
Gamification and Experiential Factors Influencing Mobile Shopping Purchase Intentions in Sri Lanka

V.K.A.C.P.N. Kuruppu ^{a,*}, T.M. de Silva ^a

^a Department of Marketing, Faculty of Management and Finance, University of Ruhuna, Sri Lanka

A B S T R A C T

Retailers have been encouraged to utilize innovative strategies that enhance customer engagement and purchase intention as a result of the rapid shift in consumer purchasing behavior caused by mobile commerce. Among these strategies, gamification has proven effective for incorporating game elements into mobile shopping applications to enhance user engagement and enjoyment. However, in emerging economies like Sri Lanka, few empirical studies have looked at how gamification and experiential dimensions of shopping influence consumers' purchase intention. Thus, this study examines the mediation effect of shopping engagement in the mobile shopping context, as well as the effects of gamification and experiential dimensions on purchase intention. Drawing on Self-Determination Theory (SDT), this study adopted a quantitative research methodology. Data were collected through a structured survey questionnaire using a non-probability purposive sampling technique from Sri Lankan mobile shopping application users. The empirical analysis was conducted using 296 valid responses. Three experiential dimensions are the focus of the study, which include focused attention, shopping enjoyment, and socialness. The results demonstrate that some experiential dimensions have significant impacts on shopping engagement, which in turn influences purchase intention favourably. Additionally, the association between experiential dimensions and purchase intention is mediated by shopping engagement. Nevertheless, there was no significant direct impact of gamification on purchase intention. The study contributes to the body of knowledge already accessible on mobile commerce and delivers helpful guidance to retailers and application developers who are interested in developing captivating and experience-focused mobile shopping environments.

Keywords: Experiential dimensions, Gamification, Mobile shopping, purchase intention, Shopping-engagement

1. Introduction

The retail environment and consumer purchasing behaviour have been profoundly influenced by the rapid growth of mobile commerce. As smartphones and mobile applications become

*Corresponding author: chamodiparindya28@gmail.com

15th ICME at University of Ruhuna, Sri Lanka

08th October 2026

ISBN: 978-624-6923-00-6

more widely used, retailers increasingly use mobile shopping platforms to provide personalized, convenient, and engaging shopping experiences (Grewal et al., 2017). Customers can effortlessly search, buy, and communicate with traditional retailers via mobile shopping apps, which improves overall shopping experiences and fosters stronger customer relationships. According to Liébana-Cabanillas et al. (2019), the increasing use of mobile technology in emerging economies like Sri Lanka has accelerated the popularity of mobile shopping applications and influenced consumers' purchasing intentions.

Despite all these advantages, traditional retailers still face significant obstacles in sustaining long-term customer engagement. Due to repetitive interactions, low perceived value, and a lack of interest, users frequently quit using apps. As a result of this, retailers are using gamification methods more and more in order to improve customer engagement and involvement. Gamification is the process of incorporating elements of game design into non-gaming environments to enhance customer experiences and encourage user participation (Hamari & Keronen, 2017). According to previous studies, gamification enhances customer behaviour by enhancing motivation, enjoyment, and engagement in online purchasing settings (Hamari et al., 2014).

Customers' mobile shopping experiences are greatly influenced by experiential factors like focused attention, shopping enjoyment, and socialness. While focused attention displays consumers' cognitive absorption and involvement during app usage, shopping enjoyment refers to the emotional pleasure obtained from interactive shopping experiences (Childers et al., 2001). Socialness refers to the degree of social interaction and community involvement enabled by gamified elements. According to Hollebeek et al. (2014), these experiential factors strengthen consumers' shopping engagement, which in turn increases purchase intentions.

While gamification has become increasingly common in mobile commerce, limited empirical research has investigated these relationships in emerging markets such as Sri Lanka. Therefore, this study examines the influence of shopping gamification, focused attention, shopping enjoyment, and socialness on purchase intention through the mediating effect of shopping engagement in Sri Lankan mobile shopping applications.

1.1. Research Problem

Due to the growing popularity of mobile commerce, retailers are under pressure to move beyond functional efficiency and embrace a customer experience that promotes customer engagement and purchase intention. One of the most widely used methods for enhancing customer motivation, enjoyment, and behavioural outcomes in digital settings is gamification, which involves integrating game design elements into non-gaming settings. Previous research in mobile shopping contexts has demonstrated that gamified elements such as reward points, leaderboards, challenges, and progress indicators might improve user engagement, stimulate focused attention, and increase the shopping experience (Xu et al., 2017).

