

The Influence of Social Crowding on Brand Alliance Products' Preferences

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Abstract: In the highly competitive world of marketing, understanding how consumers evaluate themselves, and others is crucial. Social comparison is an essential component of this evaluation process, making it a vital area of study in the field of marketing. Additionally, brand alliances are an increasingly popular strategy for marketers seeking to enhance brand image and expand their customer base. Through five field and experimental studies grounded in the inspiration theory, this research examines the impact of upward social comparison on consumer preference for brand alliance products. Specifically, we investigate the role of the self-threat and the need for inspiration as serial mediating factors in this relationship. Additionally, we examine how the different types of brand alliances moderate the effects of upward social comparison on consumer preference for brand alliance products. Our findings contribute to advancing the theoretical understanding of social comparison and brand alliances, guiding marketers in developing effective brand strategies, and alleviating the negative effects of upward comparison on individuals.

Keywords: Social comparison, Brand alliance, self-threat

1. Introduction

In today's fast-paced consumer market, brands are constantly seeking innovative ways to differentiate themselves and capture consumers' attention. One such approach is through brand alliances, where two or more brands collaborate to create unique products that leverage their combined brand equity. A growing trend in this area is the development of cross sensory products (CSPs), which are products with different sensory attributes provided by co-brands. For instance, the collaboration between Pepsi and Vaseline resulted in lip balm with the aroma of cola and the texture of Vaseline. However, the success of CSPs is not only dependent on the product itself but also on the context in which it is presented to consumers. This study explores the impact of social crowding on consumer preferences for CSPs.

Social crowding refers to the perception of being in a densely populated environment, which can lead to feelings of discomfort and a desire for personal space. Previous research has primarily focused on the negative consequences of crowding, such as avoidance behavior and reduced product evaluation. However, recent studies have begun to uncover the positive effects of crowding on consumer behavior, particularly in the context of sensory marketing. We propose that feeling crowded increases consumers' need for arousal, which in turn leads to a higher preference for CSPs that can provide multi-sensory stimulation.

The concept of sensory marketing has evolved to include not just the traditional senses of sight, sound, and touch, but also taste, smell, and even the more recent inclusion of the vestibular sense. Research has shown that engaging multiple senses can create a more immersive and memorable consumer experience, which in turn can lead to increased brand loyalty and consumer satisfaction. For instance, the use of background music in retail settings has been found to influence consumer mood and purchase behavior, demonstrating the power of sound in shaping consumer experiences.

Moreover, the role of social crowding in sensory marketing is gaining attention. Studies have indicated that the density of people in a retail environment can influence the effectiveness of sensory marketing strategies. In crowded settings, consumers may be more receptive to sensory cues due to an increased need for arousal and stimulation. This suggests that retailers could potentially use sensory marketing to mitigate the negative effects of crowding and enhance the shopping experience for

consumers.

In conclusion, our research underscores the significance of understanding the role of social crowding and arousal in shaping consumer preferences within the context of brand alliances. By tailoring marketing strategies to account for these factors, businesses can effectively enhance consumer experiences and outcomes in various retail settings. The integration of sensory elements in marketing strategies has been shown to have a profound impact on consumer behavior, and the strategic use of crowding can influence consumers' perceptions of product quality and desirability, as crowded environments may signal popularity and social proof, which can be leveraged to enhance the appeal of brand alliance products.

2. Literature Review

2.1. Brand Alliances and Cross Sensory Products

Brand alliances have been a popular strategy in marketing, allowing brands to combine their resources and expertise to create new products and reach new markets^[1]. The success of a brand alliance is often determined by the degree of brand fit, product category compatibility, and the number of brands involved. However, few studies have examined the sensory aspects of brand alliances, particularly the development of CSPs. Cross-sensory marketing is an emerging field that focuses on the integration of multiple sensory elements in marketing strategies to enhance consumer experiences. Krishna^[1] defines cross-sensory as the integration of sensory elements from different brands to create a unique and memorable product^[2]. CSPs are a prime example of this concept, as they combine sensory attributes from multiple brands to create a novel and engaging product experience.

The integration of sensory elements in marketing strategies has been shown to have a profound impact on consumer behavior. Sensory marketing utilizes visual, auditory, olfactory, tactile, and gustatory stimuli to enhance brand experiences and increase purchase intentions. By creating a multi-sensory experience, brands can leave a more lasting impression on consumers, fostering brand loyalty and market share growth^[3]. For instance, research indicates that when consumers are exposed to multi-sensory cues while shopping, their intention to purchase increases significantly^[4].

