

# Examining Consumer Behavior and Brand Awareness through Expectancy Theory: The Moderating Effect of Privacy Concerns

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## ABSTRACT

Gamification is widely applied across various industries to enhance brand awareness and consumer purchase intent, particularly in marketing. This study uses Vroom's Expectancy Theory of Motivation to explore the connection between consumer behavior, brand awareness, and purchase intention, examining the moderating effect of privacy concerns. While previous studies have investigated the connection between motivation and gamification, a significant gap exists in understanding this area. This quantitative research employs SPSS and Smart-PLS software to analyze data collected from a 7-section survey questionnaire with 26 items rated on a 7-point Likert scale. Results indicate that engagement, user experience, rewards giving, and brand awareness significantly influence purchase intention, with the most substantial impact observed between brand awareness and purchase intention. This study provides insight into the increasingly widespread use of gamification in online platforms and offers valuable guidance for designing compelling gamified experiences.

**Keywords:** Consumer Behavior, E-commerce, Gamification, Vroom Expectancy Theory of Motivation, Privacy Concerns.

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## 1. INTRODUCTION

Technological progress has accelerated in recent decades, which is good news for consumers but could also negatively affect businesses. Internet technology has brought more competitors to marketers than in the golden age. There are so many companies

applying gamification in their online social software to improve the value of the software and the user experiences [1]. Gamification has found applications in a wide range of areas, including education [2], marketing, citizen science [3], idea competition [4], consumer products [5], and forecasting [6]. According to Deterding et al.[5], gamification is "the application of game design features in a non-game environment." Gamification's advantages include greater consumer engagement, loyalty, increased brand recognition, and improved customer experience. According to the statistics report, the gamification market size is forecasted to grow from USD 9.1 billion in 2020 to USD 30.7 billion by 2025. Statistics report stated that gamification's market value is estimated at \$11.94 billion by 2021. Besides, 93% of marketers love to use gamification.

There are so many examples to prove that adopting gamification into the marketing strategy will increase customer engagement towards the brand. Domino's pizza sales rose 30% when the company launched a mobile gaming app. The game software has been successfully modified using one of the gamification components, 'Incentivizing Online Activities.' When the user completes a game, such as directing a pizza cutter vehicle along a track, the app rewards them with points. When a player completes all six stages, they will get ten reward points from the app, which may be redeemed online for one medium, two-topping pizza. Gamification, games, or game elements used for educational or other purposes other than entertainment are becoming increasingly common in several fields and with a wide range of target audiences [7]. Referring to Aparicio, Costa, and Moises [8], research indicated that gamification would significantly affect the intention of using the online shopping platform. According to O'Donohoe and Vedrashko [9], marketing involves persuasion, incentive, and manipulation. As a result, gamification has enormous potential in the marketing industry. Gamification features rewards such as points, coupons, and vouchers, which have been substantial in marketing strategies to encourage consumer engagement with the brand and services [10].

Muntean [11] states gamification has the potential to boost customer engagement, loyalty, brand recognition, and motivation. Gamification also has the potential to be a considerable asset to improve brand identification [12]. Gamification is a method used to create an engaging process that enables customers to view the worth of a product as outstanding. Using gamification could help companies draw consumers' attention, which will be followed by their engagement, and increase the relationship between consumers and the brand. An apparent example would be Autodesk's software business, which increased its trial use rate by 40% and conversion rates by 15% after incorporating gamification into the system. Using gamification could help the company to attract consumers and raise their aspirations. Gamification features would provide gamified online experiences to users both online and offline. Digital stamp cards, Spin and Win, and Digital Scratch Card are perfect examples. Those gamified experiences would attract consumers to engage with the brand or product. Referring to previous research by Hamari, Koivisto, and Sarsa [13], the study indicated that gamification does provide a positive effect. Still, the effect greatly depends on how the gamification is implemented and how the user uses it. On the contrary, the extant studies indicate no evidence to deduce the connection between gamification and purchasing intention. Yang et al.[14] stated that

future research should focus on designing games that may make a game more enjoyable or helpful in gamification. Thus, one of the purposes of this research is to investigate the relationship between consumer behaviors toward gamification and purchase intention.

According to Rohr et al. [15], there is a lack of understanding of how gamification may be systematically implemented. It is still unclear if gamification can alter people's behavior or attitudes in all corporate processes. It would be difficult to predict changes in user or consumer behavior, especially as technology advances. Recently, the advantages of gamification have been a hot subject of discussion in research on gamified consumer experiences [16], so it is essential to investigate the users' demands to develop a game that would be more pleasant or beneficial. In doing so, the game designer could produce a more appealing game to the user and might attract their attention to the game's gamification. Few severe games have been developed in which gamification could help to form the consumer attitude in cognitive tasks like choosing choices [17]. It has also been hypothesized that game experiences could be effective and beneficial for enhancing and minimizing cognitive biases to assist rational thought.