Despite the growing body of research, empirical studies on shopping gamification primarily focus on global e-commerce platforms and established market environments. However, the influence of gamified experiences on customer engagement and purchase intention in local mobile shopping applications, particularly in emerging markets, remains underexplored.

Although previous studies have shown that gamification can enhance user engagement and loyalty, limited research has examined the psychological mechanisms through which gamified and experiential dimensions influence purchase-related outcomes. Specifically, the combined influence of focused attention, shopping enjoyment, and socialness on purchase intention

through the mediating role of shopping engagement remains insufficiently investigated (Xi & Hamari, 2019).

Customers' views on gamification may differ in emerging economies like Sri Lanka due to disparities in digital literacy, cultural values, social orientation, and localized mobile usage patterns (Koivisto & Hamari, 2019). There seems to be a lack of empirical studies on gamification-driven customer behaviour within Sri Lanka's mobile retail environment, considering the country's rapidly expanding mobile internet adoption and mobile app usage. The dearth of localized evidence restricts both theoretical advancement and practical guidance for local shops and app developers in effectively employing gamification.

Based on SDT (Ryan & Deci, 2000), this study claims that by satisfying fundamental psychological needs for relatedness, competence, and autonomy, gamification of shopping may indirectly influence customers' purchase intention. Gamified mobile shopping features are predicted to enhance focused attention (cognitive participation), shopping enjoyment (emotional fulfilment), and socialness (perceived sociable connection), all of which, together, encourage higher levels of shopping engagement. Consequently, shopping engagement plays a critical mediating role in integrating gamified experiences into consumers' purchase intentions.

Accordingly, the problem this study seeks to address is the dearth of empirical information on how shopping gamification, focused attention, enjoyment, and socialness interact to influence consumers' purchase intentions through the mediating role of shopping engagement in local mobile shopping applications in Sri Lanka.

1.2. Research Questions

The study is suggested to be guided by the following research questions.

1.2.1. Overarching research question

To what extent do shopping gamification and experiential dimensions influence purchase intention through shopping engagement?

1.2.2. Research sub-questions

RQ1: To what extent does shopping gamification influence shopping engagement?

RQ2: To what extent do experiential dimensions influence shopping engagement?

RQ3: To what extent does shopping engagement influence purchase intention?

RQ4: To what extent does shopping engagement mediate the relationships between shopping gamification, experiential dimensions, and purchase intention?

2. Literature Review

The rapid advancement of mobile commerce has changed how consumers make purchases by fostering more engaging and experience-focused retail environments. Through customized digital platforms, mobile shopping applications enable customers to look for, assess, and purchase products. Retailers are using more creative strategies to strengthen customer engagement and purchase intention as the competition in digital retail develops. Gamification has become a key approach in mobile commerce among these strategies.

In order to improve user motivation and engagement, gamification refers to the incorporation of game design elements like points, badges, prizes, and leaderboards into non-gaming contexts (Deterring et al., 2011). According to earlier research, gamification has a positive

effect on customer engagement, enjoyment, and interaction on digital platforms (Hamari et al., 2014). According to Bitrián, Buil, and Catalán (2021), Gamification features such as leaderboards, badges, and points substantially enhanced user engagement in mobile apps. However, previous studies demonstrate both positive and mixed findings regarding the effects of gamification. Hamari et al. (2014) found that gamification generally enhances motivation, engagement, and system use, while Bitrián et al. (2021) reported that gamification features such as leaderboards, badges, and points improved user engagement in mobile applications. However, Hamari and Keronen (2017) noted that gamification does not always have a direct effect on customer behaviour, while Liu et al. (2024) highlighted that repetitive or poorly designed gamification may lead to cognitive exhaustion and disengagement. These mixed findings suggest that the effectiveness of gamification depends on its design and the context in which it is implemented.

SDT, which analyses motivation through the satisfaction of autonomy, competence, and relatedness requirements, is the foundation of this study (Ryan & Deci, 2000). These psychological demands are addressed by gamified elements like challenges, incentives, and social interaction, which boost user engagement with mobile shopping apps.

Customer engagement and behavioural intention are also influenced by experiential factors such as focused attention, shopping enjoyment, and socialness. According to Childers et al. (2001) and Xi and Hamari (2019), focused attention displays cognitive absorption during app usage, shopping enjoyment symbolizes emotional pleasure, and socialness refers to sociable engagement made possible by gamified features.

While gamification in e-commerce has been studied in earlier times, limited empirical research has looked at how gamification and experiential dimensions of shopping affect consumers' purchase intention in emerging markets like Sri Lanka. Thus, using the mediating role of shopping engagement in mobile shopping applications, this study explores these relationships.

