



**VILNIUS UNIVERSITY
BUSINESS SCHOOL**

DIGITAL MARKETING PROGRAMME

Melike Halat

THE FINAL MASTER'S THESIS

<p>ŽAIDYBINIŲ ELEMENTŲ ĮTAKA KETINIMAMS PIRKTI INTERNETINĖSE PREKYBOS PLATFORMOSE</p>	<p>IMPACT OF GAMIFICATION ON REPURCHASE INTENTION WITHIN ONLINE SHOPPING PLATFORMS</p>
--	---

Student: Melike Halat

Supervisor: Prof. Dr. Dikčius Vytautas

The date of the delivery: 2023.01.03

Registration No.

Vilnius, 2023

SUMMARY (IN ENGLISH)

VILNIUS UNIVERSITY BUSINESS SCHOOL

DIGITAL MARKETING

MELIKE HALAT

IMPACT OF GAMIFICATION ON REPURCHASE INTENTION WITHIN ONLINE SHOPPING PLATFORMS

Supervisor: Prof. Dr. Dikčius Vytautas

Master's thesis was prepared in Vilnius, in 2023

Scope of master's thesis - 78 pages

Number of tables used in the FMT - 20

Number of figures used in the FMT - 3

Number references - 176

Problem formulation: The influence of point-based gamification elements on customers' repurchase intentions within the context of online shopping platforms through the intention-to-use theories to provide a comprehensive analysis.

Aim of this research: to analyse the impact of point system gamification elements on repurchase intention within Hepsiburada and N11 online shopping platforms in Turkey.

Current research is contained from three major parts: literature analysis, research methods and the analysis of the research results. The literature review part gave an overview of the concept of gamification and the gamification impact on consumer's behaviour while shopping in online shopping platforms. Literature analysis introduced variables which may have an impact on repurchase intentions of which were: customer commitment, customer trust and customer satisfaction which might have impacts by perceived ease of use, perceived usefulness and perceived enjoyment.

Following the literature analysis, the author carried out the research which was intended to identify what is the relationship between the intention to use of point based gamification element and the consumer behaviour through the certain theoretical model's variables such as perceived ease of use, perceived usefulness and perceived enjoyment. For the research online survey was chosen as a method of data collection, which was composed from 26 questions based on variables of the study and 6 demographic questions and 3 intentions to learn online shopping habits of the respondents. In total, the survey was filled by

493 respondents, where Survey 1 was filled by 288 respondents, Survey 2 was filled by 205 respondents.

SANTRAUKA (IN LITHUANIAN)

VILNIUS UNIVERSITY VERSLO MOKYKLA SKAITMENINĖS RINKODAROS
STUDIJŲ PROGRAMA
MELIKE HALAT
ŽAIDYBINIŲ ELEMENTŲ ĮTAKA KETINIMAMS PIRKTI INTERNETINĖSE
PREKYBOS PLATFORMOSE

Vadovas: Prof. Dr. Vytautas Dikčius

Magistro darbas parengtas Vilniuje, 2023 m.

Magistro darbo apimtis - 78 puslapiai

Lentelių skaičius FMT - 20

Paveikslėlių skaičius FMT - 3

Nuorodų skaičius - 176

Problemų formulavimas: Taškais paremtų gamifikacijos elementų įtaka vartotojų pasikartojančių pirkimų ketinimams internetinėse apsipirkimo platformose per ketinimo naudoti teorijas siekiant suteikti išsamų tyrimą.

Tyrimo tikslas: analizuoti taškų sistemos gamifikacijos elementų poveikį pirkimo ketinimams Hepsiburada ir N11 internetinėse apsipirkimo platformose Turkijoje. Šiuo metu atliekamas tyrimas susideda iš trijų pagrindinių dalių: literatūros analizės, tyrimo metodų ir tyrimo rezultatų analizės. Literatūros apžvalgos dalyje pateikiamas gamifikacijos sąvokos apibrėžimas ir gamifikacijos poveikis vartotojų elgesiui apsipirkinėjant internetinėse apsipirkimo platformose. Literatūros analizė įveda kintamuosius, kurie gali turėti įtakos pasikartojančių pirkimų ketinimams, tarp jų yra: klientų įsipareigojimas, klientų pasitikėjimas ir klientų pasitenkinimas, kurie gali būti paveikti suvoktu patogumu, suvoktu naudingumu ir suvoktu malonumu.

Po literatūros analizės autorius atliko tyrimą, kurio tikslas buvo nustatyti santykį tarp ketinimo naudoti taškais paremtus gamifikacijos elementus ir vartotojų elgesio per tam tikrų teorinių modelių kintamuosius, tokius kaip suvoktas patogumas, suvoktas naudingumas ir suvoktas malonumas. Tyrimui buvo pasirinktas internetinės apklausos metodas, kurią sudarė 26 klausimai, pagrįsti tyrimo kintamaisiais, 6 demografiniais klausimais ir 3 ketinimais išmolti internetinio apsipirkimo įpročius respondentų. Iš viso apklausa buvo užpildyta 493 respondentai, kur Survey 1 užpildė 288 respondentai, o Survey 2 užpildė 205 respondentai.