Conversely, as gamification becomes more popular for intelligent cities, users' privacy, such as geolocation, buddy lists, and other private information, has sparked significant worry. Information loss consumers are exposed to a range of privacy issues, such as pricing discrimination, unwanted advertising, and the sharing of personal information with third parties in the context of gamified services [18]. According to Abou-Shouk and Soliman [19], the effect of customer attitudes, intentions, behavior, and new technology usage, such as privacy concerns, should be examined. High confidentiality of privacy is essential to consumers, and it could affect consumers' lives if confidentiality has been exposed, which could negatively affect the brand. Consequently, in this research, we hypothesize that privacy concerns will moderate the relationship between brand awareness and purchase intention.

Based on Vroom's Expectancy Theory (VIE), this study investigates the relationship between user experiences, rewards giving, consumer engagement, brand awareness, and purchase intention. According to the VIE, a person will act or behave in a particular manner because they are driven to select that behavior above others depending on the results of that action. In short, the motivation for choosing an action is determined by the desirable outcome. Vroom defined motivation as a mechanism that governs decisions among different forms of activity and is controlled by the individual. The person makes judgments based on assessments of how closely the anticipated results of a specific action will resemble or ultimately lead to the expected goals. An individual's expectations that a particular effort would lead to the intended performance, the effectiveness of this performance in achieving a specific result, and the valence of this result for the individual all contribute to motivation. This theory is about the person's cognitive state, as to how many choices they make would come out and how many outcomes they will have. The model has three components: expectancy, instrumentality, and valence. In this study, gamification features such as engagement, user experiences, and reward giving will be adapted as expectation, instrumentality, and valence. Besides, privacy concerns would be the moderator that affects the relationship between brand awareness and purchase

intention. Using VIE theory would help to indicate the research question: Are the factors that contribute to motivation influencing the behavior of consumers towards the gamification online shopping platform?

A quantitative research approach has been used to address the study questions, and 78 Malaysians took part in the survey. (a) Our study contributes to an improved understanding of consumers' attitudes, the study of consumer behavior that has not yet gained as much attention in the context of online shopping sites. (b) Our research uses expectancy theory's extensive but underutilized applicability to deliver new insights into customer behavior when using gamification online shopping platforms. The other section of the study is organized as follows. Section 2 includes a review of the literature and the formulation of hypotheses, and Section 3 describes the data and techniques. Section 4 presents the findings and discussion of the study in Section 5.

## **2. GAMIFICATION AND EXPECTANCY THEORY**

The term gamification was first used in 2008 in a blog post by Brett Terrill. The researcher defines the term "using game mechanics to other digital domains to improve engagement." The word became more widely used in the industry and academia around 2010 [5], [13]. Gamification emerged because of the emergence of computer software with game-like properties. In this new paradigm, gaming mechanics, attractive design, and persuasion enhance human-machine connection.

Given that it integrates user-favored game elements, it might become a deciding factor in the development of software products [20]. Gamification is also described as a technology augmented with game-like qualities that appeal to users, possibly increasing their desire and intention to use the technology and their feeling engaged with it [21]. Gamification could engage and encourage users by allowing them to accumulate points that define their status and result in rankings [22]. Motivation is an essential problem in gamification since gamified systems are used to change behavior for desired and desirable activities. Extrinsic motivation is focused on incorporating gamified elements into non-gaming settings to create an external incentive. Second, since they are driven by an internal desire to play, game thinking and compelling design positively affect motivation [23].

According to van der Lubbe et al. [7], gamification is "the worldwide usage of game components for a gamefic experience in non-game contexts, which may even be used in the marketing sector." As efficiency and technology advances, customers are becoming more careful about where and how they spend their money and time. As a result, businesses are pressured to find new ways to change their marketing strategies to keep consumers involved. The range of experiences may be created by combining game components, mechanics, and dynamics in any manner imaginable. Many businesses have utilized gamification in marketing to increase brand awareness by providing rewards, such as earning points, badges, and free goods by playing games or engaging in competitive events. The 'points' topic includes outcomes, meaningful points, and concepts that improve the gamification's meaning and impact on the user's intrinsic incentive to play [24]. Some well-known examples would be loyalty programs such as

Starbucks Reward, Bonus link, Watson Elite Program, Genting Member reward, etc. This loyalty program mainly keeps consumer retention by using the point and tip by becoming their V.I.P. customer. For instance, when an individual wants to become an elite member of Watson, he needs to spend up to RM1000 per year to enjoy the member reward, such as using the point to exchange a discount or cash voucher. Gamification may be used in two ways. The idea may be utilized to promote consumer involvement and improve the customer experience or boost staff engagement inside an organization. Organizations may also use it for marketing, sales, and consumer interaction [25].