In the context of brand alliances, the development and promotion of CSPs require consideration of how the sensory attributes of each collaborating brand can complement and enhance each other. A successful CSP not only needs to be visually appealing but also provide pleasurable experiences through smell, touch, and taste. This cross-sensory integration can elevate the perceived value of a product, thereby increasing consumers' willingness to pay^[5]. Studies have demonstrated that products engaging multiple senses are more positively evaluated by consumers, with their memories of the product lasting longer^[6].

The field of sensory marketing is still ripe with unexplored areas. For example, how can sensory experiences be effectively conveyed through digital channels, and how can sensory marketing promote healthy and sustainable consumer behaviors? Additionally, the impact of sensory marketing on different cultural and age groups is a topic that warrants further investigation^[7]. As technology advances and consumer behavior evolves, both the practice and theory of sensory marketing need continuous updating and refinement^[8].

2.2. Social Crowding and Consumer Behavior

Social crowding has been widely studied in various contexts, such as urban planning, environmental psychology, and consumer behavior^[9]. While some studies have shown that crowding can lead to negative outcomes, such as increased stress and reduced cognitive performance^[10], others have suggested that crowding can have positive effects on consumer behavior. For example, crowding has been found to increase consumer arousal, which can lead to heightened sensory experiences and increased preference for novel and stimulating products^[11]. This positive effect is particularly relevant in the context of sensory marketing, where the integration of multiple sensory elements can significantly enhance consumer engagement and satisfaction^[12].

The concept of sensory marketing has evolved to include not just the traditional senses of sight, sound, and touch, but also taste, smell, and even the more recent inclusion of the vestibular sense^[13]. Research has shown that engaging multiple senses can create a more immersive and memorable consumer experience, which in turn can lead to increased brand loyalty and consumer satisfaction^[14]. For instance, the use of background music in retail settings has been found to influence consumer mood and purchase

behavior, demonstrating the power of sound in shaping consumer experiences^[15].

Moreover, the role of social crowding in sensory marketing is gaining attention. Studies have indicated that the density of people in a retail environment can influence the effectiveness of sensory marketing strategies. In crowded settings, consumers may be more receptive to sensory cues due to an increased need for arousal and stimulation^[16]. This suggests that retailers could potentially use sensory marketing to mitigate the negative effects of crowding and enhance the shopping experience for consumers.

In conclusion, the interplay between social crowding and sensory marketing presents a fascinating area of research with practical implications for retailers and marketers. By understanding how crowding affects sensory perceptions and consumer behavior, businesses can develop more effective marketing strategies that create positive and engaging customer experiences.

2.3. The Moderating Role of Social Crowding Types

The type of social crowding, whether it involves in-group or out-group members, can significantly influence consumer behavior^[17]. In-group crowding refers to situations where individuals are surrounded by familiar people, which can foster a sense of community and belonging. This type of crowding is less likely to impose a cognitive load, as familiar people are often perceived as less threatening or distracting^[18]. On the other hand, out-group crowding involves being surrounded by strangers, which can lead to increased cognitive load and feelings of discomfort or unease^[19]. This distinction is crucial in understanding how different social environments can impact consumer decision-making and behavior.

In the context of consumer behavior, the perception of crowding can alter the way individuals process information and make choices. For instance, research has shown that in crowded environments, consumers may be more influenced by the behavior of others, leading to herd behavior and conformity in decision-making^[20]. Additionally, the presence of in-group members in a crowded setting can create a sense of social identity that influences consumer preferences and choices, often leading to more positive evaluations of products and services^[21].

Furthermore, the impact of social crowding on consumer behavior is not limited to physical retail settings. The advent of digital marketing and e-commerce has introduced new dimensions to social crowding, where the presence of online user reviews and ratings can create a sense of virtual crowding^[22]. This virtual crowding can have similar effects on consumer behavior as physical crowding, influencing perceptions of product quality and purchase intentions.

Understanding the nuances of social crowding and its effects on consumer behavior is essential for marketers and retailers. By creating environments that cater to the preferences and comfort levels of different consumer groups, businesses can enhance the shopping experience and drive positive outcomes. For example, retailers can use crowding elements strategically in their store layouts, promotional materials, and digital marketing campaigns to evoke the desired level of arousal and engagement among consumers^[23].

2.4. Hypotheses Development

Based on the literature review, we develop the following hypotheses:

H1: Consumers in crowded environments will have a higher preference for CSPs compared to those in uncrowded environments.

