

Analysis of the relationship between Taobao promotion strategy and purchase intention based on the perspective of consumer behavior

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Abstract. In the highly competitive e-commerce industry, retailers must develop and implement diverse marketing strategies to influence consumer purchase decisions. As one of the largest e-commerce platforms in China, Taobao offers a wide set of promotions including discount coupons, full discount promotions, limited time discounts, and even promotions with full freebies aimed to attract and keep their customers. This study examines the impact of various promotional strategies on consumer purchase intentions, with a particular focus on the mediating effects of price perception and promotion participation. By analyzing the survey results of 302 users of Taobao, descriptive statistics were created and a set of various techniques like reliability analysis, exploratory factor analysis, Pearson correlation, and regression modeling was employed. The results confirm the hypotheses that the price discount, gift promotion, and emotional marketing significantly impact the purchase frequency while price cognition and promotion participation are intervening variables. These insights offer valuable guidance for marketers and e-commerce platforms, helping them optimize promotional strategies, enhance consumer engagement, and ultimately drive higher sales.

Keywords: Taobao, promotion, purchase intention, price discount, consumer behavior

1. Introduction

In the past few years, the emergence of e-commerce has shifted consumer shopping behaviors, prompting online retail platforms to adopt various promotional strategies to boost sales volume. Among these platforms, Taobao has dominated through the use of discount coupons, full reduction promotions, flash sales and gifts promotions that have considerably impacted on the purchasing behavior of consumers. Nonetheless, these methods proved inaccurate since some research indicates direct payment motives guarantee sales, while the converse indicates emotional participation is equally essential for buying something [1].

Existing literature have explored the role of social components -such as social network and source credibility- in e-commerce marketing [2]. In addition, perceived risk and engagement with the product are other notable variables that contribute to the consumers' reluctance to buy on Taobao [3]. However, a gap remains in understanding how various promotional strategies interact and influence consumer purchase decisions, particularly regarding the mediating effects of price perception and promotion participation [4].

This study aims to analyze the effect of varying promotional approaches on the purchase intention of consumers on Taobao and make an effort to bridge the existing gap in the previous research. Specifically, this research seeks to

- (1) Assess the effect of differing advertisement methods on the shopping activity of consumers.
- (2) Investigate the mediating effect of cognition of price and willingness to take part in the promotion.
- (3) Develop practical recommendations to help online marketing companies improve their marketing strategies.

2. Literature review

2.1. Marketing strategy and its implications for consumer behavior

Marketing strategy is crucial in determining what items the customer will buy. Studies reveal that price cut is the most widely used marketing strategy because it influences the consumer perception of a product's value and the urgency in which it needs to be decayed [5]. Additionally, incremental increases in full-discount promotions have been shown to stimulate higher purchase volumes, as consumers respond favorably to greater perceived savings [6].

In the recent years, live streaming e-commerce on Taobao has emerged as a key marketing channel, where the believability and social engagement of the anchors have a significant impact on the consumers' purchase decision [1]. Consumers are more likely to engage in the promotion when they perceive that sellers are credible, and when the advertisement information is consistent with expectations [7]. Moreover, social media interaction has a considerable effect on purchase intention as users trust peer recommendations and reviews before they buy anything [8].

2.2. The mediating role of price perception and promotion participation in consumer behavior

Price perception is a key determinant of consumer purchasing behavior, as it influences how individuals evaluate the fairness and value of a product [9]. Consumers develop cognitive frameworks around pricing based on past experiences and market expectations, which ultimately affect their willingness to purchase [10].

Additionally, promotion participation also has an impact on the response from consumers towards efforts made on promotion [2]. Studies indicate that consumers who actively engage in promotional activities—such as redeeming discount coupons or participating in limited-time offers—tend to exhibit higher purchase frequencies [4].

