Why premium in freemium: a hedonic shopping motivation model in virtual game retailing

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Abstract

Purpose – Hedonic shopping is a growing phenomenon designed to enhance gamers' virtual content shopping experience with increasing economic significance, yet limited attention has been dedicated to this area. Our study explores key hedonic motivations of virtual content shopping and how hedonic shopping value builds trust (trust in virtual content and trust in virtual retailers) that enhances the intention to pay for premium.

Design/methodology/approach – This research adopts a mixed-methods approach. Study 1 is qualitative; 19 semi-structured interviews were conducted with virtual game retail platform users. Study 2, based on the literature review and qualitative inquiry findings (obtained from Study 1), proposes a research model empirically validated by analysing survey data administered to 437 online gamers from gaming zones, cybercafés, and e-sports centers.

Findings – The results show that in-game shopping-related adventure-, gratification-, role-, and idea-seeking motivations significantly influence gamers' perceived hedonic shopping value. In turn, perceived shopping value has a significant indirect effect through trust on gamers' intention to pay for premium.

Originality/value – This research contributes to gaming literature by offering a comprehensive model that elucidates the role of hedonic shopping in increasing gamers' trust, which explains purchase behavior in the virtual game retail context. The findings deepen the understanding of the game retailing landscape and offer strategies to build gamers' trust, increase premium usage, and retain existing spenders.

Keywords Online games, Premium content, Hedonic shopping, Trust, Intention to pay

Paper type Research paper.

1. Introduction

In recent years, the freemium-to-premium gaming business model has become ubiquitous in the gaming industry, revolutionizing how video game developers can monetize games and how players can enjoy a premium gaming experience. In freemium games, revenue is mainly generated by selling additional or supplementary services to enhance users' game experiences (Hussain *et al.* 2023a). However, a major challenge of the freemium business model lies in its ability to convert free users to paying customers (Beltagui *et al.* 2019, Gu *et al.* 2018). In other words, how can developers encourage freemium gamers to purchase in-game content, such as game coins, unlocks, weapons, artifacts, and costumes (Mkedder and Özata 2023, Zhao *et al.* 2024). Although such in-game shopping surpassed US$ 710 billion in 2024 (Statista 2024), there is still vast untapped potential. It has been estimated that only 2% of gamers actually spend money on in-game content (Hussain *et al.* 2023a, Wang *et al.* 2021). To overcome this challenge, video game developers can undertake advertising campaigns and offer other incentives, such as tournaments, for monetization (Lehtonen *et al.* 2022). However, the key concern is ensuring virtual items and the shopping experience itself add value for gamers, 'when there is no value, there is no motivation to purchase' (see; Marder *et al.* 2019). Albeit the case, understanding value driven motivations, specifically those which are hedonic in nature remains underexplored.

Prior studies on online games identify two types of gamers: (1) active spectators, motivated by escapism, curiosity, and game aesthetics (Hamari and Sjöblom 2017, Kim and Kim 2020), and (2) those focused on gaming behavior and its underlying features, such as flow, access/availability, and cost (Catalán *et al.* 2019, Hollebeek *et al.* 2022). In both cases, players have game-related hedonic needs, in which their desires for gratification, pleasure, playfulness, and fun are key drivers of game engagement behavior (Hollebeek *et al.* 2022). Free-to-play games provide opportunities for players to satisfy their hedonic needs. While the base game is

free, players may choose to purchase additional premium content not available in freemium or free versions, such as game narratives, social gifts, intellectual challenges, and/or personalized avatars (Teng 2021, Gong and Huang 2023) to enhance their gaming experience. Prior gaming research has largely explored in-game content to support utilitarian objectives (e.g.,in-game advantages;Marder *et al.* 2019). For example, players can progress more quickly in a game by purchasing a powerful fighting tool. Online games are predominantly experienced-driven activities, and a sense of happiness is associated with their hedonic nature, as they meet consumers' experiential needs. Hedonic elements in virtual game retailing promote enjoyment and involvement (Wu and Holsapple 2014) and prompt purchase behavior. Indeed, the hedonic motivation system adoption model, which is frequently applied in Information Technology research (Kim and Hall 2019), also suggests that elements such as fun, enjoyment, and social/emotional ties as temporal states can help gamers transform ideas into real purchases (Wang *et al.* 2021, Guo *et al.* 2022). While several studies recognize the importance of hedonic motivation in online games (see Kim *et al.* 2023, Possler *et al.* 2024), these studies focus on hedonic-related game experiences as a single, unidimensional construct. Prior broader research on the complexity of hedonic motivation suggests there could be an oversimplification, asserting that hedonic experiences are multi-dimensional (Hollebeek *et al.* 2022). Our proposed multi-dimensional model of hedonic shopping motivations includes adventure, gratification, role, value, social, and idea seeking. These are the possible hedonic shopping antecedents gamers look for when engaged with virtual game retail. This highlights an important research gap, which we aim to address.

Furthermore, the gaming industry needs to develop a competitive advantage. The ability to attract players, interact with them, and eventually develop a trustworthy and reliable relationship with them is key to the success of the premium gaming business model (Hussain *et al.* 2023a). Trust between customers and retailers is a cornerstone for the success of both

physical and online retailing. Although online consumer trust plays a significant role in the development of retail businesses and consumer behavior researchers have focused on understanding how trust is generated in mature online business contexts (Riegger *et al.* 2021, Wu and Tang 2022), empirical evidence on the role of trust in the formation of purchase decisions in virtual game retailing is lacking. In the virtual game retailing context, similar to traditional retailing, though gamers pay for the premium in-game content, there is no guarantee that these premium features will actually yield the desired value for the consumer. For example, a gamer may buy a new skin for their character to appear superior and distinct, trusting the developer to keep this skin exclusive and not widely available, which would diminish its value (Carvalho 2021). This underscores the critical role of trust as an antecedent of in-game purchases. Consequently, a gap exists, with more research required to better understand how game retailers can encourage trust and trigger intention to pay for premium gaming items.

To fill these research gaps, the current research aims to identify the factors of in-game hedonic experiences that trigger gamers' hedonic shopping value and, in turn, how hedonic shopping value influences gamers' intention to pay for premium services/content. To do so, we employed a mixed-method research approach and investigated the pertinent issue in two studies. Drawing on hedonic consumption theory, Study 1 analyses 19 in-depth interviews to uncover what hedonic experiences gamers seek in their in-game virtual item purchases that trigger their hedonic shopping value. Study 2 then empirically validates the elements of a hedonic experience triggering gamers' hedonic shopping value and intention to pay for in-game premium content/services.

This research offers three core contributions. First, in gaming literature, our study contributes to understanding how multi-faceted hedonic motivations associated with the in-game shopping experience for virtual items increase purchase intention through trust. This validated process provides a useful conceptualization to ground further studies into the

relationship between in-game shopping experiences and the purchase of virtual items. Overall, this model elucidates the important role of hedonic shopping value as a direct selling tool that can transition gamers from freemium to premium and encourage existing premium players to continue making purchases.

Second, we contribute to the multi-faceted nature of hedonic experiences associated with in-game shopping to Information Technology research in this domain. Thus, we extend the current literature on the motivation for game related purchases and experiences to consider the complexity of hedonic motivations to better understand 'why' exactly gamers see hedonic motivation as important. In a similar vein, our different dimensions of hedonic experience can be directly leveraged by game studios and developers to recognize player preferences (specific features and characteristics that gamers find most appealing and enjoyable), using this knowledge to adapt their offering to increase hedonic motivation within in-game shopping experiences and virtual content (e.g., better training AI recommendation systems).