TABLE OF CONTENTS

INTRODUCTION.....	8
1. LITERATURE REVIEW OF GAMIFICATION AND ITS IMPACT ON REPURCHASE INTENTION.....	11
1.1. Definition and dimensions of gamification.....	11
1.1.1 Definition of gamification.....	11
1.1.2. Key gamification elements: Points, badges, leaderboards (PBL).....	12
1.2. Theoretical models and their application on the consumer behaviour within the gamification context.....	14
1.2.1. Technology acceptance model (TAM) and its relation to gamification in consumer behaviour.....	14
1.2.2. Self-Determination Theory (SDT) and its relation to gamification in consumer behaviour.....	16
1.2.3. Theory of planned behaviour (TPB) and its relation to gamification in consumer behaviour.....	17
1.3. Analysing the interaction between theoretical models and customer intentions through key variables.....	19
1.3.1. Definition and conceptual framework of perceived usefulness.....	19
1.3.2. Impact of perceived usefulness on user intentions and behaviour.....	19
1.3.3. Definition and conceptual framework of perceived ease of use.....	22
1.3.4. Definition and conceptual framework of perceived enjoyment.....	27
1.4. Examining the dynamics of customer commitment, trust, and satisfaction within the context of repurchase intentions through gamification.....	30
1.4.1. Definition and conceptual framework of repurchase intention.....	30
1.4.2. The role of gamification in enhancing repurchase intention.....	31
2. METHODOLOGY OF THE EMPIRICAL RESEARCH ON IMPACT OF GAMIFICATION ON REPURCHASE INTENTION WITHIN ONLINE SHOPPING PLATFORMS.....	37
2.1 Purpose of the research, model, and hypotheses.....	37
Problem definition.....	37
Purpose of the research.....	38
2.2 Conceptual model and hypotheses of the research.....	39
Hypotheses.....	42
2.4. Methods and procedures for data collection.....	48
3. STATISTICAL ANALYSIS OF THE RESEARCH ON IMPACT OF GAMIFICATION AND ITS IMPACT ON REPURCHASE INTENTION.....	56
3.1. Demographic characteristics of questionnaire respondents.....	56
3.2. Analysis of adapted scales.....	58
3.2.1 Reliability analysis.....	58
3.3. Impact of perceived ease of use, usefulness, and enjoyment on users' intention to use gamification elements.....	59
3.3.1 Tests of Normality.....	60
3.4. The influence of perceived ease of use on trust, commitment, and satisfaction in online shopping environments.....	63
3.5. Impact of perceived usefulness on commitment, customer satisfaction, and trust in online shopping environments.....	65
3.6. Impact of perceived enjoyment on commitment, customer satisfaction, and trust in	

online shopping environments.....	67
3.7. Impact of commitment, customer satisfaction, and trust on enhancing repurchase intention in online shopping.....	70
3.7.1. Summary of statistical analysis.....	72
FINDINGS, LIABILITIES AND RECOMMENDATIONS.....	75
LIST OF REFERENCES.....	81
LIST OF APPENDICES.....	97

<i>Figure 1. The original technology acceptance model TAM (Davis, 1989).....</i>	<i>11</i>
<i>Figure 2: Proposed Research Model. Source: Susilo, 2022.....</i>	<i>28</i>
<i>Figure 3. Conceptual model of the research. (Developed by the author).....</i>	<i>34</i>
<i>Table 1. Demographic questions.....</i>	<i>44</i>
<i>Table 2. Measurement constructs.....</i>	<i>46</i>
<i>Table 3. Comparable researches.....</i>	<i>50</i>
<i>Table 4. Distribution of respondents by gender.....</i>	<i>52</i>
<i>Table 5. Distribution of respondents by age.....</i>	<i>52</i>
<i>Table 6. Distribution of respondents by personal income after taxes.....</i>	<i>52</i>
<i>Table 7. Questionnaire no1: Reliability of scales.....</i>	<i>53</i>
<i>Table 8. Questionnaire no2: Reliability of scales.....</i>	<i>54</i>
<i>Table 9. Questionnaire no1, no2 (Respectively): Tests of normality.....</i>	<i>56</i>
<i>Table 10. Questionnaire no1: Pearson Correlation.....</i>	<i>57</i>
<i>Table 11. Questionnaire no2: Pearson Correlation.....</i>	<i>58</i>
<i>Table 12. Questionnaire no1: Linear Regression for H4, H5, H6.....</i>	<i>60</i>
<i>Table 13. Questionnaire no2: Linear Regression for H4, H5, H6.....</i>	<i>61</i>
<i>Table 14. Questionnaire no1: Linear Regression for H7, H8, H9.....</i>	<i>63</i>
<i>Table 15. Questionnaire no2: Linear Regression for H7, H8, H9.....</i>	<i>63</i>
<i>Table 16. Questionnaire no1: Linear Regression for H10, H11, H12.....</i>	<i>65</i>
<i>Table 17. Questionnaire no2: Linear Regression for H10, H11, H12.....</i>	<i>66</i>
<i>Table 18. Questionnaire no1: Linear Regression for H13, H14, H15.....</i>	<i>68</i>
<i>Table 19. Questionnaire no2: Linear Regression for H13, H14, H15.....</i>	<i>69</i>
<i>Table 20. Status of hypotheses.....</i>	<i>69</i>