3. Research methods

3.1. Data collection

This paper uses consumers of Taobao as a case study drawing from available literature on the correlation of purchase intention and e-commerce marketing strategies, and employs a survey focusing on personal details of consumers, their participation in promotions, perception of prices, and frequency of purchase. It analyzes how these factors relate or contribute to the actual purchase intention of consumers and its determining factors through the use of SPSS 23.0 software.

With regard to the prevailing conditions of Taobao users and the user of promotional activities, a total of 320 questionnaires were distributed and 302 were returned (94.4% return ratio). These figures warrant the authenticity, representativeness, and validity of the data obtained from the questionnaire.

3.2. Research variables

Table 1. Promotional strategies and purchase frequency model

| Variable Type | Variable Name |
|-----------------------|---|
| Independent Variables | Emotional Marketing |
| | Gift Promotion |
| | Discount Pricing |
| Mediator Variables | Price Perception |
| | Promotion Engagement |
| Dependent Variable | Purchase Frequency |
| Control Variables | Control Variables (e.g., gender, age, etc.) |

Using an intricate analytical design with independent factors, mediating components, a dependent variable, and control variables, Table 1 illustrates the independent model for this investigation, which covers the effect of marketing techniques on the frequency of purchases made by consumers. The independent variables mostly comprise of three different types of promotional strategies which are emotional marketing, gift promotions, and discounts. Emotional marketing encompasses these strategies that are designed to elicit some sort of emotional appeal on consumers such as brand advertising and storytelling or use of emotions in advertisements which seek to foster brand loyalty and increase buying intentions. Gift promotions involve offering complimentary items or bonuses with purchases to enhance the attractiveness of the offer, while discount pricing is a strategy focused on generating immediate sales through short-term price reductions.

To analyze these effects, two mediating variables are added: promotion engagement and price perception. Price perception is the subjective evaluation of the fairness of the price and the discount on offer, and helps to explain how price-based promotions indirectly affect purchasing behavior through price perception. This latter term refers to the level of consumer attention or perceived participation in promotional activities which enables stronger brand devotion and increase consumer attention toward the brand sponsored.

The purchase frequency, which is a dependent variable, shows the active engagement of a consumer in shopping over a certain timeframe, making it the principal focus of the research. In addition, control demographic variables like age and gender are included to neutralize possible biases in the research so that the results can more accurately demonstrate the effects the promotion tactics has on the consumers.

3.3. Data analysis methods

This study combine different data analysis to ensure the scientific and reliable results. The primary means of analysis include descriptive statistical analysis, pearson correlation analysis, and linear regression analysis.

4. Research results and discussion

Based on the analysis of 302 Taobao users, this research examines the impact of price discounts, gift promotions, emotional marketing, price cognition, and promotion participation on purchase frequency. The findings from descriptive statistics are integrated with regression and correlation analyses to explain the results presented in this section.

4.1. Correlation analysis

Pearson correlation analysis was employed to assess the relationships between the variables and their linear associations. The results revealed significant correlations ($p < 0.001$), with all variables demonstrating strong positive correlations, suggesting that each promotional strategy positively influences purchase frequency.

Table 2. Correlation matrix of key variables

| | 1. | 2. | 3. | 4. | 5. | 6. |
|---------------------------|----------|----------|----------|----------|----------|----|
| 1.Price Discount | 1 | | | | | |
| 2.Giveaway Promotion | 0.418*** | 1 | | | | |
| 3.Emotional Marketing | 0.386*** | 0.400*** | 1 | | | |
| 4.Price Cognition | 0.489*** | 0.450*** | 0.512*** | 1 | | |
| 5.Promotion Participation | 0.453*** | 0.448*** | 0.422*** | 0.467*** | 1 | |
| 6.Purchase Frequency | 0.434*** | 0.432*** | 0.448*** | 0.478*** | 0.431*** | 1 |

*** $p < 0.001$

The results are depicted in Table 2.