Third, Nghia *et al.* (2020) show that shopping value and trust can significantly reinforce online shopping behavior. However, a universal definition of online trust that is multifaceted and encompasses multiple dimensions across diverse academic fields is lacking. We extend the current knowledge by theorizing and validating gamers' trust as a higher-order construct anteceded by two distinct dimensions – *trust in virtual content* and *trust in virtual retailers* (Huang *et al.* 2022, Wu and Tang 2022). These two elements are important, yet, they have separate levers for enhancing overall gamers' trust.

2. Literature review

2.1 Freemium to premium gaming business model

Over the past two decades, the virtual game industry has gone through a major shift in how it is monetized, from a 'pay to play' (i.e. buying a physical game disc) model to a prevalent

'freemium to premium' model (Petrovskaya and Zendle 2021). The freemium to premium model originated in the early 2000s in China, where console games were banned, with games played predominately on PCs (Liu 2013). This model was then adopted by game developers internationally as it provided several benefits; reducing money lost through piracy and the trade-in market, removing price as a barrier to adoption, allowing unlimited revenue generation from single gamers (e.g. whales – those who spend large sums in-game), and better exploitation of mobile gaming opportunities (Moseby 2024).

The freemium-premium gaming model offers the core products/services free of charge. However, this is available with limited functionality, time constraints, or reduced quality (Hussain *et al.* 2023a, Deng *et al.* 2023) . Revenue is generated by upselling in-app purchases (e.g., virtual content, upgraded plan, enhanced functionality) for those who wish to enjoy an advanced experience. In-game advertising is also used to persuade users to pay for these premium features (Meng *et al.* 2021, Gong *et al.* 2024). The freemium model has helped attract a large user base (potential customers) through the basic (free) version of the game, allowing players to explore the game offering before committing to premium features (Hamari *et al.* 2020, Bapna *et al.* 2018). Albeit the case, the gaming industry operates within a highly competitive market (e.g., 500 new games daily; Hussain *et al.* 2022), and it is challenging for service providers to sustain themselves in the long term. For this, Syahrivar *et al.* (2021) highlight the role of in-game virtual retailing as the future of the de facto freemium gaming model.

In these retail spaces, game developers offer different in-game premium items that are mostly virtual or physically intangible (Zhao *et al.* 2024). Virtual goods purchased can be viewed as in-game shopping or retailing because players compare the prices of various virtual goods offered by game retailers before making a purchase (Mkedder and Özata 2023, Hamari *et al.* 2020). In-game premium items help fulfill the dynamic needs of gamers missing from

the freemium version. In identifying these specific needs of gamers and targeting explicit virtual items to fulfill such needs, game developers have access to huge amounts of user data based on demographics, gameplay, and retail store behavior that can be used to forecast purchase behavior (Ratchford *et al.* 2023). These insights can be used to train AI-based recommendation systems for items sold in in-game retail, similar to the systems used in retail sites such as Amazon (Jin and Zhang 2023).

2.2 Hedonic motivations and in-game retailing

Arnold and Reynolds (2003) define shopping motives as "the driving force that propel[s] consumers to the market to fulfill their inner needs." These inner needs include desires for personal satisfaction, identity expression, novelty-seeking, sensory enjoyment, and mental relaxation. All these needs, which are psychologically based, will influence how consumers engage with their gaming pursuits. Relying on the assumption that different psychological needs drive people's shopping motivation, Lowry *et al.* (2012) proposed various motivations, such as self-gratification, role-play, new trends, sensory stimulation, and diversion to enhance their gaming experiences. Picot-Coupey *et al.* (2021) classified the nature of these motivations into utilitarian and hedonic motivations. Utilitarian motive consumers focus more on assessing the product's quality and functionality (e.g., quality, functionality; Choi *et al.* 2020). In contrast, hedonic motivations come from enjoyment and pleasure experienced during shopping (Dugan *et al.* 2021). In other words, hedonic motivations reflect pleasure, stratification, and emotional aspects generated during the shopping experience. Psychological needs and hedonic motivations are crucial in shaping gamers' behavior and influencing their perceptions of gaming intent and purchases. Understanding these needs and motivations is essential to game developers and their business models, where the allure of enhanced gaming experiences often hinges on these intrinsic psychological and pleasure-seeking factors.

With the rise of freemium to a premium business model in online games, more and more scholars and practitioners started focusing on hedonic consumption behavior in virtual game retail. Prior studies have found that online gamers have long been engaged in virtual game retail mainly because of hedonic tendencies. For example, Kaur *et al.* (2020) reported that enjoyment or gratification had been considered an important motivation for in-game shopping. Similarly, discounts and bargains are also a common source of hedonic seeking. This happens when there are differences between the sale price of the virtual game content and the internal reference price exceeding the functional utility, thereby augmenting gamers' feelings of excitement (Jee 2021). Several recent studies reveal that hedonic motivations such as feelings of enjoyment, arousal, uniqueness, adventure, and socializing have been precursors of in-game retail (Zhao *et al.* 2024, Wang *et al.* 2023). Moreover, novelty and aesthetics are also salient features that help gamers to achieve their hedonic needs (Wang and Jia 2023). For example, during in-game shopping, players find some new designs and aesthetics that gamers perceive as unfamiliar and surprising. Based on the above discussion, we focus on exploring gamers' intent to pay, driven by hedonic shopping motivation, for the following reasons. First, the hedonic perspective has emerged as the most prevalent criterion for different pleasure-oriented categorizations of online shopping (Sameeni *et al.* 2022, Wang and Jia 2023). From this standpoint, we can better understand gamers' affective/social psychology, specifically regarding hedonic attitudes. Second, recent gaming literature has proven that hedonic elements foster higher satisfaction, pleasure, and happiness than utilitarian elements (Hollebeek *et al.* 2022, Marder *et al.* 2019). Thus, we believe that bringing such changes in virtual game retail may have a non-negligible impact on gamers' shopping behavior. Third, hedonic motivations can influence immediate purchase decisions and contribute to long-term gamers' engagement and loyalty. Through a proper understanding and catering of these motivations, game

developers and retailers can create a more loyal and engaged customer base, subsequently leading to sustained revenue growth

2.3 The dual perspectives of trust: virtual content and virtual retailer

Xiao *et al.* (2019) define trust as confidence in an exchange partner's ability, integrity, and benevolence. In an online environment, trust is a pivotal and multi-dimensional element influencing consumer behavior. To establish online consumer trust, Kim *et al.* (2008) developed a framework encompassing four important antecedents of online consumers' trust: cognitive-based (e.g., information, privacy), affective-based (e.g., certification, word of mouth), experience-based (e.g., familiarity, experience), and personality-oriented (e.g., disposition of trust). In addition, Ha *et al.* (2016) divided trust into cognitive- and effective-based trust in e-commerce. Liang *et al.* (2019) evaluated buyers' trust in a live-streaming retail context by including two perspectives of trust: trust in the streamer and the product. Trust in the streamer captures buyers' belief that a streamer is honest, trustworthy, and will not cheat them. Trust in the product refers to buyers' belief that the product will meet their expectations (Chen *et al.* 2022).

