



User Participation under a Points-Based Incentive System: A Case Study of Taobao

Yunlong Li

University Sains Malaysia, Penang, 11800, Malaysia

yunlong_raley@student.usm.my

Abstract. The research examined point-based incentives associated with Taobao and how they affect user behavior differentiated by user groups. The existing literature highlights that digital rewards have been effective in enhancing user engagement in the short run, but have not incorporated user heterogeneity nor offered insights into the psychological mechanisms that can account for behavioral change. This research illustrated that digital rewards can be understood through self-determination theory, user experience design research, and behavioral economics, and through qualitative research explored motivational and behavioral specificity within a sample of long-term users of Taobao. Using a semi-structured interview format, four long-term users of Taobao were interviewed and revealed a range of user engagement pathways. More specifically, some users were able to internalize the gamified incentives into their loyalty towards the platform, while some users were less engaged, with rather passive engagement without much interplay with the opportune redemption of gamified incentives. The moderating factors that were identified were: the type of reward, the rules clarity, and the feedback rhythm. This study was further able to show that the effectiveness of the incentive could also be differentiated by demographic profiles and motivational fit. Finally, this study contributed to the incentive design theory literature by identifying differentiated user profiles, and offered an avenue for project managers to be mindful of in managing adaptive and sustainable reward systems in the digital commerce context.

Keywords: Point System, User Behavior, Taobao, Incentive Mechanism, User Engagement

1 Introduction

The points system is a common incentive mechanism in platform-based communities, especially in the context of the pandemic, where user consumption behavior has shifted from offline to online, and new consumption models such as live-streamed shopping have emerged rapidly^[15]. Platforms adjust the exchange ratio between points and rewards to guide users toward specific behaviors.

However, as users accumulate experience, their response to reward mechanisms also changes, necessitating continuous optimization of incentive strategies to maintain their effectiveness.

In recent years, the points system has evolved from a single reward mechanism to a diversified one. For example, since 2022, platforms such as Blur have enhanced user stickiness and engagement through mechanisms such as “order placement” and “points borrowing,” demonstrating the positive impact of gamified design on user activity^[5]. Taobao, on the other hand, has effectively stimulated user consumption and interaction through strategies such as “Taobao Coins” and “Points for Cash.”

However, traditional user experience evaluation methods such as questionnaires have limitations such as limited sample sizes and strong subjectivity^[3]. In the long term and across diverse user groups, incentive effects still face ongoing challenges. Previous studies have pointed out that while gamification can temporarily increase participation, how to achieve long-term sustained incentives still requires further exploration^[7]. Therefore, understanding changes in user behavior and their incentive mechanisms can help platforms build more adaptive strategic frameworks.

2 Literature Review

2.1 Research Topic: the Impact of Points Systems on User Behavior

Points systems, a common incentive tool used by e-commerce platforms, have been proven to have a significant effect on user behavior, but their effectiveness is influenced by multiple factors, including user characteristics and system design^[1].

First, points systems can effectively increase short-term user engagement and platform stickiness.

As a form of light gamification design, points incentivize active user behavior on the platform through task feedback, reward mechanisms, and other forms^[5]. Personalized incentive pathways combined with big data analysis also enable platforms to maintain user engagement more precisely^[13]. However, such incentives primarily focus on short-term behavioral outcomes, positively impacting metrics like click-through rates and dwell time. Without subsequent mechanism adjustments, users may fall into an “incentive inertia,” leading to decreased engagement.

Secondly, the long-term effectiveness of the points system is determined by the differences among user groups and the degree of alignment between incentive design and user needs.

Research has found that users exhibit significant differences in their acceptance of task complexity, understanding of reward structures, and preferences for feedback frequency. If the system design is too uniform, it may lead to incentive fatigue or functional failure^[13]. Kim noted that the formation of loyalty is influenced by the flexibility of the mechanism, and a single structure cannot meet the evolving needs of long-term user behavior^[8]. Additionally, Guay combined self-determination theory to propose that intrinsic motivations such as a sense of belonging and control are the key to maintaining long-term loyalty^[6].