2.1. Hypothesis Development

2.1.1. Gamification and shopping engagement

Gamification is the incorporation of game design elements, such as points, badges, leaderboards, challenges, and prizes, in non-gaming contexts to boost user motivation and engagement. Gamification has gained widespread recognition as an effective tool for stimulating more time spent on apps, encouraging customer engagement in mobile shopping settings, and fostering deeper engagement with purchasing activities. According to SDT, by fulfilling fundamental psychological needs for competence, autonomy, and relatedness, gamified aspects enhance intrinsic motivation and sustained engagement (Ryan & Deci, 2000). Empirical studies indicate that gamified shopping applications enhance users' cognitive engagement, emotional connection, and behavioural involvement (Hamari et al., 2014; Xi & Hamari, 2019). When gamified features are satisfying and rewarding, customers are more inclined to actively explore products, get involved with in-app activities, and deepen their engagement with the shopping platform. As a result, the following hypothesis is put forth:

H1: Gamification has a positive effect on shopping engagement.

2.1.2. Focused attention and shopping engagement

Focused attention is the term used to define the customers' level of cognitive focus on shopping-related stimuli when using a mobile application (Agarwal & Karahanna, 2000). Attracting and keeping users' attention is critical for effective interaction in digital settings that suffer from distractions and information overload. According to flow theory (Csikszentmihalyi,

1990), when people are thoroughly engaged and involved in a task, they are more likely to experience higher levels of engagement and intrinsic motivation. Previous studies in online and mobile shopping environments have demonstrated that focused attention stimulates users' absorption, participation, and interactive behaviour, leading to greater engagement outcomes. Mobile app features like personalized information, interactive elements, and user-friendly interfaces can help users concentrate while making them more inclined to take part in purchasing activities. Thus, it is hypothesized that,

H2: Focused attention has a positive effect on shopping engagement.

2.1.3. Shopping enjoyment and shopping engagement

Beyond just completing tasks or making purchases, shopping enjoyment refers to the satisfaction people obtain from the actual shopping experience. When it comes to mobile commerce, customers' emotions and how frequently they use shopping applications are greatly influenced by their satisfaction.

Research indicates that enjoyable shopping experiences increase positive emotions, stimulate curiosity, and foster emotional connections with digital platforms (Childers et al., 2001). Enjoyment is an essential component in user engagement when it comes to experiential consumption. It urges customers to use shopping apps often and voluntarily. Additionally, appealing app designs and gamified elements increase satisfaction and increase the likelihood that users will stay engaged. Hence, the following hypothesis is proposed,

H3: Shopping enjoyment has a positive effect on shopping engagement.

2.1.4. Socialness and shopping engagement

Socialness is the degree to which a mobile shopping application encourages social engagement, social presence, and connection among users through features like sharing, reviews, recommendations, leaderboards, and community involvement. Social interaction is essential to digital engagement, especially within mobile commerce settings where peer pressure and social approval greatly influence consumer behaviour. Perceived social interaction promotes users' emotional engagement and sense of belonging, according to social presence theory (Cui et al., 2012). Thus, it is hypothesized that,

H4: Socialness has a positive effect on shopping engagement.

2.1.5. Shopping engagement and purchase intention using a mobile app

Shopping engagement is a complicated idea that encompasses behavioural, emotional, and cognitive involvement in shopping activities, according to Brodie et al. (2011). Highly engaged consumers are more interested, passionate, and attached to digital platforms, which directly influences their purchasing decisions. Engagement is a significant psychological process that combines behavioural intentions to experience aspects, as defined by theories of planned behaviour and consumer engagement (Hollebeek et al., 2014). Previous research in mobile commerce has demonstrated that engaged users have greater purchase intentions, stronger loyalty, and a greater willingness to shop via mobile applications. Thus, this study supports the following hypothesis:

H5: Shopping engagement has a positive effect on purchase intention using a mobile app.

H6a: Shopping Engagement mediates the relationship between Shopping Gamification and Purchase Intention.

H6b: Shopping Engagement mediates the relationship between Focused Attention and Purchase Intention.

H6c: Shopping Engagement mediates the relationship between Shopping Enjoyment and Purchase Intention.

H6d: Shopping Engagement mediates the relationship between Socialness and Purchase Intention.