We follow Huang *et al.* (2022) higher-order trust conceptualization framework and also integrate Chen *et al.* (2022) components of trust in our study. In virtual game retailing, most retailers promote micro-level non-descriptive products (for a few dollars each), but these products need to be well-established (Gong and Huang 2023). Many online game service providers need help with their brand message in the industry, and some have bad reputations. As such, purchasing virtual content from individual game retailers with an unspecified description and non-recognizable branding during online game playing is perceived as risky (e.g., low quality, fake) by gamers (Wang *et al.* 2019). Trust not only plays a critical role in alleviating players' perceived risk with the virtual content (e.g., product, performance) and the

retailer (e.g., payment) but also helps convert freemium gamers to premium users, increase game store loyalty, and enhance satisfaction. Adapting to the higher-order conceptualization, the trust-building mechanism derives from the dual perspectives of virtual content and virtual retailers, which enhances gamers' intention to pay. Specifically, trust in virtual content can be enhanced through cognitive- and experience-based engagement, while trust in virtual retailers can be increased through affective-based engagement.

3. Study 1: conceptualizing hedonic shopping motivations on the online game platform

To explore the motives related to hedonic shopping in an online virtual game environment, we used a mixed-methods design (Krasonikolakis and Chen 2023), which comprised both qualitative and quantitative approaches. In a virtual game retail context, mixed-methods designs are especially useful because the game retail context frequently changes and is typically highly ambiguous, emphasizing the need to "produce a greater assortment of divergent and/or complementary views" and to "provide stronger inferences than a single method" (Shi *et al.* 2022).

Following the guidelines from recent studies (Califf *et al.* 2020, Shi *et al.* 2022, Fang *et al.* 2023), we systematically reviewed the gaming literature and in-depth interviews to uncover and distinguish potential gamers' hedonic motivations on virtual game platforms. We conducted in-depth interviews with gamers who purchased items while playing online games. For Study 1, we used a snowball sampling approach to collect our data (Noy 2008). The sample consisted of online game players who had purchased items within the last month; they received small monetary vouchers as a token of our appreciation. Our first two respondents were hardcore gamers, with experience playing online games and purchasing in-game items. Subsequently, we expanded our pool of respondents using recommendations from these respondents. To qualify as our respondents, we asked some screening questions to ensure their

appropriateness for our study. Sample questions were, “How long have you played online games?” “What is your frequency of playing games?” “Do you have experience with in-game shopping?” and “What kind of in-game virtual content do you usually purchase while playing video games?” We interviewed 19 online gamers (16 men and 3 women) with the supposition that they had experienced in-game virtual consumption and could provide insight into the phenomenon. From the 13th respondent onwards, we found no new themes emerging from the interviews (after we had reviewed successive data within the investigated themes) (Glaser and Strauss 2017). Hence, we believe that theoretical saturation was achieved by the 13th respondent. According to Boddy (2016), theoretical saturation is useful in qualitative research design, where practical evidence shows that 12 samples may lead to data saturation among a relatively homogeneous population.

3.1 Data analysis

To analyse the data, we performed a thematic analysis following Braun and Clarke (2006)’s steps. Thematic analysis is a method for identifying, analysing, and communicating patterns (i.e., themes) within qualitative data. Following broadly Braun and Clarke (2006) steps, we first familiarized ourselves with the data before commencing open and axial coding (Kindermann *et al.* 2024), to iteratively examine the data to distinguish the main hedonic experiences during shopping for in-game virtual items. Here, we first identified open codes associated with hedonic virtual items (keywords and descriptions). We then analysed the gaming and online shopping literature to uncover relevant concepts for our preliminary analysis and pinpoint common instances of virtual item purchases. We subsequently created sub-themes as conceptually similar groups of open codes through the theoretical lens and associated literature. Using axial coding, we compared the sub-themes for similarities and differences and linked them to conceptual units and the overarching themes (Shi *et al.* 2022). Overall, we

identified six motivational themes on hedonic experiences that online gamers seek during in-game virtual item purchasing: adventure-, gratification-, role-, value-, social-, and idea-seeking (see Figure 1).

Insert Figure 1 here

3.2 Model building based on qualitative results and the literature

To further illustrate the relationship among hedonic shopping motives, shopping value, trust, and players' intention to pay for premium content during in-game shopping, we propose a conceptual model (see Figure 2). This model is developed based on relevant theories and literature and the results from the semi-structured interviews conducted in the qualitative study.

3.2.1 Hedonic motivations and hedonic shopping values

Arnold and Reynolds (2003) use "adventure" to describe consumers' sensual excitement while shopping. Online gamers, motivated by their hedonic nature, value the shopping process more than the virtual gaming content itself. During online game playing, specifically for freemium gaming services in which players can only enjoy the basic/limited features of online games (Hussain *et al.* 2022), visiting virtual retail stores where they can purchase game-related content (e.g., artifacts, avatars) can be exciting and adventurous (Kindermann *et al.* 2024). As gamers visit these in-game virtual retail stores to explore new virtual content and acquire new gaming designs, this exploration process may be more exciting and, thus, significantly enhance gamers' shopping value. In fashion retail settings, for example, Kumar and Yadav (2021) show that online customers experience thrill and adventure when they interact with an online web store and its products. Therefore, we posit the following:

H1. Online gamers' adventure-seeking positively influences their hedonic shopping value.

Gratification motivations drive desires for shopping as a stress reliever, mood stabilizer, just for fun, or to treat oneself (Horváth and Adıgüzel 2018). According to prior gaming research, many people indulge in the gaming world to escape from negative thoughts, find relief from a depressive state, and experience positive emotions (Boldi *et al.* 2022). Often, a basic motivation to engage in this activity is to eliminate negative feelings. Wang *et al.* (2022) suggest two key factors directly coupled with a gratifying shopping experience: non-personal and interpersonal. A non-interpersonal or experience-based factor entails purchasing or acquiring a valuable product or encountering an unexpected discount (Arnold *et al.* 2005). By contrast, an interpersonal factor refers to situations when a player's or service provider's actions contribute to a pleasant experience (Ha and Jang 2013). Gratification is considered a more pressing desire of online gamers to counter a bad mood, relieve stress, and consider themselves special (Brand *et al.* 2022). As people spend more time on various online games, given the accessibility of the internet, this need may become more apparent in the context of in-game virtual content purchasing (Gong *et al.* 2019). Therefore, we posit the following:

H2. Online gamers' gratification-seeking positively influences their hedonic shopping value.

In the online gaming context, role-seeking involves gamers' perceived pleasure that leads them to shop for content/items for friends or teammates within the virtual gaming environment (Arnold and Reynolds 2003). Online gamers (especially team leaders) often buy different game-related virtual content, such as weapons and character classes (e.g., princess, wizard), for their gaming partners; they also do so out of a role-enrichment motivation (Wang and Hang 2021, Azman Ong and Ibrahim 2024). Similarly, to increase their social image, game players often find virtual items for their gaming friends that help them improve their characters'

appearance and ability to progress in the game (Ali *et al.* 2020, Teng 2018). Players with a high level of ensuing self-enhancement will pursue authority and social power over other gamers, prestige, social recognition, and personal success. Consequently, such gamers engage more in purchasing content for other gamers, which also serves as a way to exhibit their prestige and achievements (Coelho *et al.* 2023). We, therefore, hypothesize that online gamers illuminate their self-image and perceived roles in the gaming community through buying decisions and are more likely to enhance their hedonic shopping value. Thus:

H3. Online gamers' role-seeking positively influences their hedonic shopping value.