According to Vroom's Expectancy Theory of Motivation (VIE), humans evaluate decisions and choices based on the option they believe will lead to the most desirable personal outcome to maximize pleasure and minimize cost [26]. The three main principles of expectancy theory, a cognitive account of motivation that emphasizes subjectively reasonable human action, are expectancy, instrumentality, and valence. Together, these three concepts provide a powerful motivational force (MF). According to VIE theory, when the total number of points increases, a person may be encouraged to work toward a goal if they think there is a positive relationship between effort and performance. The outcome of a favorable performance will result in a desirable reward, while a prize from an account will satisfy an essential need. Hence, if the consumer spends a lot in that shop, it is hard to explain why they will reject to become a loyal customer of the specific shop. Furthermore, consumers also hardly abandon those points they have accumulated for a long time in that shop. This circulation will keep repeating to all the loyal consumers, which means that the shop has successfully retained the consumer to their shop.

At the same time, these programs are one of the game mechanics of gamification. Gamification aims to superimpose the gaming world's calming motivational qualities into the real world. It's become a common strategy for boosting motivation and commitment by encouraging specific behaviors. The adoption of gamification in the marketing field increases as gamification increases customer engagement. Furthermore, with the proliferation of mobile technology, companies are being pushed to adopt gamification to engage consumers and boost sales.

Furthermore, businesses are being pushed to implement gamification to engage customers and increase sales due to the spread of mobile technology. As a result, Zhang et al. [27] suggested that global corporations use gamification in their marketing initiatives. Thus, it is reasonable to indicate that the consumer could elicit the relationship between brand awareness by engaging in gamification. While engaging in gamification online shopping platforms, the consumer would experience gamification features such as storytelling about the brand, online ranking, points rewards, and more. These gamification features are an experience for users or consumers, which helps the brand connect with the consumers. Abou-Shouk & Soliman [19] demonstrated that gamified websites improve users' experiences and aid in the promotion of company branding. As mentioned above, gamification provides rewards such as coupons, points, and badges, which would also increase consumers' attention toward the brands.

The expectancy theory states that a person must believe that exerting a certain level of effort will produce performance (expectancy), that this performance will produce benefits (instrumentality), and that the rewards will outweigh the costs of the effort (valence). People should be inspired to participate in the environment of gamification when (a) they feel confident in their capability to make use of gamification feature for rewards exchange (expectancy), (b) they believe that engaging with gamification feature contributes to user experiences (instrumentality), and (c) they regard rewards giving as a perceived value for the consumer (valence).

## **2.1 Hypothesis Development**

Building on Vroom's expectancy theory, the following section provides an overview. It examines the connections between engagement, user experience, rewards, brand awareness, purchase intention, and the moderating effect of privacy concerns. This study treats Engagement, User Experience, and Rewards as independent variables that directly influence consumer behavior by enhancing motivation, satisfaction, and perceived value. These customer-focused factors shape how individuals engage with and respond to a brand. In contrast, Brand Awareness is not something customers seek or are motivated to pursue. Instead, it serves as a strategic objective for the enterprise. The brand's responsibility is to build and strengthen awareness through effective marketing and communication strategies. While Engagement, User Experience, and Rewards may contribute to increasing brand recognition, pursuing brand awareness is an enterprise-driven effort, not a consumer-driven one. Thus, although Brand Awareness can result from positive engagement, experience, and rewards, it should be recognized as an outcome that signifies the brand's ability to establish itself in the minds of consumers rather than a factor that directly drives consumer behavior. By clarifying this distinction, we recognize that while consumers benefit from enhanced engagement, experience, and rewards, Brand Awareness is a goal the company pursues, not a direct motivation for consumers.

## **2.2 Engagement and Brand Awareness**

Gamification is the application of game concepts and game-based problem-solving to non-game contexts to engage audiences [28]. The previous study has shown that gamification is essentially related to engagement since its use is often justified by its benefits on engagement [29]. With gamification, users can enjoy the experiences while increasing engagement. Most marketing initiatives intended to engage consumers, such as customer loyalty programs, point-based management, and membership systems, have been proven ineffective in generating long-term loyalty when contrasted to approaches that fulfill intrinsic needs, such as gamification [30]. Additionally, companies view customer involvement as the cornerstone of consumer awareness [19]. In the opinion of marketing professionals, customer interaction is an essential tactic to develop a strong. Dessart and Pitardi [31] emphasized how storytelling in digital videos may help people connect with brands. In addition, Lucassen and Jansen [32] also found that consumer interaction results in increased brand recognition. Thus, we conclude that,

**H1:** Engagement has a positive relationship with brand awareness.

## **2.3 User Experience and Brand Awareness**

User experience was formerly defined as a collection of interactions between a service or product provider and an end-user that elicit a reaction. According to Buhalis and Sinatra [33], gamified websites improve user experience and aid in the promotion of corporate branding. Huotari and Hamari [34] define gamification as enhancing services by including affordances for game-like experiences. It contributes to the total value generation of users. Moreover, according to Sheng and Teo [35], the research determining any differences between what a customer anticipates and the stimuli that come as a result of their interaction with a company and the good or service they receive reflect the points of contact between the two parties is essential for evaluating user experience. A good user experience would bring a good awareness of the brand. Thus, we emphasize that:

