$ ,  $p < 0.001$ ), price ( $\beta = 0.742$ ,  $p < 0.001$ ) and promotional advertising ( $\beta = 0.656$ ,  $p < 0.001$ ), was positively correlated with impulse purchase behavior of anime derivatives. Thus, H4a, H4c, and H4e were supported.

**Table 4** Test Results of Research Hypothesis

Hypothesis	Path	Path Coefficient ( $\beta$ )	S.E.	t-value	Results
H1	IPI $\rightarrow$ IPB	0.715	0.118	5.917**	Supported
H2a	IPP $\rightarrow$ IPB	0.305	0.084	3.712***	Supported
H2c	EPP $\rightarrow$ IPB	0.512	0.073	3.103***	Supported
H3a	TP $\rightarrow$ IPB	0.459	0.098	4.032**	Supported
H3c	BE $\rightarrow$ IPB	0.410	0.145	3.385**	Supported
H4a	Pro $\rightarrow$ IPB	0.564	0.073	2.608***	Supported
H4c	Pri $\rightarrow$ IPB	0.742	0.104	5.632***	Supported
H4e	PA $\rightarrow$ IPB	0.656	0.139	6.992***	Supported

**Notes:** \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$

### Mediation Testing

To study the mediating effect of Impulsive Purchase Intention (IPI), the study evaluated the direct, indirect and total effects of consumer individual characteristics, external situational factors and marketing stimuli on the impulse purchase behavior (IPB) of anime derivatives. To test this mediation, this study followed the recommendations of Zhao et.al. (2010) and conducted a comprehensive analysis of the covariance structure model using the bootstrap method. The findings in Table 5 show that the indirect effect of individual charac-

teristics including both IPP and EPP on IPB through IPI is significant (IPP:  $\beta = 0.141$ ,  $p < 0.01$ ; EPP:  $\beta = 0.245$ ,  $p < 0.001$ ), supporting H2b and H2d. For external situational factors, the indirect effect of TP and BE through IPI is significant (TP:  $\beta = 0.122$ ,  $p < 0.001$ ; BE:  $\beta = 0.117$ ,  $p < 0.001$ ), supporting H3b and H3d. For marketing stimuli factors, product, price and promotional advertising (PA) all have a significant indirect impact on IPB through IPI (product:  $\beta = 0.263$ ,  $p < 0.01$ ; price:  $\beta = 0.103$ ,  $p < 0.001$ ; PA:  $\beta = 0.209$ ,  $p < 0.001$ ), supporting H4b, H4d, and H4f.

Table 5 Test Results of Mediation Analysis

Hypotheses	Paths	Direct Effects	Total Effects	Indirect Effects
H2b	IPP→IPI→IPB	0.305***	0.446***	0.141
H2d	EPP→IPI→IPB	0.512***	0.757***	0.245
H3b	TP→IPI→IPB	0.459**	0.581***	0.122
H3d	BE→IPI→IPB	0.410**	0.527**	0.117
H4b	Pro→IPI→IPB	0.564***	0.827**	0.263
H4d	Pri→IPI→IPB	0.742***	0.845***	0.103
H4f	PA→IPI→IPB	0.656***	0.865***	0.209

Notes: \*P< 0.05; \*\*P<0.01; \*\*\*P<0.001

## Discussion and Conclusions

This paper aims to explore the influence of consumer individual characteristics, external situational factors and marketing stimuli on the impulse purchase behavior of anime derivatives. The findings show that consumer individual characteristics (including impulse purchase propensity and emotional purchase propensity), external situational factors (both time pressure and brand effect), and marketing stimuli (product, price, and promotional advertising) are significantly and positively related to impulse purchase behavior of anime derivatives. Moreover, the mediating effect of impulsive purchase intention was significant for both the above latent variables and impulsive purchase behavior. The model of factors influencing impulse purchase behavior of anime derivatives constructed in this paper not only explores its influence on impulse buying behavior from three aspects, namely, individual characteristics, situational factors, and marketing stimuli, but also introduces mediating variables to enrich and improve the study of impulse buying behavior model. The results of this study

are also useful for providing references and suggestions for the development, design, and marketing of animation derivatives.

First, managers of animation derivatives need to focus on consumer emotional responses and pursue differentiated marketing strategies. This study demonstrates that customer emotion plays a considerable role in maintaining customer relationships and furthering a company's ability to increase its market share and competitiveness. With the development of shopping channels for anime derivatives, the convenience of online shopping, the ease of shopping for consumers and the modern logistics to narrow the geographical distance, differentiation for consumers should start from the consumers themselves. By collecting data related to consumers' online purchases, such as the type of anime products browsed and the length of time spent, the types of consumers with impulse buying qualities can be identified, and marketing strategies can be targeted to provide a good buying environment and appropriate marketing stimuli to improve the purchasing behavior of such consumers.