2.2 Theoretical Framework

To explore the pathways through which points-based incentive mechanisms influence user behavior, this paper constructs a multidimensional theoretical model integrating behavioral economics, user experience design theory, and self-determination theory (SDT). It employs expected utility theory and incentive theory to explain how points influence users' decision-making tendencies^[14]. The model comprises four key variable dimensions: independent variables, moderator variables, mediator variables, and dependent variables, forming a closed-loop pathway from incentive design to behavioral outcomes.

First, independent variables: incentive factors, user differences, and consumption habits collectively determine users' initial responses.

In terms of incentive design, factors such as point type (immediate/accumulative), visualization, and rule transparency significantly influence users' participation willingness and platform stickiness^[13]. Additionally, different users have varying psychological needs for a sense of achievement, control, and belonging due to differences in age, experience, and goals, which in turn affect their acceptance of the points system^[6]. Furthermore, users' consumption characteristics, such as shopping frequency and spending habits, also influence their subjective judgment of task value^[3].

Second, moderator variables and mediator variables reveal the psychological mechanisms underlying behavioral changes.

Age and occupation, as moderating variables, influence the intensity and direction of the relationship between motivational factors and psychological responses. For example, younger users prefer challenging tasks, while working adults prioritize the practical value of points^[8]. In terms of mediating mechanisms, users' psychological responses—including cognitive evaluations, emotional attitudes, and behavioral motivations—play a crucial bridging role between incentives and behavior^[11]. Among these, satisfaction reflects the alignment between mechanism design and user expectations, while motivation reveals whether users transition from external drive to intrinsic motivation^[6].

Third, the dependent variable manifests as changes in platform activity and consumption frequency.

The actual effectiveness of the points system ultimately manifests in increased user activity duration, purchase frequency, and interaction depth^[5]. This not only measures the sustainable conversion capacity of user behavior but also reflects the long-term influence of the entire incentive mechanism.

In summary, this theoretical model integrates behavioral economics' explanation of incentive preference judgments^[14], the focus on mechanism visualization and interaction design in user experience theory^[9], and the understanding of intrinsic motivation generation pathways in self-determination theory^[11], as shown in Figure 1, providing a theoretical foundation for exploring the behavioral transformation of users from “passive response” to “active participation.”

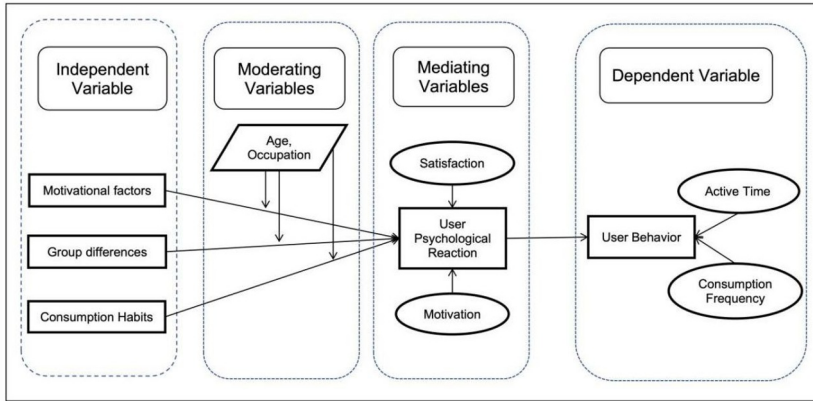


Fig. 1. Theoretical framework

3 Methodology

This study employs semi-structured interviews as a qualitative research method to explore users' psychological responses, motivational sources, and behavioral evaluation pathways during their use of the platform's points system. Compared to questionnaires or behavioral data, interviews are better suited to capturing users' subjective experiences and genuine feedback, particularly when analyzing systems like points mechanisms that integrate rules and interactivity to produce behavioral effects at the individual level^[4].

From a theoretical perspective, Self-Determination Theory suggests that motivation stems not only from external rewards but is also closely related to users' psychological needs, contextual interpretations, and value alignment^[6]. These underlying psychological mechanisms are often difficult to uncover through quantitative tools, whereas interviews can guide users to reflect on their micro-level decision-making and emotional fluctuations, thereby reconstructing user behavioral logic in a more realistic manner^[2].