Value shopping in online games refers to buying virtual gaming content at a discount or a lower price. McGuire (1974) first introduced value shopping by drawing on assertion theories (McClelland 1961), which asserts that spirited achievers admire and attempt to improve their self-esteem by developing their potential. The perception of discounts, sales, and bargains usually provides gamers with hedonic benefits (Wiegand *et al.* 2022), enhancing their sensory involvement and heightening the thrill and excitement level (Janowski *et al.* 2021)**.** Online gamers perceive more value in virtual item shopping when they obtain useful content at a discounted rate. They also have an opportunity to purchase useful content at competitive prices when game retailers mark down prices during in-game promotional campaigns. In online virtual game retail stores, gamers often encounter sales and promotions. In addition, announcements of new content or upcoming events keep players interested in the game. Limited-time events and in-game promotions create a sense of urgency to purchase before the event ends. Therefore, virtual game retailers frequently offer attractive pricing through seasonal discounts, major updates, and limited-time events to fulfill gamers' desires for thrill and excitement to increase game revenue. Thus:

H4. Online gamers' value-seeking positively influences their hedonic shopping value.

Social shopping in online games refers to the overall enjoyment of experiencing in-game content with other online gamers, friends, and game partners to socialize and develop close relationships with them (Arnold and Reynolds 2003). The proliferation of multiplayer online role-playing games and games-as-a-service paradigms has enabled online game players to be more socially interactive, find gamers with related interests, and form reference groups in gaming communities (Hussain *et al.* 2023a). Similarly, belongingness theory (Heffernan 1988) posits that technology-enabled environments encourage users to build intimate social connections and meaningful relationships. The gaming literature has also shown that the primary reason many users enter the virtual gaming world is to enjoy social interactions (e.g., collaboration, affiliation) they feel are challenging in the real world (Zhang *et al.* 2023). Therefore, the benefits of online social aspects (e.g., shopping with friends) may lead hedonically motivated online gamers to participate in in-game content shopping. Thus:

H5. Online gamers' social-seeking positively influences their hedonic shopping value.

Idea-seeking implies a desire for new trends, styles, and experiences that help gamers remain up-to-date and express their feelings and preferences in a virtual gaming environment (Horváth and Adıgüzel 2018). McGuire's (1974) categorization theories provide a foundation for idea-seeking, which attempts to explain the human need for order, structure, and knowledge together with objectification theories (e.g., Festinger 1954); in this case, humans require external guidance and information to make sense of themselves. Prior gaming research indicates that acquiring new virtual content (e.g., costumes and artifacts; Song and Fox, 2016) allows gamers to express their distinctiveness and individuality in online gaming environments (Green *et al.* 2021). In the virtual gaming world, gamers are concerned about their self-identities and self-esteem, which explains why they are keen on obtaining new content and information to improve their virtual self- and social image (Bae *et al.* 2019, Abbasi *et al.* 2021).

In this sense, we expect idea-seeking (e.g., browsing new content) to drive hedonic shopping value strongly. Thus:

H6. Online gamers' idea-seeking positively influences their hedonic shopping value.

3.2.2 Hedonic shopping value, trust, and intention to pay

Prior studies have noted that hedonism is the basic reason gamers actively participate in the virtual gaming world (Lee *et al.* 2021, Sharma *et al.* 2022). Leung (2020) also focuses on exploring the phenomenon of gamers' desire for hedonism through virtual content purchasing. Similarly, studies on in-game content purchasing have based their discussions on gamers' needs for novelty-seeking, variety, and surprise (Hamari *et al.* 2017a, Jin *et al.* 2017). A hedonic shopping value positively influences online gamers' attitudes (e.g., trust) and behavioral outcomes (e.g., purchase). In the traditional sense, trust refers to a general belief that the other party will behave ethically and socially appropriately rather than acting opportunistically (Brown *et al.* 2019). An exchange partner has more trust when the other party is capable, honest, and benevolent. Tsai and Hung (2019) suggest that game players' trust in a virtual gaming setting entails trust in the game, the game's service provider, the virtual retail store (website), the product, and the channel (online). As we focus on virtual game retailers selling in-game virtual content, the two pertinent entities are the seller and the product.

Gamer trust is essential in virtual game retail, given the lack of face-to-face interactions between a gamer and a seller or between a gamer and a product due to their temporal and physical separation (Lai and Fung 2020). Compared with traditional retailing, the nature of virtual game retailing creates information asymmetry and transaction risks, including partner identification uncertainty, opportunism, and product quality doubt. Thus, unlike other studies that cover only unidimensional aspects of trust (Jiang *et al.* 2019), we explore trust as a two-dimensional construct (i.e., trust in virtual content and trust in virtual retailers). Also, applying

the notion of trust, Wongkitrungrueng and Assarut (2020) demonstrate that seller attitude, product reliability, and engagement significantly enhance consumer purchase intention. In addition, Tan *et al.* (2022) show that trust in a product and seller significantly influences customer engagement in utilitarian and hedonic value. Building on this evidence, we hypothesize the following:

H7. Hedonic shopping value positively influences gamers' intention to pay.

H8. Trust mediates the relationship between hedonic shopping value and the intention to pay.

Insert Figure 2 here

4. *Study* 2: empirical evidence of the relationships among hedonic motivation, shopping value, trust, and intention to pay

In the second phase of this mixed-method study design, we empirically investigated the proposed conceptual model developed in study 1. We employed a quantitative technique, using a self-administrative questionnaire to collect data from online gamers who frequently purchased virtual content while playing online games.

4.1 Survey development

We adopted the measures of hedonic shopping motivations, hedonic shopping value, intention to pay, and trust from well-established studies for better reliability and validity. We measured the items of each construct with a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Arnold and Reynolds (2003) developed items of hedonic shopping motivation, including adventure-, gratification-, role-, value-, social-, and idea-seeking. We adopted the hedonic shopping value scale from Nghia *et al.* (2020), who borrowed it from Janssen *et al.*

(2016). We next modified the measurement item of intention to pay from Syahrivar *et al.* (2021). Finally, we adapted the measurement for trust from Wongkitrungrueng and Assarut (2020). A detailed overview of measurement items is available in the Appendix.

4.2 Data collection

To recruit participants for study 2, we used purposive sampling focusing on gaming zones, cybercafés, and e-sports centers located in three states in Malaysia. In each visited gaming zone, cybercafe, and e-sports center, we first estimated the number of players exiting the centers at two different time ranges, specifically from 11:00 am to 2:00 pm and 4:00 pm to 7:00 pm. We chose these two specific time ranges because this coincides with lunch and dinner hours, and we expect some gamers to exit the centers to eat. We waited outside the centers of the identified locations to approach these gamers and requested their consent to participate in our survey. We offered a small token of appreciation to each respondent who participated in our survey to boost response rates. In total, 437 online gamers completed the questionnaire. After comprehensively assessing the data set, we removed some incomplete and suspicious responses. In the end, we obtained 412 complete responses for the final analysis. Of the respondents, 62.7% were male, 37.3% were female, and the majority were below the age of 30 years (69.2%). Likewise, 78.6% claimed they played online daily, and 43.7% engaged in in-game hedonic shopping a few times a week.