Additionally, managers need to highlight the characteristics of animation symbols and strengthen the brand effect of products. Currently, there is still a lot of room to explore the industrial development of animation in China; there is a greater market potential for the image design of animation products and the production and marketing of animation products. For example, there are still many excellent works in China's traditional culture that can be visualized in animation, and many of the characters in these visual works, if consumers can deeply recognize them, can be derivatized in animation production. In addition, most of the animation enterprises have not yet found a good business model to achieve self-sustainable renewal, and still need to rely on the government's industrial support and preferential policies to sustain their operation. Therefore, the development of China's animation derivatives industry should start from a strategic point of view, in terms of product design, from the perspective of animation characters based on stationery, toys, clothing, handicrafts and many other derivatives, and expand to relevant theme parks, amusement parks, etc. From the perspective of consumers, product design should be combined with consumer needs to find the creative source of product design and create anime competing products. In addition, when marketing anime derivatives (especially inviting consumers to participate in anime derivative experiences), companies should not only highlight the symbolic value and entertainment performance of the

product, but also let consumers clearly understand the difference between the anime derivative and existing ordinary products (or other anime derivatives), so that they can better realize their consumption behavior. Meanwhile, in the process of developing and designing animation derivatives, attention should be paid to the use of concepts such as "commemorative edition", "collector's edition" or "limited edition", so that the purchase, use, and collection of animation derivatives have a richer "meaning" and "value" and improve the product characteristics of animation derivatives. On the other hand, the development and design process of animation derivatives is not simply from supply to demand but should pay attention to the interaction with consumers, listen to their wishes and voices, so that the final developed and designed anime derivatives can meet the needs of consumers to the maximum extent, and let consumers express their emotions for specific characters and images in the anime when they use these anime derivatives. The final product will be developed and designed to meet the needs of the consumer to the fullest extent possible, allowing the consumer to express their emotions towards the specific characters and images in the animation.

Furthermore, the level of entertainment in the design of anime products is also a key factor influencing consumers' impulse purchases. Consumers not only want to get pleasure from the use of anime derivatives but also would like to share their pleasure with others. Given this, companies can regularly

interact with consumers and encourage them to establish entertainment alliances to provide the necessary platform and support for them to share their happiness while marketing anime derivatives.

Finally, this study shows that there is a positive relationship between price stimuli of products and promotional activities and consumers' impulse buying behavior. Therefore, companies can make reasonable adjustments in this area to meet customers' psychological needs with high quality and low prices. In addition, companies can incorporate other promotional methods, including gift vouchers, coupons, gifts, add-on deals, rebates, "small samples" distribution, and time-limited promotions. Companies can also choose to sponsor campus events with prizes to make anime derivatives popular on campus. Furthermore, price discounts can be used to stimulate impulse buying behavior under time pressure to buy. When the promotion period is short, direct discounts have a significant impact on impulse buying. When the promotional period is longer, merchants can attract consumers' attention by prominently displaying the promotional discounts, product benefits and usage effects, and the risks that can be avoided by using the product. In the case of online sales, marketers of animation derivatives can highlight the duration of the promotion and the strength of the discount on the transaction screen to stimulate impulse buying behavior.

### **Limitation and Recommendations for Future Research**

There are still some limitations to this research. Firstly, this paper focuses on the positive factors that influence the impulse purchase intention and impulse purchase behavior of anime derivatives to avoid the negative effects faced by anime derivatives in the process of development, design, and marketing. However, are there any negative factors that influence the impulse buying intention and impulse buying behavior of anime derivatives? At the moment, we do not verify yet. Future research could start from the negative factors. In addition, the analysis and understanding of the impulse buying behavior of animation derivatives in this paper are mainly based on China's consumption patterns and consumption habits and do not consider other countries. Given China's status as a major manufacturing country, studying the consumption patterns and habits of other countries and the impact of these factors on the impulse buying behavior of animation derivatives can help contribute to the production and export of animation derivatives in China. Finally, in this research, only the quantitative research method was adopted and all questions are closed questions. Therefore, in the future study, open opinions and suggestions from respondents are necessary to find more inputs on what would be the influence factors toward customer impulse purchase behavior of anime derivatives.

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