Current research on points systems primarily focuses on system design and outcome-oriented approaches, with limited exploration of “user subjective response mechanisms”. Interviews not only help validate theoretical hypotheses but also identify blind spots and gaps in system operation, providing a more strategic user perspective and feedback for system optimization^[4].

3.1 Research Design and Theoretical Support

This study is based on an exploratory research design, using semi-structured interviews to reveal the potential path relationships between the points mechanism—user psychology—behavioral response. Interview methods are suitable for problem types that have

not yet been systematically modeled, involve complex variable relationships, and encompass subjective cognition and situational judgment. They can more effectively capture users' psychological perceptions, motivational shifts, and behavioral feedback in real-world platform usage environments. Compared to quantitative tools, interviews are better suited for uncovering the differentiated response processes of different user groups to incentive mechanisms, offering stronger discriminative and explanatory power.

The study revolves around four core themes: user habits, task participation and immediate feedback, behavioral transformation pathways, and overall evaluation of the mechanism. The question design balances theoretical construction and variable identification, focusing not only on subjective experiences but also supporting subsequent behavioral modeling analysis, providing an empirical foundation for understanding the specific operational mechanisms of the incentive system.

Overall, the study's methodological design aligns closely with its theoretical framework, facilitating a deeper understanding of how the points-based mechanism operates within different user psychological structures to elicit behavioral responses. The insights gained from the interviews address gaps in current research regarding the "mechanism's adaptability" and "group differences" and provide empirical support for optimizing and personalizing incentive mechanisms.

3.2 Interview Sample Design and Selection Logic

3.2.1 Sample Strategy and Theoretical Basis.

Purposive sampling was employed to select representative long-term Taobao users, emphasizing information richness and structural diversity rather than statistical representativeness. Sample selection prioritized key variables such as age, occupational role, platform usage frequency, and participation level in the points system to reflect psychological response pathways across different social identities and usage contexts.

Based on Self-Determination Theory, an individual's behavioral motivation is determined by the extent to which their needs for achievement, control, and belonging are satisfied, and these psychological needs exhibit significant differences across different user groups^{[6][11]}. Therefore, this study incorporates group heterogeneity into the sample selection logic to provide theoretical support for constructing the "incentive-psychological-behavioral" structural pathway.

3.2.2 Overview of Sample Structure.

Table 1 is an Overview of Sample Structure, which provides a detailed introduction to the User Survey.

Table 1. User Survey

<p>User A: 26 years old, white collar, daily active user</p>	<p>Prefers instant feedback rewards, participates in gamification activities such as check-in and browsing tasks on a daily basis, and is sensitive to the pace of task experience and visual feedback. He is sensitive to the rhythm of task experience and visual feedback.</p>	<p>He represents the "high-frequency/highly sensitive" young user group.</p>
--	---	--

User B: 42 years old, middle manager in manufacturing industry	Attaches importance to the convertibility of points and clarity of rules, and prefers exchange behaviors with low participation threshold. Low tolerance for complex tasks.	Represents the “rational/utilitarian” middle-aged user group.
User C: 22 years old, college student	Prefers lucky draws and punching cards, and is interested in the gameplay and socialization of the points system.	Representing the “interaction-oriented/community participation” young user group.
User D: 36 years old, full-time mother	Mainly passively uses points to offset cash through the checkout page, does not actively participate in tasks but recognizes the “automatic rebate”.	She represents the “low-frequency/passive” user group.

3.2.3 Research Value of Sample Composition.

The sample design covers typical dimensions such as “high/low engagement,” “immediate motivation/long-term value,” and “game perception/utilitarian rationality,” aligning with Sun's “user motivation stratification theory.” Through in-depth interviews with a small sample of high information density, it is possible to effectively observe the genuine reactions of different types of users to the points system and their potential incentive breakpoints^[8], providing valuable empirical references for platform-tiered incentive strategies.