4.3. Analysis and results

4.3.1 Measurement model

We used SmartPLS 3.2.8 to analyse the data. Following the guidelines of prior studies (Sarstedt *et al.* 2016, Hair *et al.* 2019a), we assessed the measurement model by establishing the convergent and discriminant validity of the data. As Table 1 illustrates, the outer loading of

each measurement item was above the threshold level of 0.70. In addition, Cronbach's alpha (CA) and composite reliability (CR) values for each construct were above the recommended threshold of 0.70 (Hair *et al.* 2019b). The average variance extracted (AVE) value for each construct was also above the recommended minimum value of 0.50 (Sarstedt *et al.* 2019). As the results meet all three conditions for convergent validity, our measurement model has no convergent validity issues.

Insert Table 1 here

We used the heterotrait–monotrait (HTMT) ratio to confirm discriminant validity (Roemer *et al.* 2021). As Table 2 shows, all HTMT values are well below the threshold of 0.85, indicating adequate discriminant validity. A variance inflation factor (VIF) test assessed any potential multicollinearity problems. Given that the VIF values for all constructs ranged from 1.39 to 3.1 and were significantly lower than the 3.3 threshold value (Hair *et al.* 2011, Hair Jr *et al.* 2017), we can conclude that multicollinearity was not a problem.

Insert Table 2 here

Examining the relationship between customers and virtual agents in a retail setting, Huang *et al.* (2022) specify trust as a second-order construct. Trust in virtual content and trust in virtual retailers are two distinct constructs with different impacts. In doing so, we operationalize the gamer trust construct as reflective on the first-order level and the formative construct on the second-order level. To assess the reliability and validity of the formative measurement model, studies recommend evaluating multicollinearity (i.e., VIF) and performing bootstrapping to check indicator weights and the significance of items used for the second-order construct (Hair Jr *et al.* 2017). The results in Table 3 show that gamer trust is a reliable and sound second-order formative construct, as the VIF is below 3.3 (Kock and Lynn 2012) and the indicator weights are significant.

Insert Table 3 here

4.3.2 Structural model

After achieving significant results for the measurement model, Wong (2013) proposes using a bootstrapping method with 5,000 resamples to assess the structural model by examining the statistical significance of path coefficients, *t*-values, and *p*-values. Table 4 shows the results of the structural model assessment. The structural model results support the hedonic shopping motivations, except for value- and social-seeking motivations. That is, adventure-seeking (β = 0.122, *t* = 2.560), gratification-seeking (β = 0.304, *t* = 6.701), role-seeking (β = 0.383, *t* = 7.808), and idea-seeking (β = 0.241, *t* = 6.260) motivations significantly influence hedonic shopping value, providing support for H1, H2, H3, and H6, respectively. However, the results for value-seeking (β = 0.041, t = 0.331) and social-seeking (β = 0.047, t = 0.286) motivations showed a non-significant relationship, thus rejecting H4 and H5, respectively. Surprisingly, hedonic shopping value did not significantly affect gamers' intention to pay for premium in-game content (β = 0.091, *t* = 1.238); thus, H7 is rejected.

Insert Table 4 here

4.3.3 Mediating effect of trust

We followed the recommendations of Rungtusanatham *et al.* (2014) and Chuah (2019) to create a mediating hypothesis. They suggest two key approaches (i.e., transmittal and segmentation) to test the mediation relationship. In the transmittal approach, a single mediator or, in other words, an indirect effect is required to mediate the relationship between the independent and dependent variables without any other associations (e.g., independent variable to mediator, mediator to dependent variable). We developed a mediating hypothesis (H8) based on this approach and examined the indirect effect by analysing confidence intervals to confirm its significance (Hayes and Preacher 2010). The results show a significantly positive mediating effect of gamer trust on the relationship between hedonic shopping value and intention to pay

(β = 0.238, *t* = 5.289), thereby confirming H8 (see Table 5). This finding supports the validity of the proposed conceptual framework that trust (as a higher-order construct) plays a critical role in altering gamers' intention to pay for premium items in freemium online games.

Insert Table 5 here

5. Discussion

The study supports all the hypotheses regarding the impact of hedonic motivations on gamers' shopping value, except for value- and social-seeking motivations. The findings are in line with prior studies (Evanschitzky *et al.* 2014, Patel and Sharma 2009), adventure-, gratification-, role-, and idea-seeking motivations contribute to gamers' hedonic shopping value. This confirms our beliefs and the findings of Koban *et al.* (2019) that online gamers have a flourishing need for thrill and stimulation, which explains why they are always keen to be adventurous in virtual content shopping. Online gaming is mainly a hedonically motivated activity where most people satisfy their hedonic desires (e.g., joy, pleasure, stress release). Still, with the rise of the freemium business paradigm, gamers can only enjoy limited access to freemium game services. Duvenage *et al.* (2020) exemplify gratification-seeking to be highly correlated with anxiety, stress release, and mood repair. Moreover, social interaction with other game players helps gamers feel more excitement and intrinsic joy when they purchase in-game virtual content as a gift; they also enjoy the shopping experience and achieve hedonic motivation from this experience. Limbach *et al.* (2019) suggest that gamers are conscious of trends and fashion in the virtual gaming environment and thus are willing to try new features and trends in the early stage of launches to improve their self-esteem and identity among other players.

Surprisingly, the results for the impact of value-seeking (H5) and social-seeking (H6) motivations on gamers' hedonic shopping value were non-significant. Thus, hedonically

oriented players may tend to be less price sensitive and value conscious; instead, they may be keen only on virtual content that makes their shopping and gaming experiences more pleasurable and enjoyable. Likewise, social-seeking motivation had a positive association with hedonic shopping value but was non-significant at the 0.05 level. An explanation may be that some online gamers purchase new content and features that make them seem more unique and distinct from other players, and thus, they prefer to shop alone.

Similarly, the results indicate that hedonic shopping value was not a significant predictor of gamers' intention to pay for premium in-game content. This result has implications for game developers and researchers. For example, a possible explanation for this unexpected result could be the risk associated with the nature of online virtual game retail transactions. In the broader gaming context, AI-based recommendation systems leveraging in-game data can provide tailored suggestions, leading to a more immersive and trustworthy retail experience for gamers. Further, this also plays a key enabler in the pursuit of understanding and enhancing the complex relationship between players, the virtual environment, and the gaming industry.

Finally, we employed the transmittal mediation approach to assess the indirect effect of gamers' trust (trust in virtual content and trust in virtual retailers) on the relationship between hedonic shopping value and intention to pay. As the direct association between shopping value and intention to pay has not been established, (Lăzăroiu *et al.* 2020) and Martín-Consuegra *et al.* (2019) suggest exploring this mechanism more systematically to underpin the relationship. In response to these calls, we show that trust as a higher-order construct is a significant mediator between hedonic shopping value and gamers' intention to pay a premium. This finding reinforces the dynamic landscape of the games-as-a-service industry, in which selling virtual content that enhances gamer trust is critical for survivability.

5.1 Theoretical contributions

This study makes three theoretical contributions. First, we extend in-game virtual retail studies (Hamari *et al.* 2017b, Ravoniarison and Benito 2019) that understand the characteristics of game retailing and gamers' motivations that drive in-game purchases by theorizing and validating a new empirical model. This mechanism supports that hedonic motivation in in-game shopping is multifaceted (adventure, gratification, role-seeking, idea-seeking), and increasing the hedonic motivation stimulates purchase intent by increasing gamers' trust. In essence, our research establishes an important position of the shopping experience for virtual items as critical purchase antecedents. Against the backdrop of an untapped potential in the gaming market, with only 2% of gamers being converted from freemium to premium customers (Hussain *et al.* 2022), we thus offer important knowledge that can be used to catalyze this transition. Scholars and practitioners now need to consider different hedonic facets as levers to make in-game shopping experiences more appealing in their design and communication. This contribution is relevant in an era in which IT scholars and game developers explore innovative ways to balance profitability and player satisfaction. Beyond a gaming context, our new perspective on the unique drivers behind hedonic shopping experiences adds value for broader studies to understand hedonic antecedents of IT experiences and adoption. For example, scholars examining Metaverse technologies (especially with a retail component) may consider the drivers we highlight as means of producing greater trust and thus favorable behavior (e.g., adoption and purchase).