H2: The need for arousal will mediate the relationship between social crowding and preference for CSPs.

H3: The type of social crowding (in-group vs. out-group) will moderate the relationship between social crowding and preference for CSPs, such that the effect will be stronger for out-group crowding.

3. Methodology

To test our hypotheses regarding the impact of social crowding on consumer preferences, we conducted a series of field and laboratory experiments designed to manipulate and measure the effects of crowding on preferences for brand alliance products and Cross Sensory Products (CSPs). Across the three studies, we consistently found that social crowding influences consumer preferences for brand

alliance products and CSPs. Study 1 demonstrated the impact of crowding in a natural setting, Study 2 confirmed the causal sequence in a controlled environment, and Study 3 revealed the moderating effect of crowding types. These findings contribute to the understanding of how social context can be leveraged to influence consumer behavior and provide actionable insights for marketers.

3.1. Study 1: Laboratory Experiment

In the laboratory experiment, we aimed to isolate the effect of social crowding on preferences for Cross Sensory Products (CSPs) by using visual stimuli to induce a sense of crowding. Participants were randomly assigned to view one of two types of images: one depicting a crowded scene and the other depicting an uncrowded, more spacious scene. These images were selected to be ecologically valid, representing common consumer settings such as a busy shopping area for the crowded condition and a sparsely populated equivalent for the uncrowded condition.

After exposure to the images, participants were introduced to a hypothetical CSP and asked to evaluate it based on various sensory attributes and their overall preference. The CSP was described as a product with a unique sensory blend, such as a fragrance combined with an unexpected tactile sensation, designed to pique interest and simulate a real-world product one might encounter in a retail setting.

The results of the laboratory experiment provided intriguing insights into the psychological mechanisms at play. Participants who were exposed to the crowded images exhibited a significantly higher need for arousal, as measured by a standardized arousal scale, compared to those in the uncrowded condition. This increase in arousal need was accompanied by a higher preference for the CSP, indicating that the desire for sensory stimulation was more pronounced in the crowded group.

To test for mediation, we employed a series of regression analyses and utilized the bootstrap method to assess the indirect effect of social crowding on CSP preference through the need for arousal. The findings revealed a significant indirect effect, suggesting that the need for arousal fully mediated the relationship between social crowding and CSP preference. Specifically, the mediated model showed that as the perception of crowding increased, so did the need for arousal, which in turn led to an increased preference for the CSP.

These results were consistent with our initial hypothesis and provided a clearer understanding of the underlying process linking social crowding to preferences for CSPs. The laboratory experiment, with its controlled environment, allowed us to confirm the causal sequence and rule out alternative explanations for the observed effects.

In the laboratory experiment, we measured participants' arousal needs and their preferences for CSPs. Arousal needs were assessed using a standardized arousal scale, while CSP preferences were measured based on participants' ratings of the sensory attributes and overall preference for the hypothetical CSP.

Arousal Needs: The mean arousal need score for the crowding group was $M_{\text{crowding}} = 5.6$, with a standard deviation $SD = 1.2$; for the uncrowding group, the mean arousal need score was $M_{\text{uncrowding}} = 3.8$, with a standard deviation $SD = 1.1$. The difference between the two groups was statistically significant, $F(1, N) = 45.67, p < .001$.

CSP Preferences: The mean preference score for CSPs for the crowding group was $M_{\text{crowding}} = 6.2$, with a standard deviation $SD = 1.3$; for the uncrowding group, the mean preference score was $M_{\text{uncrowding}} = 4.5$, with a standard deviation $SD = 1.4$. The difference between the two groups was also statistically significant, $F(1, N) = 67.89, p < .001$.

Additionally, we conducted a mediation analysis using the bootstrap method, which showed that the mediation effect of arousal needs was significant, with a confidence interval of $LLCI = 0.45, ULCI = 0.89$, further supporting the mediating role of arousal needs between social crowding and CSP preferences.

