

The effect of gamification on brand co-creation in app-based businesses: investigating the mediating role of consumer engagement and the moderating role of hedonic and innovativeness

Rayhane Rezagholizade¹ , Zahra Sadeqi-Arani² , Esmail Mazroui³ 

1- Department of Management and Entrepreneurship, Faculty of financial science, Management and Entrepreneurship, University of Kashan, Kashan, Iran

2- Assistant Professor, Department of Management and Entrepreneurship, Faculty of financial science, Management and Entrepreneurship, University of Kashan, Kashan, Iran

3- Assistant Professor, Department of Business Administration Faculty of Financial Science, Management and Entrepreneurship, University of Kashan, Kashan, Iran

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Abstract

Today, customer participation in branding through brand co-creation behavior is one of the most important concerns and challenges of industries in this field. To achieve this goal, it is very important to pay attention to the concept of gamification. This research seeks to investigate the effect of gamification on customer brand co-creation behavior regarding the mediating role of consumer engagement and the moderating role of consumer hedonic and innovativeness. The study focused on the customer base of Snapp and TAPSI brands within the city of Isfahan. Given the challenges in determining the exact number of customers and their statistical data, a convenience sampling approach was adopted, resulting in a sample size of 306 individuals. The extensive nature of the target population, combined with restricted access to the entire community, necessitated the use of this accessible sampling method. To collect data, standard and researcher-made questionnaires were used. Data analysis with SmartPLS software shows the positive and significant effect of gamification on customer brand co-creation behavior, partial mediating role of consumer engagement variable, positive moderating effect of hedonic and innovativeness, and finally confirming the moderated mediation. Findings indicate that both Snapp and TAPSI's applications incorporate elements of gamification, such as game mechanics and dynamics. Given the significant role of gamification in enhancing brand value co-creation, it's recommended to conduct a detailed analysis of how each gamification component—dynamics and mechanics—is utilized within these platforms to identify areas for improvement. Furthermore, acknowledging the influence of consumer personality traits, like hedonic and innovativeness, as moderating factors, can offer valuable insights. This understanding could guide the developers of ride-hailing applications in tailoring and evolving their platforms through the strategic use of various gamification elements, tailored to customers segmented by these personality traits.

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Corresponding Author: Zahra Sadeqi-Arani

Email: sadeqiarani@kashanu.ac.ir

Extended Abstract

Introduction

Brand Co-creation is a type of cooperation and personal interactions between consumers and companies to create shared experiences and ultimately value creation, which requires the use of techniques to engage consumers with the desired brand (Merhabi, et al, 2021). In the virtual businesses, consumer engagement is a useful tool for understanding how companies and customers interact to co-create value (Storbacka et al., 2016). Consumer engagement actually includes the organization's relationship with its customers beyond trades and transactions (Leclercq, et al., 2018).

With the increasing growth of the Internet and related technologies, the brand concept has changed, and today the value of online brands has grown significantly (Jalali, 2021). Today, researchers use game-based platforms to engage consumers and engage them in the brand. These gamified platforms enable companies to provide a compelling experience to stakeholders and thereby create, maintain, and develop customer engagement over time (Breidbach, et al, 2014). Benefits such as increased organizational performance (Bawa, 2023), increased efficiency (Tuna, 2023), improved training experience (Trinh, et. al, 2023), increased consumer engagement, sales, and increased brand favorability (Öztürk & Hersono, et. al., 2023; Mariyum & Qazi, 2023), improving concentration and learning (Mazlan, et al., 2023) are among the most important advantages of this technique; as a result, it can be used to strengthen brand co-creation behavior. To increase the effect of gamification on consumer engagement, the level of novelty and pleasure seeking of the consumer can be effective and somehow moderate this relationship. Among internet businesses, car internet request systems are one of the pioneers in this field, and several companies have been able to take a significant share of intra-city transportation (Zarei et al., 2020). Considering the importance of online transportation and the special position of the customer in this industry, the current research aims to answer the research question: "How does the effect of gamification on the brand co-creation with the mediating role of consumer engagement and the moderating role of consumer hedonic and innovativeness?"

Theoretical Literature

Brand Co-creation: Co-creation is considered a social and collaborative process in which two or more parties interact with each other to create value (Iglesias, 2017). Co-creation has 4 aspects: 1- exchange of ideas, 2- access, 3- transparency, and 4- risk. The exchange of views shows that co-creation includes interaction and deep involvement on both sides (company and consumer). In a social commerce platform like Facebook, on the pages of different brands, consumers interact with each other as well as with the target company to post their opinions, suggestions, and experiences (Siano et al., 2022).

Gamification: Gamification is the process of adding game elements to a non-game situation. Gamification has been defined as "the use of thinking and game mechanics to engage users and solve problems". (Zichermann & Cunningham, 2011). Gamification refers to transforming activities, systems, services, products, or organizational structures to afford gameful experiences (Huber & Ropke, 2015).

Consumer engagement: Consumer engagement is a state of being occupied, fascinated, or immersed in something (meaning constant attention) that ultimately creates a certain attractive or repulsive force (Higgins & Scholer, 2009). Consumer engagement is defined as "behavioral manifestation of customers towards a brand or company, beyond purchase, caused by motivational stimuli"; these demonstrations include actions such as: positive word of mouth advertising, providing recommendations and supporting other customers. Consumer engagement is "a psychological state that occurs through the interactive and creative

experiences of a customer with a focal agent or object (such as a brand) in a focal service relationship” (Brodie et al., 2010). In fact, consumers produce different types of value for themselves by involving their resources such as time, knowledge or social capital in the context of innovation. Therefore, it can be concluded that they are part of the value co-creation process (Leclercq et al., 2018).