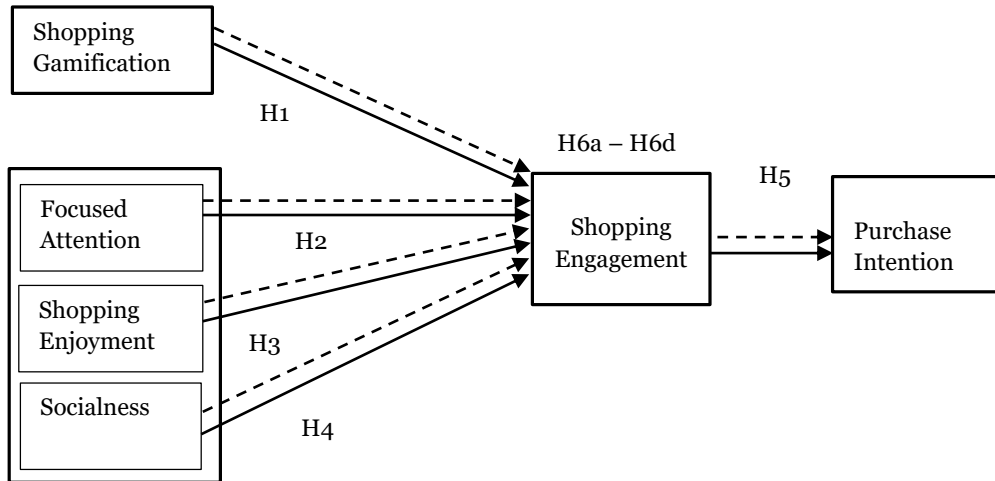


Figure 01: Conceptual Framework

3. Methodology

In order to look into the effect of gamification and experiential dimensions on consumers' purchase intentions in Sri Lankan mobile shopping applications, this study utilized a quantitative research methodology. For the purpose of exploring theoretically established relationships among the study variables, the study used a deductive research approach and was directed by the positivist research paradigm. The causal relationship between shopping gamification, focused attention, shopping enjoyment, socialness, shopping engagement, and purchase intention was examined using an explanatory study methodology.

A standardized self-administered questionnaire was used to gather data from Sri Lankan users of mobile shopping applications via online platforms. To ensure content and construct validity, the questionnaire items were adapted from earlier validated studies (Hair et al., 2019). Since the study specifically focused on participants who had used at least one local mobile shopping application with gamified aspects over the previous six months, a non-probability purposive sampling technique was used. For the empirical analysis, a total of 296 valid responses were gathered. The study used a cross-sectional time horizon, collecting data at a particular moment in time, and used the individual user of a mobile shopping application as the unit of analysis. A five-point Likert scale, ranging from strongly disagree to strongly agree, was used to evaluate responses.

SmartPLS 4 was used for partial least squares structural equation modelling (PLS-SEM), and the Statistical Package for the Social Sciences (SPSS) for preliminary data screening. Cronbach's alpha and Composite Reliability values were used to determine reliability, and convergent and discriminant validity were verified to ensure measurement accuracy. The

suggested theories were then tested, and the role of mediator of shopping engagement was assessed by evaluating the structural model. The reliability and rigor of the study findings were enhanced overall as the chosen methodological processes ensured coherence between the theoretical framework, research objectives, and analytical approaches.

4. Data analysis and Findings

The study's analysis and findings, which were based on information gathered from 296 Sri Lankan users of local mobile shopping apps, are outlined in this section. While SmartPLS 4 was used to assess the measurement and structural models using PLS-SEM techniques, SPSS was employed for initial data screening. Reliability, validity, hypothesis testing, and mediation analysis are all included in the analysis.

4.1. Sample Profile

Table 1: Sample Profile

Demographic Variable	Category	Sample Size (n= 296)	
		Frequency	Percentage
Gender	Male	117	39.5
	Female	179	60.5
	Prefer not to say	0	0
Age	18 – 24 years	83	28.0
	25 – 35 years	166	56.1
	36 – 50 years	37	12.5
	Above 51 years	10	3.4
	Passed Ordinary Level	9	3.0
Educational Level	Passed Advanced Level	29	9.8
	Professional Qualification	38	12.8
	Diploma	37	12.5
	Degree (Bachelor's)	165	55.7
	Postgraduate	17	5.7
Employment Status	Undergraduate MBBS	1	0.3
	Student	32	10.8
	Part-time Employed	26	8.8
	Full-time Employed	199	67.2
	Self-Employed	31	10.5
	Unemployed	4	1.4
	Retired	4	1.4
Monthly Income (LKR)	Below 30,000	36	12.2
	30,001 - 60,000	84	28.4
	60,001 - 90,000	55	18.6
	90,001 - 120,000	60	20.3
	120,001 - 150,000	20	6.8
	Above 150,000	41	13.9
Purchase Frequency	Daily	7	2.4
	Weekly	127	42.9
	Monthly	55	18.6
	Occasionally	107	36.1

4.2. Common Method Bias and Multicollinearity

Since all constructs were measured using a self-administered questionnaire at a single point in time, the potential for common method bias (CMB) was assessed using Harman's single-factor test. The analysis extracted 23 components, with the first unrotated component accounting for 46.998% of the total variance, which is below the commonly applied 50% threshold. Therefore, CMB is unlikely to be a substantial concern. In addition, collinearity was assessed using the Inner (Variance Inflation Factor) VIF values obtained through the PLS Algorithm in SmartPLS. The VIF values ranged from 1.000 to 3.218, remaining below the recommended threshold of 5, indicating that multicollinearity among the predictor constructs is not an issue.