3.3 Research Ethics Statement

This study strictly adheres to social science research ethics norms to ensure participants' informed consent, privacy rights, and autonomy in participation:

Prior to interviews, oral informed consent was obtained via WeChat voice messages, clearly explaining the research objectives, content, and data usage;

All interviews were recorded with participants' permission, and pseudonyms were used to conceal real identity information;

Data were used exclusively for this study's analysis, stored on the researcher's encrypted personal device, and deleted within three months after the study concluded;

The study did not involve minors or sensitive topics, and the interview method was non-invasive and low-risk, aligning with ethical standards and academic requirements^{[4][12]}.

4 Research Findings

Research indicates that the impact of the points system on user behavior exhibits significant group-level differences. These differences are not only reflected in variations in participation frequency and behavioral patterns but also manifest at the levels of motivational structure and cognitive proficiency. High-frequency users demonstrate stronger task response capabilities and sensitivity, actively engaging with platform tasks and feedback mechanisms, while low-frequency users primarily use points during settlement processes and lack sustained response to task-driven incentives. This phe-

nomenon aligns with the perspective proposed by Sun^[13], which states that the effectiveness of incentive mechanisms depends on their alignment with user behavioral characteristics.

Users' motivational composition also influences their acceptance of the points system. Some users prefer growth-oriented, process-driven incentive pathways, with their behavior driven by intrinsic motivation such as a sense of achievement and immediate feedback, aligning with Ryan and Deci's "motivation internalization" pathway^[11]. In contrast, other users place greater emphasis on the redemption value of points, with their participation often driven by external incentives, exhibiting lower interest in the tasks themselves. If incentive strategies fail to encompass diverse motivational pathways, they may limit behavioral conversion among certain users.

Additionally, the complexity of mechanism design and the clarity of feedback rhythms have a critical impact on users' sustained participation. High-engagement users can understand the task pathways and reward logic, while low-engagement users generally report complex rules and unclear feedback, which affects their willingness to use the platform and their sense of trust. This finding aligns with Lewis and Sauro's conclusion that "mechanism usability is user experience," further highlighting the importance of design transparency and smooth interaction in platform mechanism optimization^[9].

Overall, the points system can form a positive chain of "incentive-psychological response-sustained behavior" under certain conditions, but its effectiveness is limited by users' cognitive structures and motivational differences^[10]. This study validated the applicability of the theoretical model through micro-level interview data and provided empirical foundations and directional guidance for e-commerce platforms in the personalized optimization of points strategies.

5 Conclusion

This study uses the Taobao platform as an example to explore the impact of the points-based incentive mechanism on the behavior of different user groups through qualitative interviews, and constructs an analytical framework that examines the relationships between motivational factors, user psychological responses, and behavioral outcomes. The findings indicate that users' responses to the points mechanism exhibit significant differences in terms of behavioral intensity, cognitive understanding, and participation pathways, and these differences are moderated by variables such as age and occupation. To enhance the generalizability and systematic nature of the research findings, future studies could expand the sample size to include new users and high-spending users, thereby improving the results' applicability.

Additionally, incorporating quantifiable metrics such as user activity duration, points redemption frequency, and spending amounts can enhance the precision of evaluating the effectiveness of the points system on a qualitative foundation. In response to the periodic updates and structural changes in incentive strategies, a longitudinal tracking design is recommended to study the evolutionary trends of user behavior over time. Furthermore, future research could incorporate cross-platform comparative analysis,

such as between Pinduoduo and JD.com, to examine differences in points structures and user behavioral responses across platforms, thereby addressing the limitations of this study's single-platform focus.

Finally, it is recommended to explore the underlying logic between individual psychological expectations, task-driven motivations, and behavioral stickiness from the perspective of user motivation structures. This would help refine user segmentation and adaptation mechanisms in points strategy design, thereby achieving dynamic sustainability and strategic adaptability in incentive effects.