**H2:** User experiences have a positive relationship with brand awareness.

## **2.4 Rewards Giving and Brand Awareness**

For years, motivating strategies have included incentives and rewards. Rewards are incentives that give people something in exchange for performing well or acting in a certain way [36]. For instance, points, used to measure a player's score, are a common form of gamified incentives. Points give feedback while potentially enhancing perceptions of competence and relatedness through point collecting and point-based ranks. Gamification rewards are believed to promote intrinsic motivation because they provide joy and satisfaction, unlike traditional incentives. Points were the most common reward type, appearing in more than half of the interventions, followed by achievements/badges/medals, tangible gifts, and other unidentified benefits like animated feedback. It is critical to developing a virtually interactive environment that allows users to exchange trustworthy, prosperous, and up-to-date information in real-time [37] to increase brand awareness. Numerous research investigate the effects of rewards on behaviors that represent features or outcomes of brand awareness, such as brand awareness and brand recall. Consumers are more likely to recognize and remember a brand's elements when they receive rewards. Thus,

**H3:** Rewards giving positively associated with brand awareness.

## **2.5 Brand Awareness and Purchase Intention**

Brand awareness is seen as a necessary instrument in the development of brand equity since it is linked to the power of a brand's presence in the minds of consumers. Brand awareness is essential in consumer decision-making because it is the first step in adding a brand into the consideration set because of brand recognition [38]. According to the findings of Ehsan Malik et al.[39], brand awareness has a significant positive relationship with purchase intent. The intention to buy a product or get a service is called purchase intention. It refers to a customer's desire to purchase a particular product from a specific brand [40]. Even when customers desire a particular product, brand awareness remains the most significant and influential element in purchasing. Thus,

**H4:** Brand awareness has a positive effect on purchase intention.

## **2.6 Moderating Effect of Privacy Concerns**

Privacy concerns are a kind of concern regarding privacy expressed by users when their information is used for purposes other than those for which it was collected. In keeping with prior research, we believe privacy concerns are a personal attribute and, therefore, an attitudinal consequence of privacy-related decisions. Previous research has shown privacy-related decision-making in the context of technology for driving behavior. Users who are highly involved in engaging with a system are more prone to utilize heuristics in their privacy decisions. It could affect customer engagement if the gamification causes privacy concerns for the users. Privacy concerns are one of the largest concerns of the consumer as privacy concerns can potentially threaten the consumer in the network. A user's privacy issue is their anxiety about their information being used for marketing and other business strategies other than its original purpose, such as enhancing the quality of the service provided [41]. Most users' privacy concerns stem from their perceptions that a service provider cannot protect their personal information or that it is being misused, such as by disclosing it to third parties or using it for secondary purposes without the user's consent [42].

Consequently, users will probably reject the purchase on the platform and will not consider engaging with it in the future. Besides, privacy concerns have emerged as a noticeable moderating variable in various research circumstances, particularly those involving technology and online behaviour. These worries may impact individuals' attitudes and behaviours, thereby influencing critical outcomes when combined with other factors. For example, privacy concerns may affect the relationship between brand awareness and purchasing behavior. Individuals with increased privacy concerns may behave more cautiously, influencing their purchasing decisions, even with high brand awareness, as research has frequently shown that privacy concerns influence online buying intentions. Bansal and Nah emphasize the significance of privacy in shaping customer behavior in digital contexts [43].

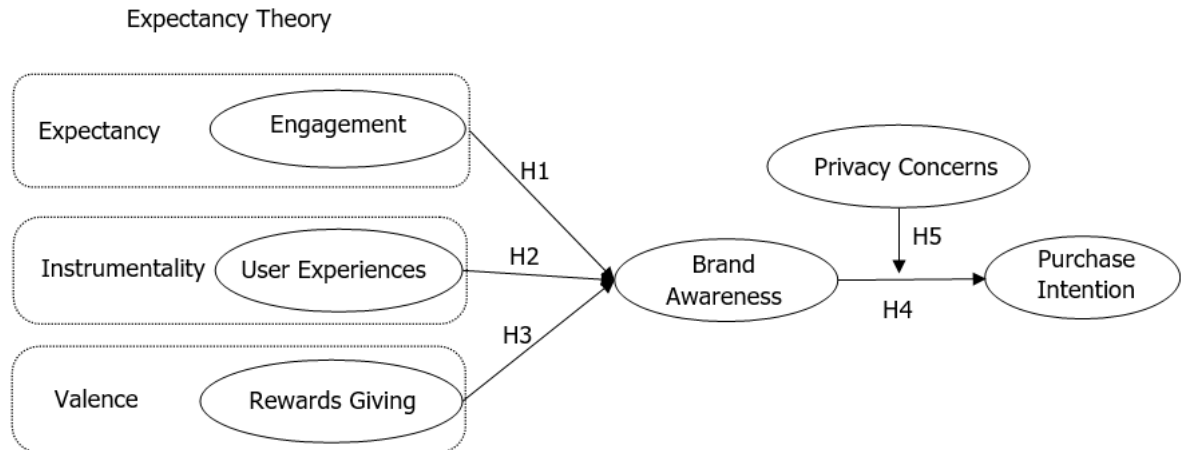
Similarly, Tajvidi et al. also discovered that increased privacy concerns lower consumers' propensity to use social media to make purchases [44]. Aside from privacy concerns, additional considerations that influence consumer trust when utilizing social media for e-commerce include information quality, security concerns, and perceived ease of use. However, privacy concerns might complicate the relationship between consumer trust and purchasing behavior.