4.3. Measurement Model Assessment

4.3.1. Factor loadings (indicator reliability)

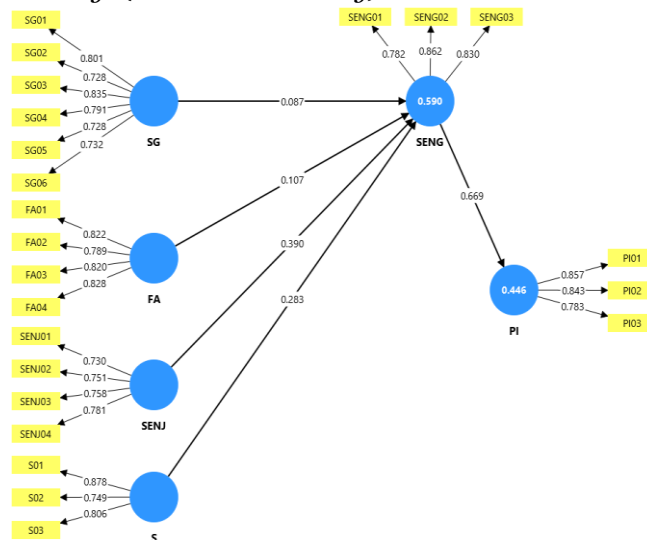


Figure 02: Measurement Model

All measurement items' factor loadings, which ranged from 0.728 to 0.878, were higher than the suggested threshold value of 0.70. These findings verify that the observed items accurately reflect their respective constructs and show adequate indicator reliability. As a result, the measurement model's dimensionality and convergent validity were deemed appropriate for further structural model assessment.

Table 2: Factor Loadings

Construct	Item	Description	Factor Loadings
Shopping Gamification (SG)	SG01	Using local mobile shopping apps feels similar to playing a game.	0.801
	SG02	I complete different tasks or missions when shopping via local mobile shopping apps.	0.728
	SG03	Local mobile shopping apps make me feel like a winner through rewards or achievements.	0.835
	SG04	I like collecting points, badges, or credits in local mobile shopping apps.	0.791
	SG05	Shopping through local mobile apps gives me a gamified experience.	0.728
	SG06	Local mobile shopping apps offer challenges that motivate me to continue shopping.	0.732
Focused Attention (FA)	FA01	When shopping via local mobile apps, I become so involved that I lose track of time.	0.822
	FA02	The time I spend on local mobile shopping apps passes very quickly.	0.789
	FA03	I lose myself while browsing products on local mobile shopping apps.	0.82
	FA04	I ignore what is happening around me when shopping via local mobile apps.	0.828

Shopping Enjoyment (SENJ)	SENJo1	Shopping through local mobile apps makes me feel happy.	0.73
	SENJo2	I enjoy using local mobile apps for shopping purposes.	0.751
	SENJo3	I find it enjoyable to buy products through local mobile shopping apps.	0.758
Socialness (S)	SENJo4	I feel excited when shopping via local mobile apps.	0.781
	So1	While interacting with friends online, I often switch to local mobile shopping apps.	0.878
	So2	I like sharing my local mobile shopping experiences with friends.	0.749
Shopping Engagement (SENG)	So3	Local mobile shopping allows me to socialize about my purchases.	0.806
	SENGo1	My experience with local mobile shopping apps is rewarding.	0.782
	SENGo2	Shopping through local mobile apps is an engaging activity for me.	0.862
Purchase Intention (PI)	SENGo3	I feel strongly involved when shopping through local mobile apps.	0.83
	PIo1	I plan to increase my shopping through local mobile apps in the future.	0.857
	PIo2	I am willing to recommend local mobile shopping apps to others.	0.843
	PIo3	I am likely to shop through a local mobile app in the near future.	0.783

4.3.2. Reliability and Validity

The examination of validity and reliability demonstrated that the measurement standard was acceptable. Internal consistency reliability was confirmed by Cronbach's alpha and Composite dependability (CR) values that were higher than the recommended threshold of 0.70. Furthermore, adequate convergent validity was shown by AVE values that were greater than 0.50. Since the square root of AVE values was greater than the inter-construct correlations for every construct, discriminant validity was also established.