Second, hedonic shopping has captured the attention of scholars in different research areas, including fashion (Rosendo-Rios and Shukla 2023), tourism (Chen *et al.* 2019), and retailing (Tarka *et al.* 2022), with the general conclusion that antecedents for hedonic motivation are still largely context-dependent. Despite the significance of the drivers of the hedonic shopping value for gamers' engagement in premium gaming content, the current

knowledge of the behavior is still lacking. This has led researchers to call for new approaches to explore the unique features of online game hedonic shopping value (e.g., Marder et al 2019). Until now, gaming research has attended to hedonic motivation as a single, uni-dimensional construct (Baabdullah 2018, Sharma *et al.* 2020). Inspired by the complex nature of hedonic motivation exposed by broader studies outside of the gaming literature (Horváth and Adıgüzel 2018), we contribute by shifting the perspective on hedonic motivation from uni-dimensional to multi-dimensional to gain greater nuance in the understanding of the motivational phenomenon (Hollebeek *et al.* 2022). In doing so, our study broadens prior gaming literature on in-game content purchasing for enhancing gamers' shopping value, especially in freemium-to-premium game contexts (Sharma *et al.* 2020).

Third, our study responds to Huang *et al.* (2022) recent call to empirically examine trust as a second-order construct to better comprehend the relationship between consumers and virtual technologies. Prior studies on online trust (Reynolds-McIlnay and Morrin 2019) have examined this variable from a uni-dimensional perspective (e.g., trust on a firm platform), and thus, it needs to be revised. In response, we offer an integrative assessment of trust and conceptualize gamer trust as a second-order formative construct that comprises two first-order reflective constructs (i.e., trust in virtual content and trust in virtual retailers). By conceptualizing trust as two-dimensional, we show two routes through which game studios and retailers can build gamers' trust from shopping value to trigger intention to pay. We propose that this more nuanced understanding of trust can be useful in examining broader IT related consumption, especially when there could be differences in trust between products/content and the retailer. Thus, we contribute to the broader literature on trust related to the digital phenomenon, with implications for e-commerce and digital marketing beyond the gaming industry.

5.2 Managerial implication

This study offers practical implications for game studios, developers, and marketers. First, it is recommended that effort be made to design favorable hedonic shopping experiences to aid in transitioning free-to-play users to premium gamers. In other words, developers should focus on more than just bringing pleasure through the items themselves but also on the shopping experiences. To increase the purchase of in-game items; practitioners need to shift their mindset from more simply 'selling' them in standard e-commerce-like webpages to creating hedonic shopping experiences. While we acknowledge that utilitarian value promoted in the shopping experience (e.g., discounts, performance) is still important for converting and retaining premium gamers (Choi and Chen 2019), the findings suggest that the synergies resulting from the combined effects or interactions between utilitarian and hedonic motivation will increase pleasure in the retail experience. For example, Activision's Call-Of-Duty creates enjoyment in acquiring new skins and weapons by positioning them as part of a 'journey' in their battle pass screen, as well as offering immersive 3D panoramas of products in their 'shop'.

Second, within our general call to promote the hedonic nature of in-game shopping, our research offers four dimensions of this experience that practitioners can leverage. As gamers are looking for *adventure* when shopping, designers should consider adding further gamification to their retail experiences, for example, making shopping like a quest, that involves traversing a virtual environment to get to products. Players seek *gratification* in the shopping experience, alike the game itself. In this vein, developers can convert the retail space into an immersive environment that reflects the excitement and escapism of the core game and elevates the overall experience to new heights. For example, a medieval RPG may make their shop mimic an immersive medieval market. Players are motivated by *idea seeking,* just like a person who visits physical shops for inspiration. Marketers need to leverage available in-game data (e.g., previous items bought or viewed) to support AI-based recommendation systems to

present products to gamers that they think they will like. For instance, a person who recently changed skin to an Astronaut in an FPS game may be recommended products such as a 'laser gun'. Lastly, gamers are *role seeking,* in other words, they are not only shopping for themselves but buying virtual content or resources for other gamers (e.g., team members). To support this, marketers can use in-game data similar to above in understanding preferences of a player's close connections and promote 'items' they think a gamer's connections will appreciate. Furthermore, marketers may promote 'badges or souvenirs' on relevant days or following achievements e.g., 'team anniversary' '100^{th} win together' etc.

Finally, our finding shows that gamer trust, which will drive purchases (to sustain premium players) is founded on two dimensions (i.e., trust in virtual content and trust in retailer). We urge developers and marketers to consider directed strategies for improving trust in both these domains. In terms of trust in virtual content, game retailers can offer trialware/try-before-you-buy offers, easy return policies, and detailed information (e.g., video tutorials) on how to use or interact with content effectively. Regarding trust in virtual retailers, gaming firms can enhance relationship building by using AI–based communication tools (e.g., chatbots) to deliver continuous support to gamers anywhere and anytime to fulfill their dynamic needs.

5.3 Limitations and future research

Our study has several limitations that offer opportunities for further investigation. The first limitation lies in disentangling the intertwined components of hedonic elements, the gaming mindset, and gamers' imagination during gameplay, consequently giving rise to varied expectations within the gaming industry. We recommend that future researchers explore additional control mechanisms that can effectively separate and isolate the components in the hedonic elements, yielding a more accurate comprehension of gamers' behavior. Second, our aggregate game data did not distinguish between different game genres and their potentially

differing dynamics. Consequently, another avenue for further research is to re-apply the conceptual model for different gaming categories and gamers' respective motivations for game-related hedonic shopping. Findings may reveal differing relative importance levels of our identified drivers of hedonic shopping value, in addition to unique dynamics characterizing the association between user-perceived shopping value and intention to pay for premium, thereby offering further insights. Third, we collected our cross-sectional data at a single point in time (Hair *et al.* 2014). Therefore, adopting a longitudinal research methodology would be useful in uncovering the modeled dynamics over time (Viswanathan *et al.* 2017, Hussain *et al.* 2023b).