For example, consumers with solid privacy worries may trust a brand yet avoid making purchases at the same rate as individuals with lower privacy issues. The "privacy paradox" describes this dynamic, which refers to the disparity between people's expressed privacy concerns and actual behavior. Adjerid, Peer, and Acquisti (2018) and Watson et al. (2010) both demonstrate this paradox, in which people show care about privacy but frequently engage in behaviors that contradict their stated concerns [18][45]. Limited rationality in decision-making could explain this, implying that privacy protection behaviors are influenced by the relative significance people place on their privacy. Given the problems that privacy concerns bring, it is critical to quantify and assess them systematically in

studies related to technology use, online purchases, and digital consumer behavior. Understanding the role of privacy as a moderating factor enables researchers to more correctly assess its influence on interest-related outcomes, providing deeper insights into how privacy concerns shape consumer behavior. Therefore,

**H5:** Privacy concerns moderate the relationship between brand awareness and purchase intention.

### 3. RESEARCH METHODS



**Figure 1.** Research Framework

A quantitative research and deductive approach will be employed, and a sample survey will be conducted to collect data for this study. The research to choose quantitative research is the method of this study because this study is to investigate the hypothesis with the developed theory. At the same time, the framework could be referred to in Figure 1. Besides, The need to increase the statistical accuracy of the research and its ability to spot significant effects drove the decision to use GPower to determine the ideal sample size for this investigation. The validity and longevity of the study's conclusions depend heavily on choosing an appropriate sample size. Using GPower, we hope to ensure that our research has the necessary sensitivity to find essential results and connections within the purview of our research questions and hypotheses. The study aims to gain insights from a particular set of people to extrapolate the results to a more general picture of e-commerce consumer behavior. The methodological considerations were dependent on several crucial elements that were all essential to the process. Besides, the target population of this study is the age group 16 to 49 years old, which focuses on active social media users.

Moreover, table 1 presents the research constructs, and all scales have been modified from earlier studies, with "strongly disagree" and "strongly agree" acting as scale anchors. Adjustments have been made to the items to fit the context of the gamification platform. In the questionnaire, respondents will be asked about their favorite online shopping platform and which gamification feature most satisfied them. Previous research highlights lacking examples of gamified e-business and e-commerce applications in gamification scientific literature [20]. Moreover, the questionnaire will be added to a video explaining

the meaning and benefits of gamification in marketing. The video is meant to let the respondents be more transparent about the topic of this study so that they can make a more accurate answer to the questions.

The questionnaire survey will be categorized into seven sections, which include 26 items in total. Section A until Section C will be asked regarding the elements of Expectancy Value: engagement, user experiences, and reward giving. Section D will be the question of brand awareness. Followed by purchase intention in the following section, which is Section E. While section F would be the measurement items of privacy concerns. Seven-point Likert scales with anchors at Strongly Disagree 1, Disagree 2, Somewhat Disagree 3, Neither Agree nor Disagree 4, Somewhat Agree 5, Agree 6, and Strongly Agree seven were used to score the questionnaire items. The last section, Section G, contains respondents' demographic information. Participants were guaranteed the confidentiality of their contribution. They specified responses and comments through the Google Survey form. The valid replies were imported into SPSS 27 to eliminate data input errors. Numerous advantages are suggested by this form of data collecting, including shorter data collection times and less expensive questionnaire administration. The smart PLS 3 also have been used to analyze the survey data.

**Table 1.** Measurement Items

Constructs	Item	Sources
Engagement	Using game applications will increase customers' interactivity/engagement with the brand. Customers would like to participate actively in brand community discussions/activities. Customers will thoroughly enjoy exchanging ideas with other people in the brand community. Customers will be passionate about the brand.	[19]
User Experiences	This gamified website is focused on sensory appeal. This gamified website tries to excite my senses. This gamified website tries to be emotional. This gamified website tries to intrigue me. This gamified website tries to stimulate my curiosity.	[46]
Rewards Giving	The platform provides tangible rewards, such as red pockets and coupons. The platform provides tangible rewards according to task behaviors (e.g., friend invitation, payment) The tangible reward is a popular incentive mechanism to encourage consumers' participation. The platform provides intangible regards, such as "Coins." The platform can precisely evaluate my task behaviors and increase my "Coins." "Coins" is a critical measurement of my performance or engagement in the platform.	[27]
Brand Awareness	Customers would like to learn more about our brand. Customers will pay a lot of attention to anything about our brand. Anything related to our brand will grab the attention of customers. I concentrate a lot on this brand. Customer Sharing of their experience and recalling memories will help increase brand awareness.	[19]
Purchase Intention	I am going to buy a product from this brand. I am considering purchasing this brand's product. I may purchase this brand of product.	[47]
Privacy Concerns	I feel my privacy is protected when shopping online. I feel safe in my transactions when shopping online. The internet has adequate security features.	[48]