Table 3: Measurement Model Assessment of Reliability and Validity

Constructs	α	CR	AVE	FA	PI	S	SENG	SENJ	SG
FA	0.832	0.888	0.664	0.815					
PI	0.772	0.868	0.686	0.661	0.828				
S	0.743	0.853	0.660	0.718	0.608	0.813			
SENG	0.765	0.865	0.681	0.662	0.669	0.675	0.825		
SENJ	0.749	0.841	0.570	0.730	0.679	0.646	0.711	0.755	
SG	0.863	0.897	0.594	0.762	0.653	0.724	0.640	0.683	0.770

Note: α = Cronbach's Alpha; CR = Composite Reliability; AVE = Average Variance Extracted. Diagonal values in bold represent the square root of AVE values.

4.4. Structural Model Assessment

4.4.1. Coefficient of determination (R^2)

A popular measure for evaluating how well the structural model explains the data is the coefficient of determination. It displays the extent to which the variance in endogenous constructs can be explained by the corresponding exogenous construct. Table 4 displays the values for the coefficient of determination.

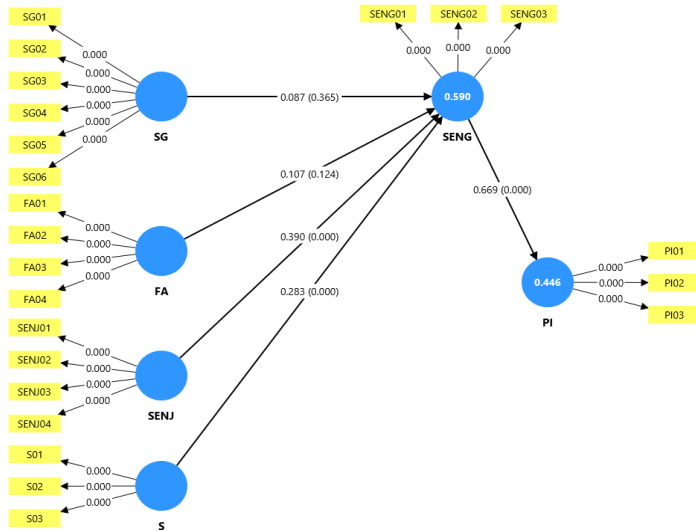


Figure 03: Structural Model

Table 4: Assessment of Coefficient of Determination (R²)

Construct	R-square	R-square adjusted
Purchase Intention	0.448	0.446
Shopping Engagement	0.595	0.59

4.4.2. Out-of-sample predictive relevance (Q²)

PLSpredict was employed to assess the model's out-of-sample predictive relevance. Q²predict values ranged from 0.286 to 0.407 for Shopping Engagement and Purchase Intention, indicating positive predictive relevance. The PLS-SEM model showed slightly higher MAE values than the linear benchmark for five of six indicators, while PI03 performed better (difference = -0.023). Overall, the findings demonstrate satisfactory predictive relevance, although the model did not consistently outperform the linear benchmark in predictive accuracy (Hair et al., 2019; Shmueli et al., 2019).

Table 5: Assessment of Predictive Relevance (Q²)

	Q ²	(PLS-SEM) MAE	LM_MAE	Difference
SENG01	0.348	0.442	0.432	0.01
SENG02	0.407	0.483	0.474	0.009
SENG03	0.407	0.504	0.502	0.002
PI01	0.377	0.501	0.471	0.03
PI02	0.325	0.529	0.508	0.021
PI03	0.286	0.189	0.212	-0.023

4.4.3. Path coefficients

The results of the structural model indicate that Socialness ($t = 3.721, p < 0.05$) and Shopping Enjoyment ($t = 5.184, p < 0.05$) have a significant positive effect on Shopping Engagement (SENG). Additionally, Shopping Engagement has a significant effect on Purchase Intention ($t = 17.427, p < 0.05$). On the other hand, neither Shopping Gamification ($p = 0.365$) nor Focused Attention ($p = 0.124$) has a significant effect on Shopping Engagement. These findings show that socialness and shopping enjoyment are crucial elements that stimulate engagement, which in turn has a strong influence on purchase intention.