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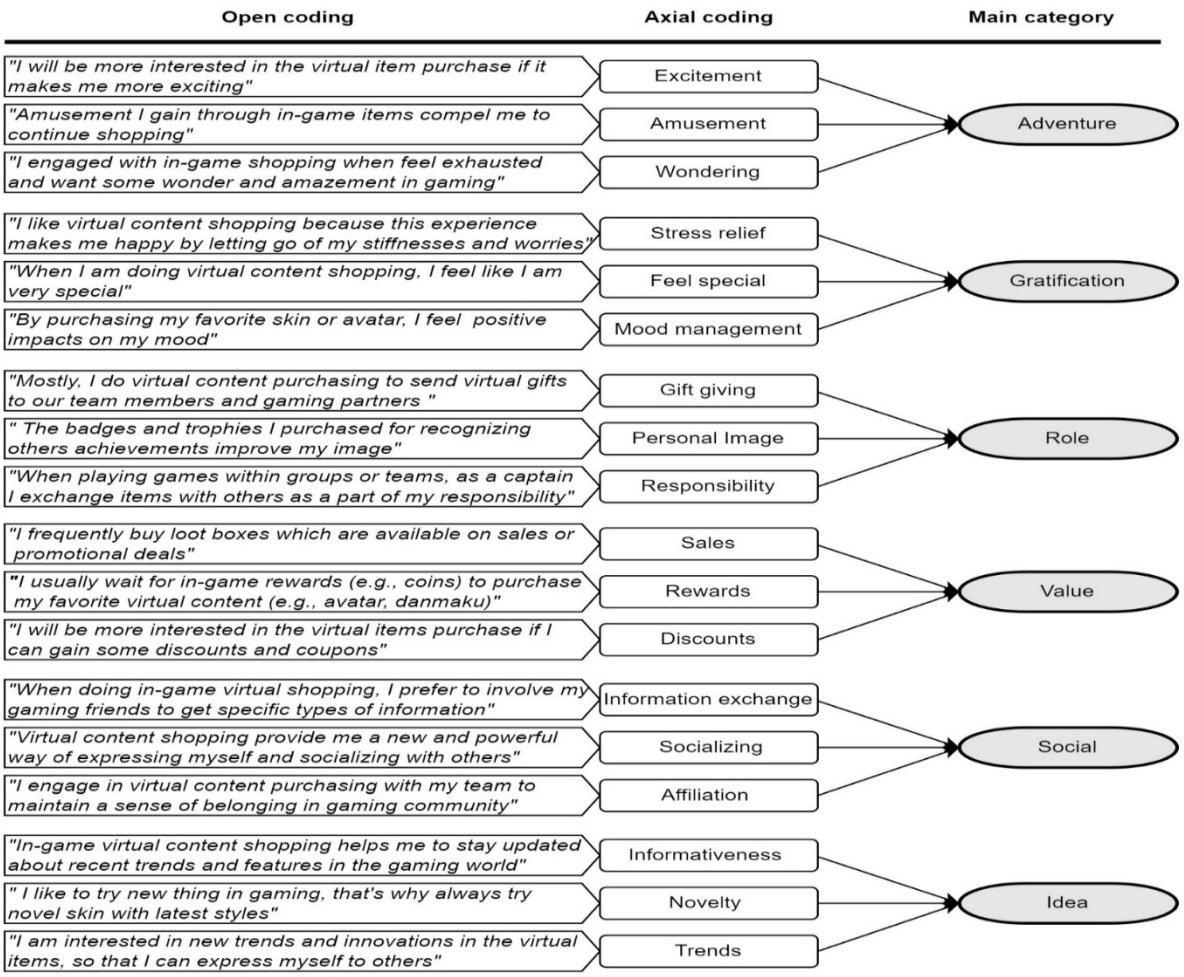
Figure 1 Open codes to selective theme results. (Source(s): Authors own work**)**



Note: Open coding involve too many concept categories, and the above diagram shows only a portion of the coding content.