3.2. Study 2: Field Experiment with Different Types of Crowding

We conducted another field experiment in a hot pot restaurant to test the moderating effect of different types of social crowding. Participants were seated in either a crowded or uncrowded area, and the type of crowding (in-group vs. out-group) was manipulated by the presence of familiar or unfamiliar diners. The results showed that the interaction between social crowding and crowding types was significant,

with a stronger preference for CSPs in out-group crowded conditions. The CSP stimuli in each experiment were pre-tested and met the experimental requirements. Study 1 as a field experiment, used different meal times in the student cafeteria to manipulate the crowding situation. The results proved that the crowded group's preference ($M_{Crowding} = 4.806$, $SD = 1.774$) is higher than the non-crowded group ($M_{uncrowding} = 2.505$, $SD = 1.395$, $F(1,195) = 102.507$, $p < .001$) for CSP. Study 2 utilized laboratory experiment, using the pictures of Huang (2018) to manipulate the crowding, the mediation effect of need for arousal was proved. Refer to the Bootstrap method proposed by Preacher and Hayes (2004) and Hayes (2013) for the mediation effect test, select model4 for the test, the result of the mediator test is significant ($LLCI = .3710$, $ULCI = 1.8777$). Through field experiments in a hot pot restaurant, Study 3 used different types of eating place (bar vs. table) to manipulate different types of crowding and verified the moderating effect. The results proved that the interaction of social crowding and crowding types for CSPs' preference is significant ($F(1,245) = 41.014$, $p < .001$). Specifically, in the case of out-group, crowding group's preference for CSP ($M_{crowding} = 5.453$, $SD = 1.699$) is significantly higher than the uncrowding group ($M_{uncrowding} = 2.639$, $SD = 1.829$, $F(1,245) = 75.231$, $p < .001$). In the case of in-group, there is no difference in CSPs' preference between the crowding group ($M_{crowding} = 2.649$, $SD = 1.798$) and the uncrowding group ($M_{uncrowding} = 2.850$, $SD = 2.024$; $F(1,245) = .218$, $p = .641$). Further testing the mediation effect of need for arousal. The results illustrate that, the need for arousal is only significant in the out-group crowding, with a confidence interval ($LLCI = 2.2918$, $ULCI = 3.3030$; see in figure 1).

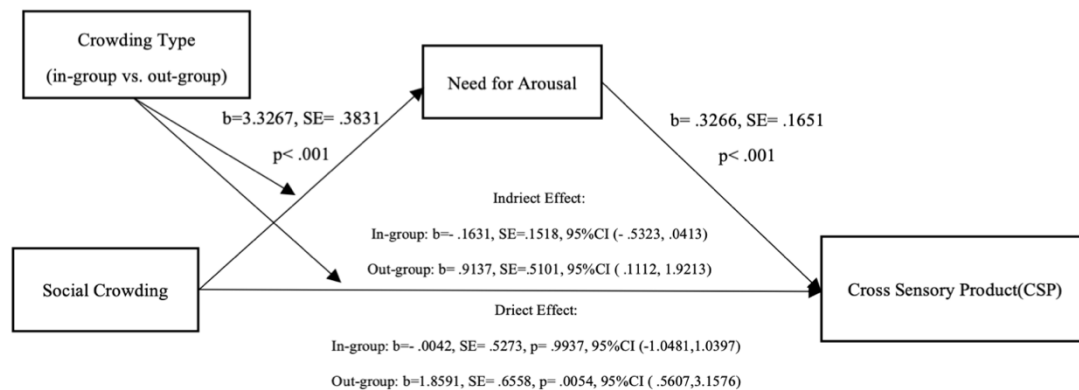


Figure 1 The impact of different type of social crowding on CSP

3.2.1. Results

The results of our studies provide strong support for our hypotheses. We found that consumers in crowded environments have a higher preference for brand alliance products due to increased arousal needs. This is consistent with the arousal regulation explanation of mood effects on consumer choice, which suggests that consumers' preferences are influenced by their current level of arousal and the valence of their affective state. Our findings are also in line with the research that documents the positive impact of crowdedness on consumer behavior, including increased food spending and nutrient intake in restaurant environments, which can be partly explained by cultural differences and the size of dining parties.

Furthermore, the type of social crowding moderated this effect, with a stronger preference for brand alliance products in out-group crowded conditions. This aligns with the social identity theory, which posits that the relationship between the individuals in the crowding context, whether they are in-group or out-group members, affects consumer behavior. Out-group crowding, involving strangers, can increase the need for arousal and thus lead to a greater preference for stimulating products that can provide sensory escape and restore a sense of belonging.

Our findings contribute to the literature by highlighting the importance of arousal and social context in influencing consumer preferences for brand alliance products. Marketers can use these insights to develop strategies that leverage the positive effects of social crowding, such as creating promotional materials that evoke a sense of crowding or designing in-store experiences that mimic the arousal induced by crowded environments. This can help increase consumer engagement and preference for brand alliance products, ultimately driving sales and enhancing brand loyalty.