## 4. RESULT, ANALYSIS, DISCUSSIONS

### 4.1 Demographic Data

The research will start by surveying the demographic data of the participants. There is a total of 78 respondents in the survey process. The collected data will be analyzed by using SPSS 27. After that, the hypothesized effect was tested using the two-step approach of structural equation modeling (SEM) using Smart-PLS3. First, to analyze the reliability and validity of the scales used in this research, the measurement model will be examined, followed by the second phase, which will be structural model evaluation.

The research will start with doing demographic research to study the demographic data about the participants, which include age, gender, ethnicity, and income, to clarify the participants in a different layer of society. A distinct social layer will also include participants' different mindsets. Other participants will have different opinions toward gamification marketing. For instance, most teenage participants will think that gamification marketing will attract them because of the content of the gamification elements. Seventy-eight answers were obtained during the data-collecting period, yielding a response rate of 100%. Because there were 78 complete answers, all of the gathered data (78) was included in the study. Target participants are drawn from the general population interested in marketing material.

**Table 2.** Demographic variables

<b>Demographic variables</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Age</b>		
16-19 years old	5	6.4
20-29 years old	63	80.8
30-39 years old	8	10.3
40-49 years old	2	2.6
<b>Gender</b>		
Male	25	32.1
Female	53	67.9
<b>Income</b>		
RM0-RM2000	55	70.5
RM2001-RM4000	14	17.9
RM4001-RM6000	3	3.8
RM6001 and above	6	7.7
<b>Ethnicity</b>		
Malay	18	23.1
Chinese	40	51.3
Indian	4	5.1
Others	16	20.5

Table 2 shows the participants are 16-19 years old, 20-29 years old, 30-39 years old, and 40-49 years old, respectively. Out of 78 participants, 5 participants are 16-19 years old (6.4 %), 8 participants are 30-39 years old (10.3 %), 2 participants are 40-49 years old (2.6%), and most participants are between 20-29 years old which is 63 respondents (80.8 %). Moreover, there are 25 male participants (32.1%) and 53 female participants (67.9%).

Other than that, there are 55 participants with an income level between RM0-RM2000 (70.5%), 14 participants with an income level of RM2001-RM4000 (17.9%), 3.8% which is 3 participants with RM4001-RM6000 income level, and 6 (7.7%) participants with income level RM6001 and above. As for ethnicity, there are 18 (23.1%) participants are Malay, 40 (51.3%) Chinese participants, 4 (5.1%) Indian participants, and 16 (20.5%) participants are other ethnicities such as Kadazandusun, Iban, and others.

## **4.2 Measurement Model Data Analysis**

Table 3 shows the overview data of this research, including item loadings, AVE, composite reliability, and Cronbach's Alpha. First, according to Leguina [49], item loading is considered valid when the loading is more than 0.7, and to ensure internal consistency reliability, the data of Cronbach's Alpha need to be more than 0.6 [50] or composite reliability should be more than 0.7 [51]. All the values of Cronbach's Alpha are considered significant, as all the values are more than 0.6. In addition, according to previous studies, Cronbach's Alpha has been used to calculate internal consistency reliability but appears to provide conservation measurements in PLS-Sem. Earlier studies, therefore, indicated that the reliability of internal consistency could be used by composite reliability as a substitute for Cronbach's Alpha, and those value which more than 0.6 means the internal consistency reliability have been demonstrated among all reflective latent variable in high-level [51]. Referring to the table below, it could be indicated that all the internal consistency reliability of the latent variable is acceptable as all of the value is higher than 0.6. Since now we are following the composite reliability to measure internal consistency reliability, thus all the variables are considered significant.

**Table 3.** Construct Reliability and Validity

<b>Construct</b>	<b>Item</b>	<b>Loadings</b>	<b>AVE</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>Cronbach Alpha</b>
<b>Engagement</b>	<b>E1</b>	0.86	0.71	0.81	0.88	0.80
	<b>E2</b>	0.81				
	<b>E3</b>	0.87				
<b>User Experiences</b>	<b>UE1</b>	0.78	0.65	0.90	0.90	0.87
	<b>UE2</b>	0.82				
	<b>UE3</b>	0.72				
	<b>UE4</b>	0.82				
	<b>UE5</b>	0.90				
<b>Rewards Giving</b>	<b>RG1</b>	0.91	0.79	0.87	0.92	0.87
	<b>RG2</b>	0.89				
	<b>RG3</b>	0.87				
<b>Brand Awareness</b>	<b>BA1</b>	0.76	0.71	0.81	0.88	0.80
	<b>BA2</b>	0.90				
	<b>BA3</b>	0.86				
<b>Purchase Intention</b>	<b>PI1</b>	0.87	0.71	0.80	0.88	0.80
	<b>PI2</b>	0.82				
	<b>PI3</b>	0.84				

Besides internal consistency reliability, convergent validity must be analyzed in this research. Convergent validity is troublesome since different impulsive steps appear to align poorly. Convergent validity refers to how closely the current scale applies to other variables and measurements of the exact nature. To validate convergent validity, each latent variable's Average Variance Extracted (AVE) should be assessed, and the result should be higher than 0.5 to indicate convergent validity is acceptable. According to Table 3, all the latent variables are adequate as they are more than 0.5.