Table 6: Assessment of Path Coefficients and Hypothesis Testing Results

Path	Hypothesis	Standard deviation	T statistics	P values	Results
SG -> SENG	H1	0.096	0.905	0.365	Not Supported
FA -> SENG	H2	0.07	1.538	0.124	Not Supported
SENJ ->	H3	0.075	5.184	0.000	Supported
SENG	H4	0.076	3.721	0.000	Supported
S -> SENG	H5	0.038	17.427	0.000	Supported
SENG -> PI					

4.5. Mediation Analysis

To examine the mediating effect of shopping engagement, an additional structural model was estimated by incorporating direct paths from the independent variables (shopping gamification, focused attention, shopping enjoyment, and socialness) to purchase intention. The mediation effects were assessed using 5,000 resamples in the bootstrapping procedure in SmartPLS. The significance of the mediation relationships was evaluated using the specific indirect effects and the corresponding *t*-statistics and *p*-values.

Table 7: Mediation Analysis

Path	Hypot thesis	Direct Effect (β)	Direct p- value	Indirect Effect (β)	Indirect p-value	Mediation Type	Results
SG -> SENG -> PI	H6a	0.178	0.029	0.022	0.391	No Mediation	Not Supported
FA -> SENG -> PI	H6b	0.159	0.059	0.027	0.167	No Mediation	Not Supported
SENJ -> SENG -> PI	H6c	0.232	0.004	0.100	0.001	Partial	Supported
S -> SENG -> PI	H6d	0.047	0.514	0.069	0.006	Mediation	Supported
						Full Mediation	

The relationship between shopping enjoyment and purchase intention was determined to be partially mediated by shopping engagement, according to the mediation analysis. On the other hand, there was no apparent mediation effect between shopping gamification and focused attention on purchase intention. However, the relationship between socialness and purchase intention was fully mediated by shopping engagement, indicating that social connection predominantly fosters purchase intention by increasing shopping engagement.

5. Discussion and Conclusion

The discussion demonstrates that the study's findings effectively addressed the proposed research questions. According to SDT, experiential factors such as shopping enjoyment and socialness significantly enhanced shopping engagement by satisfying customers' intrinsic motivational needs for enjoyment and social connection. In contrast, shopping gamification and focused attention did not significantly influence engagement, suggesting that extrinsic game elements alone may not be sufficient to generate meaningful psychological engagement. Hypothesis 1 was not supported, as shopping gamification did not significantly influence shopping engagement ($t = 0.905$; $p = 0.365$). This finding contrasts with previous studies showcasing that gamification can boost engagement through motivational feedback and rewards (Hamari et al., 2014; Mekler et al., 2017). However, its effectiveness may rely on users' familiarity with game mechanics and their relevance to the shopping task (Koivisto & Hamari, 2019). In the Sri Lankan mobile shopping environment, commonly used game elements may lose their novelty or be perceived as secondary to functional and experiential benefits. From an SDT perspective, gamification may also have limited effects when it does not adequately meet users' needs for autonomy, competence, and relatedness (Ryan & Deci, 2000). Furthermore, treating gamification as an overall construct may mask differences among individual game

mechanisms. This interpretation is further supported by the non-significant indirect effect of gamification on purchase intention through shopping engagement ($p = 0.391$), suggesting that gamification alone may not be adequate to generate meaningful engagement or indirectly influence purchase intention.

5.1. Conclusion and Implications

Through the mediation role of shopping engagement in mobile shopping applications in Sri Lanka, this study examined the influence of shopping gamification and experiential factors, including focused attention, shopping enjoyment, and socialness, on customers' purchase intention. The results showed that while shopping engagement positively influenced purchase intention, experiential dimensions, specifically shopping enjoyment and socialness, significantly influenced shopping engagement. Nevertheless, there was no significant direct influence of shopping gamification on purchase intention or shopping engagement. Additionally, the mediation analysis showed that shopping engagement fully mediated the relationship between socialness and purchase intention and partially mediated the relationship between shopping enjoyment and purchase intention. The findings emphasize how crucial experience-oriented and intrinsic elements are in influencing consumer behaviour in mobile commerce environments.

By providing empirical data from an emerging-market context, the study contributes to the body of literature already available on mobile commerce, gamification, and customer engagement. In the Sri Lankan context, retailers and mobile shopping application developers should prioritize enjoyable and socially engaging features, such as interactive product browsing, personalized promotions, customer reviews, social sharing, and community-based engagement, rather than solely relying on gamification elements such as points and rewards. These experience-oriented strategies can help Sri Lankan retailers to elevate shopping engagement and subsequently increase purchase intention.