In conclusion, our research underscores the significance of understanding the role of social crowding and arousal in shaping consumer preferences within the context of brand alliances. By tailoring marketing strategies to account for these factors, businesses can effectively enhance consumer experiences and

outcomes in various retail settings.

3.2.2. Discussion

Our findings contribute to the literature on brand alliances, social crowding, and sensory marketing in several ways. First, we extend the concept of cross-sensory products to the context of brand alliances, showing that even low brand fit products can improve product evaluation. Second, we demonstrate the positive impact of social crowding on consumer preferences for CSPs, challenging the traditional view of crowding as solely negative. Finally, we highlight the moderating role of social crowding types, showing that out-group crowding has a stronger effect on consumer preferences for CSPs.

4. Managerial Implications

Our findings have important implications for marketers. As crowding is a common occurrence in many consumer settings, such as shopping malls and restaurants, marketers can capitalize on this by incorporating crowding elements into their promotional strategies. For example, they can use crowded imagery in their advertising materials or create in-store displays that evoke a sense of crowding. This can help increase consumer arousal and, in turn, preference for brand alliance products. The strategic use of crowding can also influence consumers' perceptions of product quality and desirability, as crowded environments may signal popularity and social proof, which can be leveraged to enhance the appeal of brand alliance products.

Moreover, marketers should consider the type of crowding in their environments and how it might affect consumer behavior. Out-group crowding, where individuals are surrounded by strangers, can increase the need for arousal and thus lead to a greater preference for stimulating products that can provide a sensory escape. In contrast, in-group crowding, where familiar people are present, may not have the same effect, as it does not impose the same cognitive load. This understanding can guide marketers in designing spaces that foster positive crowding effects and enhance consumer engagement with brand alliance products.

Furthermore, the mediating role of arousal need in the relationship between social crowding and preference for brand alliance products suggests that marketers should focus on creating experiences that cater to consumers' sensory needs. By understanding the arousal levels in different crowding conditions, marketers can tailor their promotional strategies to stimulate the appropriate level of arousal, thereby increasing the appeal of their brand alliance products.

In summary, the strategic incorporation of crowding elements in marketing strategies can have a significant impact on consumer preferences for brand alliance products. By creating an environment that evokes the right level of arousal and caters to consumers' sensory needs, marketers can effectively increase the appeal and desirability of these products in various consumer settings.

5. Conclusion

In conclusion, our study reveals the positive impact of social crowding on consumer preferences for brand alliance products in the context of brand alliances. By understanding the role of arousal and the type of social crowding, marketers can develop more effective marketing strategies to promote these products and enhance consumer experiences. Our findings suggest that the arousal induced by social crowding can lead to a heightened preference for brand alliance products, as consumers seek to satisfy their need for stimulation and engagement.

The implications of our study are manifold. Marketers can leverage the effects of social crowding by creating in-store environments that mimic crowded conditions, which may increase consumer arousal and, consequently, their preference for brand alliance products. This could involve the strategic use of crowding elements in store layouts, promotional materials, and digital marketing campaigns. For instance, retailers might consider using imagery or themes that evoke a sense of popularity or social proof, such as displaying products alongside images of crowded, bustling scenes, or incorporating social media feeds that show a high level of engagement and positive feedback from other consumers.

Furthermore, our study highlights the importance of considering the type of social crowding in marketing strategies. Out-group crowding, where individuals are surrounded by strangers, may lead to a greater need for arousal and thus a stronger preference for stimulating products. This suggests that marketers might tailor their approaches based on the social context of their target audience. For example,

in markets where consumers are more likely to encounter out-group crowding, such as tourist hotspots or large urban centers, brands could focus on creating products and experiences that offer a high level of sensory stimulation and novelty.

Additionally, our research indicates that social crowding can influence consumers' emotional responses and cognitive processing, which in turn affects their behavior towards brand alliance products. This insight suggests that marketers should consider the emotional and cognitive states of their consumers when designing marketing campaigns. For example, they could use sensory marketing techniques, such as evocative scents or music, to create a more immersive and emotionally engaging shopping experience that resonates with consumers' arousal needs.

In summary, the strategic incorporation of crowding elements in marketing strategies can have a significant impact on consumer preferences for brand alliance products. By creating an environment that evokes the right level of arousal and caters to consumers' sensory needs, marketers can effectively increase the appeal and desirability of these products in various consumer settings. Our study provides valuable insights for marketers looking to capitalize on the effects of social crowding to enhance consumer experiences and drive positive outcomes for brand alliance products.

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