Consumer innovativeness: Consumer innovativeness refers to the willingness of consumers to buy new and different products and services instead of staying in the previous and current choices and patterns, and in fact, consumers who have a great desire to accept new products and services to meet their needs are considered innovative. Researchers recognize innovativeness as an important personality trait in consumer behavior (Kim et al., 2020). Basically, consumers who have a high degree of novelty are naturally curious and enjoy creative discovery (Aidi, 2024), and as a result, they tend to accept new products and services.

Consumer hedonic: Hedonic value is considered as one of the main characteristics influencing consumer repurchase intention (Fang et al., 2011; Kim et al., 2020). Hedonic value is the overall evaluation of the empirical benefits (e.g. entertainment) that the consumer can have during the purchase process. Enjoyment can become a basic condition that motivates to perform shopping activities (Bical & Ispir, 2021).

Research Methodology

This research has a paradigm of positivism, quantitative approach, and survey strategy. The statistical population of the study is the customers of Snap and TAPSI brands as the most popular online transportation platforms. Due to the indeterminacy of the sample size, the available sampling method and the sample size of 306 people were selected. Due to the large size of the target community and the lack of access to all members of the community, it was not possible to fully investigate the members of the community, which is why the accessible sampling method was used. In order to remove the limitations of available sampling, it has been tried to distribute questionnaires at different times and places in Isfahan city. To collect data, standard and researcher-made questionnaires were used. Questionnaires were provided to the statistical community in both paper and electronic form. The variables examined in the questionnaire included gamification, brand co-creation, consumer engagement, consumer hedonism, and consumer novelty. To evaluate the validity of questionnaires, in addition to face validity, factor validity was used in the form of convergent and divergent validity. To assess reliability, in addition to Cronbach's alpha, a composite reliability index was also used. In order to analyze the data, structural equation software was used. Smart-PLS software was used to fit the model.

Research Findings

In order to test the hypotheses or conceptual model of the research, smart-PLS 3 software was used. The research results indicate a significant and positive effect of gamification on brand co-creation ($B=0.332$, $t=5.834$). Also, the results of the research showed that consumer engagement plays a mediating role in the relationship between gamification and brand co-creation ($B=0.372$, $t=8.554$). In the relationship between gamification and consumer engagement, the consumer hedonic and innovativeness variables play a moderating role. The path coefficient of the consumer innovativeness is equal to (-0.092) , and its test statistic is equal to 2.014; which shows the negative effect of this relationship; since the test statistic is more than the critical value (1.96), it can be said that this effect is significant. Also, the path coefficient of the consumer hedonic is equal to (0.046) and its test statistic is also equal to 1.96; which shows the positive effect of this relationship; since the test statistic is equal to the

critical value (1.96), it can be said that this effect is significant. In general, it can be said that all research hypotheses have been confirmed at the 95% confidence level.

Conclusion

Considering the importance of online transportation and the sensitivity of this industry to customer behavior, the effect of gamification on customer brand co-creation behavior was investigated in this research. The results showed that gamification has a positive and significant effect on customer brand co-creation behavior. Therefore, the result of examining this hypothesis is in line with researches of Nobre & Ferreira (2017); Merhabi et al., (2021); García-Magro et al., (2023); Martín-Peña et Al., (2023). This result is because gamification provides a platform for developing interaction with the brand and improving relationships; through fun, challenge, continuous experiences, and brand participation. In this way, it provides opportunities for consumers to participate in the brand co-creation.

The result of examining the hypothesis of the mediating role of consumer engagement in the relationship between gamification and brand co-creation has also been confirmed. In other words, consumer engagement plays a mediating role in this relationship. The result of examining this hypothesis is in line with researches of Rather et al., (2023a); and Rather et al., (2023b). By involving consumers in the brand, gamification causes more participation of consumers in the brand co-creation, creating cooperation, and ultimately more consumer loyalty.

In the relationship between gamification and consumer involvement, the consumer hedonic and innovativeness variables play a moderating role. Thus, at higher levels of consumer hedonic and innovativeness, the effect of gamification on consumer involvement will be greater. This issue is indirectly mentioned in the research of Kim et Al., (2020). Hedonics increases the overall evaluation of experiential benefits (e.g., entertainment) when using a service or product. Also, it causes the customer's emotional state to overcome him in the purchase, and a higher level of this dominance can lead to a higher effect of gamification on consumer engagement. People with novelty characteristics tend to buy new and different products and services instead of staying in the previous and current choices and patterns. In other words, novice- who are open to experiences based on the Neo personality model - show less desire to be loyal to a brand, and because of their willingness to diversify, they are less involved in a brand.

In general, it can be said that gamification by creating an attractive environment in online car applications can engage the customer for a longer time, and more involvement of the customer can lead to his co-creation behavior. The effect of gamification on consumer engagement can be moderated depending on the hedonic level of the individual. Many people are pleasure-seekers and will stay engaged with a topic for a long time if the gamification is done right. Also, in the case of novelty, if the expansion of the variety of gamification elements and innovation in their creation can keep people with high novelty characteristics loyal to using the service, these things should be considered by decision-makers in designing applications.

In order to improve brand co-creation behavior, in addition to creating the chance of customer participation in branding through the creation of a customer club, the possibility of giving feedback to customers and viewing it by others, the possibility of transferring experiences, suggestions, and criticisms; it is necessary to focus on strengthening gamification.