5.2. Limitations and Directions for Future Research

When evaluating the findings, it is crucial to take into account the numerous limitations of this study. In order to establish causal relationships between shopping gamification, experiential factors, shopping engagement, and purchase intention, the study initially employed a cross-sectional research approach, which collected data at a particular point in time (Shadish et al., 2002). To better explore causal relationships and behavioural changes over time, future research may use experimental or longitudinal approaches. Second, the study's limited emphasis on Sri Lankan mobile shoppers could hinder the findings' applicability to other cultural and economic situations (Hofstede, 2011). Furthermore, the study did not delve into the effects of specific gamification components like points, badges, and leaderboards; instead treating gamification as a general term. Future studies should therefore look into certain gamification techniques, other psychological and technological aspects, and mediating elements like age and technological preparedness. In order to gain a deeper understanding of customer engagement and purchasing behaviour, future research may potentially make use of emerging digital commerce platforms and mixed-method methodologies.

References

- Agarwal, R., & Karahanna, E. (2000). Time Flies When You're Having Fun: Cognitive Absorption and Beliefs about Information Technology Usage. *MIS Quarterly*, 24(4), 665–694. <https://doi.org/10.2307/3250951>
- Beck, L. A. (1992). Csikszentmihalyi, Mihaly. (1990). *Flow: The Psychology of Optimal Experience*. *Journal of Leisure Research*, 24(1), 93–94. <https://doi.org/10.1080/00222216.1992.11969876>

- Bitrián, P., Buil, I., & Catalán, S. (2021). Enhancing user engagement: The role of gamification in mobile apps. *Journal of Business Research*, 132, 170–185. <https://doi.org/10.1016/j.jbusres.2021.04.028>
- Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research. *Journal of Service Research*, 14(3), 252–271. <https://doi.org/10.1177/1094670511411703>
- Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, 77(4), 511–535. [https://doi.org/10.1016/S0022-4359\(01\)00056-2](https://doi.org/10.1016/S0022-4359(01)00056-2)
- Cui, G., Lockee, B., & Meng, C. (2013). Building modern online social presence: A review of social presence theory and its instructional design implications for future trends. *Education and Information Technologies*, 18(4), 661–685. <https://doi.org/10.1007/s10639-012-9192-1>
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining “gamification.” *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9–15. <https://doi.org/10.1145/2181037.2181040>
- Grewal, D., Roggeveen, A. L., & Nordfält, J. (2017). The Future of Retailing. *Journal of Retailing*, 93(1), 1–6. <https://doi.org/10.1016/j.jretai.2016.12.008>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hamari, J., & Keronen, L. (2017). Why do people play games? A meta-analysis. *International Journal of Information Management*, 37(3), 125–141. <https://doi.org/10.1016/j.ijinfomgt.2017.01.006>
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does Gamification Work? -- A Literature Review of Empirical Studies on Gamification. *2014 47th Hawaii International Conference on System Sciences*, 3025–3034. <https://doi.org/10.1109/HICSS.2014.377>
- Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. *Online Readings in Psychology and Culture*, 2(1). <https://doi.org/10.9707/2307-0919.1014>
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer Brand Engagement in Social Media: Conceptualization, Scale Development and Validation. *Journal of Interactive Marketing*, 28(2), 149–165. <https://doi.org/10.1016/j.intmar.2013.12.002>
- Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45, 191–210. <https://doi.org/10.1016/j.ijinfomgt.2018.10.013>
- Liébana-Cabanillas, F., Higuera-Castillo, E., Molinillo, S., & Montañez, M. R. (2019). Assessing the role of risk and trust in consumers’ adoption of online payment systems. *International Journal of Information Systems and Software Engineering for Big Companies*, 5(2), 99–113. <http://uajournals.com/ojs/index.php/ijisebc/article/view/407>
- Liu, R., Benitez, J., Zhang, L., Shao, Z., & Mi, J. (2024). Exploring the influence of gamification-enabled customer experience on continuance intention towards digital platforms for e-government: An empirical investigation. *Information & Management*, 61(5), 103986. <https://doi.org/10.1016/j.im.2024.103986>
- Mekler, E. D., Brühlmann, F., Tuch, A. N., & Opwis, K. (2017). Towards understanding the effects of individual gamification elements on intrinsic motivation and performance. *Computers in Human Behavior*, 71, 525–534. <https://doi.org/10.1016/j.chb.2015.08.048>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton, Mifflin and Company.

- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322–2347. <https://doi.org/10.1108/EJM-02-2019-0189>
- Xi, N., & Hamari, J. (2019). Does gamification satisfy needs? A study on the relationship between gamification features and intrinsic need satisfaction. *International Journal of Information Management*, 46, 210–221. <https://doi.org/10.1016/j.ijinfomgt.2018.12.002>
- Xu, F., Buhalis, D., & Weber, J. (2017). Serious games and the gamification of tourism. *Tourism Management*, 60, 244–256. <https://doi.org/10.1016/j.tourman.2016.11.020>