References

1. Alshurideh, M., Gasaymeh, A., Ahmed, G., Alzoubi, H., & Kurd, B. A. (2020). Loyalty program effectiveness: Theoretical reviews and practical proofs. *Uncertain Supply Chain Management*, 599–612. <https://doi.org/10.5267/j.uscm.2020.2.003>.
2. Cheng, F., Yu, S., Qin, S., Chu, J., & Chen, J. (2021). User experience evaluation method based on online product reviews. *Journal of Intelligent & Fuzzy Systems*, 41(1), 1791–1805. <https://doi.org/10.3233/JIFS-210564>.
3. Chen, L., Tong, T. W., Tang, S., & Han, N. (2022). Governance and Design of Digital Platforms: A Review and Future Research Directions on a Meta-Organization. *Journal of Management*, 48(1), 147–184. <https://doi.org/10.1177/01492063211045023>.
4. Creswell, J. W., & Plano Clark, V. L. (2023). Revisiting mixed methods research designs twenty years later. *Handbook of mixed methods research designs*, 1(1), 21–36. <http://dx.doi.org/10.4135/9781529614572.n6>.
5. García-Jurado, A., Torres-Jiménez, M., Leal-Rodríguez, A. L., & Castro-González, P. (2021). Does gamification engage users in online shopping? *Electronic Commerce Research and Applications*, 48, 101076. <https://doi.org/10.1016/j.elerap.2021.101076>.
6. Guay, F. (2022). Applying Self-Determination Theory to Education: Regulations Types, Psychological Needs, and Autonomy Supporting Behaviors. *Canadian Journal of School Psychology*, 37(1), 75–92. <https://doi.org/10.1177/08295735211055355>.
7. Huseynov, F. (2021). Gamification in E-Commerce: Enhancing Digital Customer Engagement Through Game Elements. In I. R. Management Association (Ed.), *Research Anthology on E-Commerce Adoption, Models, and Applications for Modern Business* (pp. 724–741). IGI Global. <https://doi.org/10.4018/978-1-7998-8957-1.ch038>.
8. Kim, J. J., Steinhoff, L., & Palmatier, R. W. (2021). An emerging theory of loyalty program dynamics. *Journal of the Academy of Marketing Science*, 49(1), 71–95. <https://doi.org/10.1007/s11747-020-00719-1>.
9. Lewis, J. R., & Sauro, J. (2021). USABILITY AND USER EXPERIENCE: DESIGN AND EVALUATION. In G. Salvendy & W. Karwowski (Eds.), *HANDBOOK OF HUMAN FACTORS AND ERGONOMICS* (1st ed., pp. 972–1015). Wiley. <https://doi.org/10.1002/9781119636113.ch38>.
10. Montag, C., Yang, H., & Elhai, J. D. (2021). On the Psychology of TikTok Use: A First Glimpse From Empirical Findings. *Frontiers in Public Health*, 9, 641673. <https://doi.org/10.3389/fpubh.2021.641673>.
11. Ryan, R. M., Deci, E. L., Vansteenkiste, M., & Soenens, B. (2021). Building a science of motivated persons: Self-determination theory's empirical approach to human experience and the regulation of behavior. *Motivation science*, 7(2), 97. <https://psycnet.apa.org/doi/10.1037/mot0000194>.

12. Saunders, C. H., Sierpe, A., Von Plessen, C., Kennedy, A. M., Leviton, L. C., Bernstein, S. L., ... & Leyenaar, J. K. (2023). Practical thematic analysis: a guide for multidisciplinary health services research teams engaging in qualitative analysis. *Bmj*, 381. <https://doi.org/10.1136/bmj-2022-074256>.
13. Sun, X., & Zhang, Q. (2021). Building digital incentives for digital customer orientation in platform ecosystems. *Journal of Business Research*, 137, 555-566. <https://doi.org/10.1016/j.jbusres.2021.08.068>.
14. Takemura, K. (2020). Behavioral Decision Theory. In K. Takemura, *Oxford Research Encyclopedia of Politics*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228637.013.958>.
15. Wu, Q., Sang, Y., Wang, D., & Lu, Z. (2023). Malicious selling strategies in livestream e-commerce: A case study of Alibaba's Taobao and ByteDance's TikTok. *ACM Transactions on Computer-Human Interaction*, 30(3), 1-29. <https://doi.org/10.1145/3577199>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