### 4.3 Discriminant Validity

Discriminant validity determines if the model's structures are highly linked with the variables. Discriminant validity ensures that the latent structures used to assess the causal relationship under analysis are genuinely distinct. This research will use the Heterotrait-Monotrait Ratio of Correlations (HTMT) method to assess discriminant validity. Even though the Fornell-Larcker criterion has existed for over 30 years, there has been a lack of organized investigation into its effectiveness in evaluating discriminant validity. It compares the square root of the AVE of a particular construct with the correlation between that construct and another construct. The value of the square root of AVE should be higher than the correlation [52]. However, previous research has pointed out that the Fornell-Larcker criterion would mistakenly be led to believe that discriminant validity has been established [53]. Thus, using HTMT would be the most suitable method to evaluate the establishment of discriminant validity. According to the previous researcher, the HTMT criterion measures the average correlations of the indicators across constructs. The acceptable levels of discriminant validity ( $< 0.90$ ) are suggested by previous researchers [54]. Referring to Table 4, all the variables that the discriminant validity is significant as the value is less than 0.90. Consequently, the outcome shows that discriminant validity is fully established.

**Table 4.** Discriminant Validity

	Brand Awareness	Engagement	Moderating Effect 1	Privacy Concerns	Purchase Intention	Rewards Giving	User Experiences
Brand Awareness							
Engagement	0.73						
Moderating Effect 1	0.12	0.02					
Privacy Concerns	0.39	0.38	0.28				
Purchase Intention	0.77	0.50	0.11	0.41			
Rewards Giving	0.69	0.65	0.04	0.22	0.45		
User Experiences	0.66	0.51	0.09	0.29	0.54	0.56	

### 4.4 Structural Model Analysis

The structural model test included an approximation of the path coefficients, showing the strength of the relationship between dependent and independent. It is necessary to analyze the path coefficient. Path Coefficient explains how strong the effect of one variable is on another variable. The weight of different path coefficients enables us to rank their relative statistical importance as per the relationship between expectancy model elements, brand awareness, and purchase intention.

The table below shows that almost all the expectancy elements reflect a positive relationship with brand awareness. The data shows expectancy elements are engagement (2.35), user experiences (2.51), and rewards giving (2.04), respectively. The relationship between brand awareness and purchase intention is positive, while the T-value is 6.38,

the most substantial relationship among the models. Almost all the hypotheses have been accepted except for the moderation effect of privacy concerns on the relationship between brand awareness and purchase intention, which has been rejected.

According to Leguina [49], the research estimates that the value for which  $P=.05$ , or 1 in 20, is 1.96, or almost 2. It is convenient to take this point as a limit in judging whether a deviation is considered significant. Among the relationships, it could be seen that the relationship between brand awareness and purchase intention would be the most important, as the T-value is 6.38.

**Table 5.** Result of Hypothesis Testing

	Hypothesis	Original Sample (O)	T Statistics ( O/STDEV )	P Values
<b>Engagement -&gt; Brand Awareness</b>	<b>H1</b>	<b>0.32</b>	<b>2.35</b>	<b>0.02</b>
<b>User Experiences -&gt; Brand Awareness</b>	<b>H2</b>	<b>0.30</b>	<b>2.51</b>	<b>0.01</b>
<b>Rewards Giving -&gt; Brand Awareness</b>	<b>H3</b>	<b>0.25</b>	<b>2.04</b>	<b>0.04</b>
<b>Brand Awareness -&gt; Purchase Intention</b>	<b>H4</b>	<b>0.57</b>	<b>6.38</b>	<b>0.00</b>
<b>Moderating Effect 1 -&gt; Purchase Intention</b>	<b>H5</b>	<b>0.03</b>	<b>0.30</b>	<b>0.76</b>