Among the correlations, price discount and gift promotion had a significant positive correlation ($r = 0.418$, $p < 0.001$), as did price discount and emotional marketing ($r = 0.386$, $p < 0.001$). Furthermore, gift promotion and emotional marketing were positively correlated as well, as the correlation coefficient was 0.400, which is also significant ($p < 0.001$). Regarding the intermediate variables, price cognition was positively correlated with price discount ($r = 0.489$), gift promotion ($r = 0.450$), and emotional marketing ($r = 0.512$) ($p < 0.001$). Promotion participation also had positive correlations with price discount ($r = 0.453$), gift promotion ($r = 0.448$), and emotional marketing ($r = 0.422$) ($p < 0.001$). As for the dependent variables, purchase frequency had significant positive correlations with all independent and intermediary variables, such as price discount ($r = 0.434$), gift promotion ($r = 0.432$), emotional marketing ($r = 0.448$), price cognition ($r = 0.478$), and promotion participation ($r = 0.431$). All of the correlation coefficients noted were significant at the $p < 0.001$ level.

To sum up, the aforementioned first-step correlation analysis results affirmed the strong interaction of the key variables and identified their relations in regard to regression analysis as well as the mediation effect examination.

4.2. Linear regression analysis

Table 3. Linear regression results: Impact on purchase frequency

| Linear Regression Analysis Results (n=302) | | | | |
|--|---------------------------|-------------------|-------|---------|
| | Nonnormalized Coefficient | | t | p |
| | B | Standard Error | | |
| Constant | 0.653 | 0.215 | 3.033 | 0.003** |
| Price Discount | 0.159 | 0.060 | 2.650 | 0.008** |
| Giveaway Promotion | 0.156 | 0.056 | 2.786 | 0.006** |
| Emotional Marketing | 0.179 | 0.057 | 3.138 | 0.002** |
| Price Cognition | 0.177 | 0.060 | 2.959 | 0.003** |
| Promotion Participation | 0.127 | 0.055 | 2.303 | 0.022* |
| R ² | | 0.356 | | |
| After Adjusting R ² | | 0.346 | | |
| F | | F=32.795, p=0.000 | | |
| D-W Value | | 2.124 | | |

Dependent Variable: Purchase Frequency, *p<0.05 **p<0.01 ***p<0.001

This paper studies the effects of certain parameters on consumers' purchase frequency using the multiple linear regression method and the results can be seen in Table 3. The results of model significance test showed that the global regression model had statistical significance ($F = 32.795$, $p < 0.001$). The model's coefficient of determination, 0.356, along with an adjusted R^2 of 0.346, suggests that roughly 36% of the variance in consumer purchase frequency could be attributed to the independent variables. The Durbin-Wassen value being 2.124 means that, being close to 2, there is no obvious autocorrelation in model residuals which indicates the results are very reliable.

In the analysis of variables that influence purchase frequency, emotional marketing ($B = 0.179$, $p = 0.002$) and price cognition ($B = 0.177$, $p = 0.003$) showed the greatest positive correlation, which demonstrates that brands emotion and price evaluation have an impact on the consumers decisions. Gift promotion ($B = 0.156$, $p = 0.006$) and price discount ($B = 0.159$, $p = 0.008$) proved to also positively influence the purchase frequency, showing that indeed economic incentives are effective in promotion.

Furthermore, even though the regression coefficient of promotion participation is rather small ($B = 0.127$), the value of p is 0.022, which is still significant ($p < 0.05$). This indicates that consumers' participation in promotion activities can, to some extent, encourage purchase behavior.

In summary, price cognition, emotional factors, and economic promotion techniques have a great influence on the purchasing frequency of consumers, which confirms the research hypothesis and provides evidence for the further development of marketing strategy enhancement.