Figure 2. Conceptual framework (Source(s): Authors own work**)**

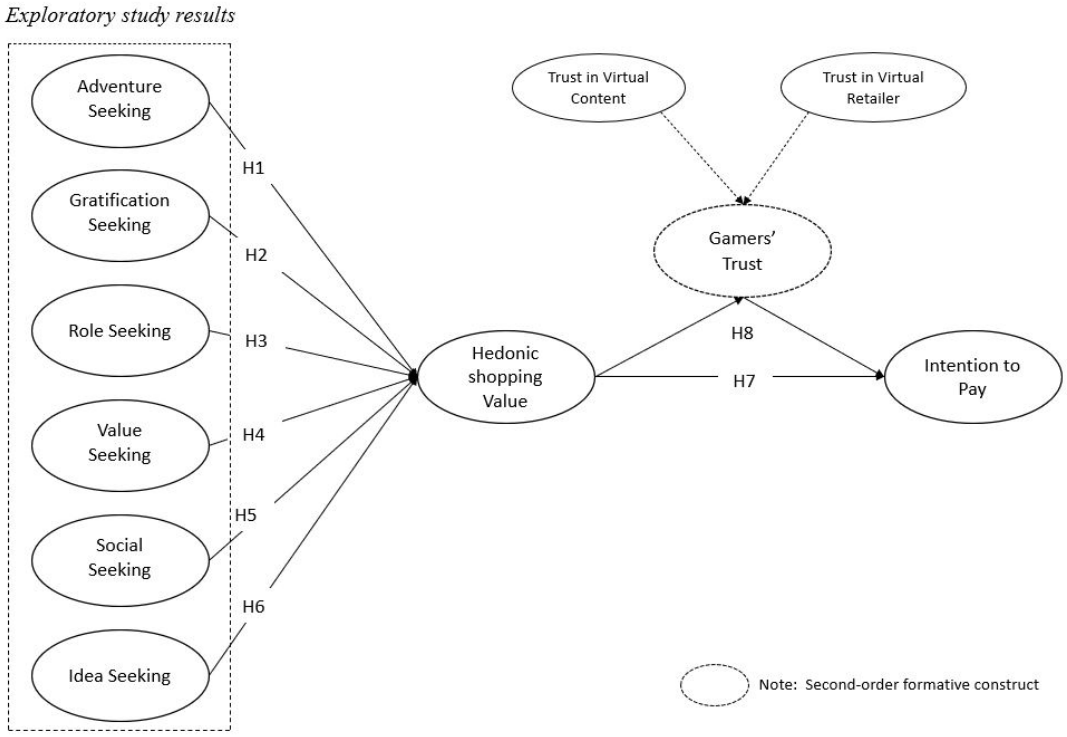


Figure 3. Results of hypothesis testing (Source(s): Authors own work**)**

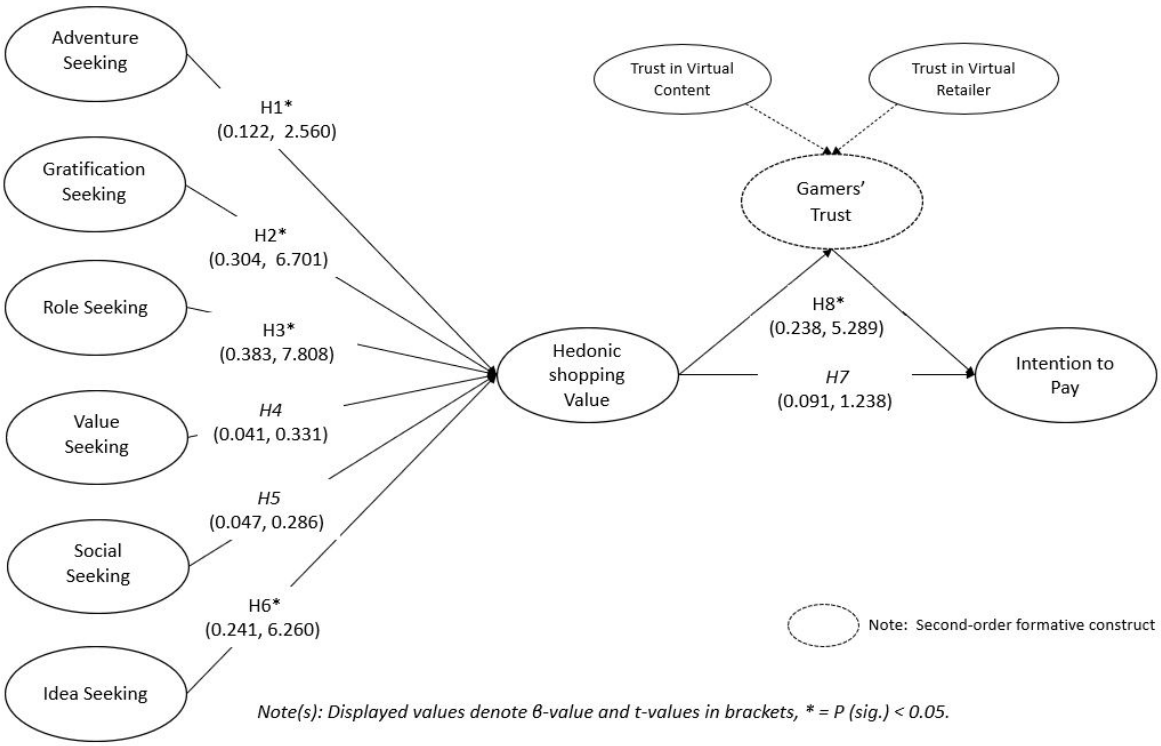


Table 1. Measurement model assessment (Source(s): Authors own work**)**

Constructs	*Items*	*Loadings*	*CA*	*RA*	*CR*	*AVE*
Adventure	ADS1	0.841	0.817	0.828	0.891	0.732
	ADS2	0.818				
	ADS3	0.906				
Gratification	GRS1	0.804	0.821	0.835	0.893	0.736
	GRS2	0.883				
	GRS3	0.885				
Role	ROS1	0.904	0.896	0.896	0.935	0.829
	ROS2	0.903				
	ROS3	0.924				
Value	VAS1	0.903	0.780	0.911	0.864	0.680
	VAS2	0.773				
	VAS3	0.791				
Social	SOS1	0.827	0.740	0.784	0.842	0.641
	SOS2	0.852				
	SOS3	0.718				
Idea	IDS1	0.928	0.873	0.954	0.919	0.792
	IDS2	0.949				
	IDS3	0.784				
Hedonic Sopping Value	HSV1	0.756	0.902	0.917	0.923	0.668
	HSV2	0.796				
	HSV3	0.790				
	HSV4	0.874				
	HSV5	0.860				
	HSV6	0.821				
Trust in Content	TIC1	0.875	0.806	0.826	0.884	0.719
	TIC2	0.815				
	TIC3	0.852				

Trust in Retailer	TIR1	0.802	0.886	0.898	0.921	0.746
	TIR2	0.869				
	TIR3	0.903				
	TIR4	0.876				
Intention to pay	INP1	0.875	0.858	0.858	0.913	0.779
	INP2	0.880				
	INP3	0.892				

Table 2. Discriminant Validity (Source(s): Authors own work**)**

	ROS	***GRS***	***IDS***	***INP***	***ADS***	***HSV***	***SOS***	***TIC***	***TIR***	***VAS***
Role Seeking										
Gratification Seeking	0.598									
Idea Seeking	0.369	0.086								
Intention to Pay	0.071	0.138	0.056							
Adventure Seeking	0.365	0.422	0.312	0.187						
Hedonic Shopping Value	0.505	0.601	0.423	0.170	0.675					
Social Seeking	0.569	0.613	0.315	0.054	0.447	0.570				
Trust in Content	0.372	0.140	0.178	0.353	0.319	0.318	0.348			
Trust in Retailer	0.382	0.475	0.391	0.278	0.517	0.680	0.503	0.282		
Value Seeking	0.065	0.051	0.106	0.091	0.047	0.072	0.027	0.056	0.029	

Table 3: Evaluation for Second-Order formative construct i.e., Gamers' Trust

(Source(s): Authors own work**)**

Constructs	***Items***	***Scale type***	***Weights***	***Sig***	***VIF***
Gamers' Trust		Formative			
	Trust in virtual content		0.324	<0.000	1.064
	Trust in virtual retailer		0.870	<0.000	1.052

Table 4: Structural Model Assessment (Source(s): Authors own work**)**

Path	*B-value*	*Std error*	*T-value*	*P-values*	*Decision*
H1: Adventure seeking -> Hedonic shopping value	0.122	0.048	2.560	0.011	**Supported**
H2: Gratification seeking -> Hedonic shopping value	0.304	0.045	6.701	0.000	**Supported**
H3: Role seeking -> Hedonic shopping value	0.383	0.049	7.808	0.000	**Supported**
H4: Value seeking -> Hedonic shopping value	0.041	0.042	0.972	0.331	Not-Supported
H5: Social seeking -> Hedonic shopping value	0.047	0.044	1.069	0.286	Not-Supported
H6: Idea seeking-> Hedonic shopping value	0.241	0.039	6.26	0.000	**Supported**
H7: Hedonic shopping value -> Intention to pay	0.091	0.073	1.238	0.216	Not-Supported

Table 5. Indirect effects of gamers' trust (Source(s): Authors own work**)**

Indirect effect	*B -value*	*Std error*	*T-value*	*P-values*	*Decision*
H8: Hedonic shopping value -> trust -> Intention to pay	0.238	0.043	5.289	0.000	**Supported**

Appendix (Source(s): Authors own work**)**

Measurement scales

Adventure shopping

1. To me, in-game shopping is an adventure.
2. I find in-game shopping stimulating.
3. In-game Shopping makes me feel like I am in my own universe.

Gratification shopping

1. When I'm in a down mood, I do in-game shopping to make me feel better.
2. To me, in-game shopping is a way to relieve stress.
3. I do in-game shopping when I want to treat myself to something special.

Role shopping

1. I like in-game shopping for others because when they feel good, I feel good.
2. I enjoy in-game shopping for my friends.
3. I enjoy in-game shopping around to find the perfect gift for other players.

Value shopping

1. For the most part, I do in-game shopping when there are sales.
2. I enjoy looking for discounts when I shop in-game.
3. I enjoy hunting for bargains when I shop in-game.

Social shopping

1. I do in-game shopping with my friends to socialize.
2. I enjoy socializing with other players when I shop in-game.
3. In-game Shopping is a bonding experience.

Idea shopping

1. I do in-game shopping to keep up with the trends.
2. I do in-game shopping to keep up with the new fashions.
3. I do in-game shopping to see what new products are available.

Hedonic shopping value

1. Shopping at this game store is delightful.
2. Shopping at this game store is exciting.
3. Shopping at this game store is enjoyable.
4. Shopping at this game store is playful.
5. Shopping at this game store is amusing.
6. Shopping at this game store is sensuous.

Trust

Trust in virtual retailer

1. I believe in the information that the in-game virtual retailer provides.

2. I can trust the in-game virtual retailer.
3. I believe that in-game virtual retailers are trustworthy.
4. I do not think that in-game virtual retailer would take advantage of me.

Trust in virtual content

1. I think the virtual content I order from the virtual retailer will be as I imagined.
2. I believe that I will be able to use virtual content like those demonstrated in a game retail store.
3. I trust that the virtual content I receive will be the same as those shown in a game retail store.

Intention to pay

1. The likelihood of my purchasing virtual content from this game in the future is high.
2. My willingness to buy virtual content from this game in the future is high.
3. Overall, I intend to buy virtual content from this game in the future.