## 5. CONCLUSION AND SUGGESTIONS

### 5.1 Discussion

While the number of users of online shopping platforms has increased, this study is encouraged to indicate how gamification contributes to user experience in online shopping platforms. Previous research has been conducted to investigate the relationship between brand and gamification user experience [46]. However, the relationship between brand awareness is still open, with a gap. Thus, in this research, we come up with the following research question: Are the factors influencing the behavior of consumers towards the gamification online shopping platform? The result shows that some aspects are associated with consumers' attitudes, but some do not. We have proposed five hypotheses in this study, the result stating that all the hypotheses have been proved except hypothesis 5, the moderating effect of privacy concerns on the relationship between brand awareness and purchase intention. This study confirms that gamification features and engaging experiences on e-commerce platforms significantly enhance brand awareness. Users who participate in interactive challenges, games, or contests form stronger connections with the brand, leading to better recall and recognition. Gamification tools like challenges, badges, and rewards encourage users to engage more deeply with the platform, resulting in higher brand awareness. This engagement creates positive emotions, reinforcing brand loyalty and driving repeated interactions. Ultimately, gamification

fosters a symbiotic relationship between user engagement and brand awareness, benefiting consumer experience and brand visibility in e-commerce strategies. For the relationship between user experiences and brand awareness, the study reveals that gamification in e-commerce significantly enhances brand awareness by improving user experiences. Interactive features like challenges and rewards lead to positive emotional connections with the brand, making users more likely to remember and recognize it. Gamified interactions create memorable experiences, boosting brand recall and fostering emotional ties that strengthen brand awareness.

Furthermore, the research also highlights a significant link between rewards and brand awareness. Gamification mechanisms, such as points and discounts, engage users and create positive associations with the brand. Rewards boost emotional investment and brand recall while also encouraging word-of-mouth promotion. Effective reward strategies can enhance brand visibility and foster community support. Lastly, the study shows that increased brand awareness positively impacts purchase intention. Gamification drives repeated brand exposure, builds familiarity and trust, and influences purchase decisions. Users frequently engaging with gamified brand content are more likely to consider and buy the brand's products. Integrating brand-related content with gamification features can enhance this effect, increasing sales and creating a more substantial market presence.

## **5.2 Theoretical Implications**

It offers empirical support for the fundamental function that motivation plays in gamification online platforms in the current study. This study highlights the importance of user motivation by understanding how they would engage with gamification and be attracted by the rewards contributed by gamification. This is the reason why the VIE Theory was adopted in this study. One strength of the current research is that it considered different facets of valence, instrumentality, and expectancy in the context of gamification users, thereby bringing together VIE theory [55].

One of the critical theoretical implications of this study is there are limited studies investigating the relationship between gamification and brand awareness. By adapting engagement, user experiences, and reward giving in this theory, it could identify what would contribute to the motivational force of the consumer towards the gamification online shopping platform.

The other theoretical implication would be the purchase intention adopted in this research. According to previous research, VIE Theory consists of the expectancy elements and the behavioral factors, while in this study, another behavioral factor has been added, and the relationship does exist. Thus, it created a foundation for future research in this area.

### **5.3 Practical Implications**

The findings of this study have numerous critical practical implications. Firstly, the result shows no statistically significant influence of moderate privacy concerns on the relationship between brand awareness and purchase intention. The data did not show a significant effect between these two factors. There are a few reasons that would cause this result. Firstly, consumers are more attracted by the gamification features than privacy concerns. When consumers are immersed in gamification, it might bring them great user experiences that make them ignore privacy issues. Secondly, privacy concerns might negatively affect the brand, not directly affecting brand awareness but other brand equity such as brand trust, brand love, and more. Privacy concerns might impact users' experiences, but it does not affect the attention that the brand draws consumers.

Furthermore, the result shows a significant relationship between engagement, user experiences, and rewards given to brand awareness. From this study, marketers could try to improve the user experience of gamification by adding features such as rankings and point reward systems. Additionally, two-way communication could be added to the gamification system through comments to exchange information. However, before the consumer uses gamification, engagement should be encouraged first. Marketers could promote an online campaign to connect the world to promote the gamification online shopping platform. Moreover, marketers should add more rewards provided by gamification, whether tangible or intangible, such as free shipping coupons, points, and more. Another suggestion is that the online shopping platform could also provide some free points for the consumer to exchange tangible rewards such as collectible mugs, bowls, and more.

As a result, this study provides a more profound knowledge of the relationships between the investigated constructs and their related indicators and the factors that influence managers' decisions to employ gamification platforms in online shopping. Lastly, this study contributes to knowledge by indicating the substantial significance of customer engagement in increasing brand awareness within an extended Vroom Expectancy theory model.

### **5.4 Limitations**

Our study has significant limitations that need to be acknowledged, even though it provides crucial insights into customer behavior toward gamification online shopping platforms. First, the fact that our conclusions are based on data gathered from actual Malaysian consumers limits the applicability of our findings to other geographic and ethnic settings. Future research could be done abroad. Second, this study might not capture all the effects of the behavior of consumers towards gamification as there are still many variables that could have been rendered in this scope of the study. Studies with other variables, such as usage barriers, could be encouraged. Third, another weakness of this study is its small sample size (less than 100 participants), which may restrict the findings' generalisability.

Furthermore, the sample has a considerable gender imbalance, which may introduce bias and reduce the representativeness of the results. As a result, there is a risk that the study's conclusions will not adequately reflect varied perspectives, especially in gamified marketing. Future studies should attempt to expand the sample size and attain a more balanced gender distribution to produce more reliable and generalizable results.

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