4.3. Results of mediation effect test

Table 4. Results of mediation effect test

| Path | Total Effect (c) | Direct Effect (c') | Mediating Effect (ab) | SE | LLCI | ULCI |
|----------|------------------|--------------------|-----------------------|-------|-------|-------|
| PD→PP→PF | 0.524 | 0.156 | 0.367 | 0.059 | 0.114 | 0.250 |
| PD→PE→PF | 0.498 | 0.128 | 0.369 | 0.059 | 0.083 | 0.198 |
| EM→PP→PF | 0.523 | 0.148 | 0.375 | 0.057 | 0.103 | 0.241 |
| EM→PE→PF | 0.442 | 0.126 | 0.316 | 0.055 | 0.074 | 0.157 |
| GP→PP→PF | 0.457 | 0.150 | 0.307 | 0.054 | 0.097 | 0.229 |
| GP→PE→PF | 0.466 | 0.122 | 0.344 | 0.055 | 0.056 | 0.164 |

Using the intermediary effect model and Bootstrap test(as shown in Table 4), the study examined the impact of price discount, emotional marketing, and gift promotion as a whole on the consumers' purchase frequency. The findings suggest that both the direct effect and indirect effect measured through the two mediating variables, price perception and participation in the promotion, are significant. Among them, price discount has a significant mediating effect through price cognition and promotion

participation (indirect effect is 0.367 and 0.369, 95% confidence interval does not contain 0). These two mediating variables also exerted emotional marketing through significant pathways (indirect effect is 0.375 and 0.316, respectively). On the other hand, the indirect effect of premium promotion through price perception and promotion participation was 0.307 and 0.344, respectively, which reached a significant level. This demonstrates that the subjective perception of consumers regarding promotional activities is extremely important during the execution of the promotion strategy to influence the purchase behavior, and there exists an intermediary effect.

In summary, the impact of the promotion strategy on purchase frequency is not entirely direct, but rather partially achieved indirectly through mediation systems such as cognitive and psychological involvement, which is essential for further comprehension of consumer behavior.

5. Conclusion

This research examines the effects that different promotional tactics employed by Taobao have on their consumer's buying frequency. Out of the 302 users, a statistical analysis of the questionnaire data is performed using Pearson correlation analysis, descriptive statistics, and linear regression model techniques. The analysis indicates that emotional marketing, price discounting, gift promotions, and participation in promotions have varying degrees of impact on consumer buying behavior. Marketing efforts that target consumer emotions paired with consumers' price perception have the most remarkable effects on purchase frequency, demonstrating that consumers, alongside paying attention to the economic value of promotions, are influenced by brand emotional attachment and price overview during decision making. On the contrary, non-monetary price promotions and gift promotions as well have substantial positive impact, but the effect is slightly weaker than that of emotional marketing.

The regression model performed well overall, with an R^2 score of 0.356 alongside a Durbin Wason score of 2.124. This suggests that when it comes to explaining the variability of purchase frequency, the dependent variable performs in a statistically significant manner, while also suggesting that there is no auto-correlation issue in the model residuals. Moreover, to maintain the integrity of the measurements and data quality, a reliability analysis of central variables was conducted before the factor and regression analyses. The results showed that the main measurement items had internal consistency, thus enabling the research conclusion and supporting the claim with robustness.

This study not only confirms the validity of some promotional measures but also reveals that consumers' actual engagement in promotional activities tends to be relatively low. This finding underscores the importance of businesses considering consumers' emotional and psychological needs, in addition to offering price discounts or gifts, to improve marketing conversion rates and user interactions when developing promotional plans.

There were notable limitations within this study despite its positive results. Firstly, the data is solely obtained from Taobao, which may not be representative of other e-commerce platforms. Future research could be conducted on Jingdong, Pinduoduo, and other platforms for vertical compare-and-contrast studies on their usage. Secondly, this study did not account for consumer heterogeneity such as gender, age, and spending power. These variables can also be analyzed in future studies to understand the variation among different people in response to the marketing strategies. Finally, the scope of this study was confined to a certain time period making it impossible to observe changes in consumer behavior over a period of time. Future research could investigate the long-term effects of marketing strategies on consumer behavior through longitudinal studies using platforms like Taobao.

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