INTRODUCTION

The impact of gamification on repurchase intention within online shopping platforms has been a significant focus of research in recent years. Djohan et al. (2022) found that enjoyable gaming experiences in e-marketplaces significantly encourage customers to continue using these services, highlighting gamification's role in fostering repurchase intention. Wicaksono and Subari (2021) discovered a strong correlation between gamification and repurchase intention, suggesting that gamification strategies significantly influence customers' decision to repurchase. Technology and Interactive Features: Shang & Lin (2013) noted the effectiveness of systematic and interactive gamified features in retaining customers and promoting repeat purchases, underlining the growing importance of integrating technology with gamification. Aparacio, Costa, and Moises (2021) found that gamified e-commerce websites positively influence repurchase intention, indicating the effectiveness of gamification in e-commerce contexts.

Sitthipon et al. (2022) observed that gamification positively impacts repurchase intention, with customer satisfaction serving as a mediating variable, implying that the positive effects of gamification on repurchase intention are partly due to increased customer satisfaction. However, Kim et al. (2020) highlighted that gamification can have a significant negative impact on repurchase behaviour, suggesting the need for careful consideration in its implementation. A study by Susilo (2022) indicated that while the Technology Acceptance Model (TAM) significantly affects repurchase intention in e-commerce platforms, gamification does not have a significant effect.

Diegmann et al. (2018) and studies by Hsu and Chen (2018), Siswanto, and Chen (2016) cited the evidences where gamification affects customers' satisfaction and brand love, which directly influence to repurchase intention. Gatautis et al. (2016) postulated on gamification as a generator of consumer behavior, while Sigala (2015) noted the lack of consumer-behaviour based research on gamification. For example, Blohm & Leimeister (2013) and Marcucci (2018) have further discussed how the elements of game design impact significantly on the user behaviour and engagement. Perceived ease of use of the gamification tool led to increasing levels of perceived usefulness and intention to use the gamification tool, as attributed by researches from Sánchez-Mena et al. (2016), and Al Amri and Almaiah (2020) among others. Further, Scherer, Siddiq, and Tondeur (2019) stated that the usefulness perceived by the gamification platforms brings out motivation to engage in training. Insley

and Nunan (2014) highlighted aspects through using the elements of gamification in online trading increase consumer involvement transforming shopping as fun and entertainment. The factor of perceived enjoyment is the most crucial controller of the degree of utilisation of mobile learning game applications and gamification services according to the research of Baek (2017) and Hamari & Koivisto (2015). In simple terms, combining these two studies present a whole understanding of how gamification influences through consumer behavior that is repurchase intention.

The problem of the paper:

To what effect does a points-based gamification system influence consumer repurchase intentions on online shopping platforms, and what observable differences in consumer behaviour will be derived by the implementation of the gamification system based on points?

The aim of the paper:

The purpose of this paper, therefore, is a systematic review on the impact of specific gamification elements with online shopping platforms on repurchase intention. This includes:

-Attempt to analyse the greatest degree to which certain gamification elements might impact a consumer's repurchase intention thus making an affirmant relationship between such elements and one's repurchase behaviour.

-Analysis of the intention to use gamification elements versus perceived usefulness, ease of use, enjoyability grounded on the hypothesis that positive perceptions significantly affect the intention to use an array of various gamification features.

-Research activity on how the perceived theoretical concepts of consumer behavior viz., perceived ease of use, usefulness, and enjoyment have an effect on trust, satisfaction, and commitment (COM) as key dependent variables. The present section of the research aims at shooting the hypotheses that each of the perceived factors has a positive effect on trust, satisfaction, and commitment levels of consumption on the part of consumers.

-Examine the relationship between trust, commitment, and satisfaction under the influence of gamification elements and their respective effects on consumer repurchase

intentions. In this regard, a set of hypotheses that advances that there is a positive relationship between these variables and repurchase intentions will be tested.

The objective of the research is:

- Determine impacts of the point-based quiz game on Hepsiburada and matching game on N11, respectively, in what extent they have succeeded in these gamification applications on consumers' perceptions regarding ease of use, usefulness and enjoyment;

- Examine these elements of gamification and their possible effects on some key psychological constructs, commitment, customer satisfaction as well as trust;

- To examine the relationship of these psychological constructs with repurchase intentions in the users.

The present study consists of 3 important sections: Review of previous literature, research methodology, and interpretation of the results obtained. The concept of gamification along with its impact on repurchase intentions including the effects of variables related to it are given an understanding and overview through literature analysis. Then consumer behaviour through theoretical models based on the previous studies was presented. In the part methodology proposed to apply 2x2 factorial experimental design are represented in this research. In the part of analysis presented evaluated results of the research, recommendations and liabilities for the further studies and businesses.

1. LITERATURE REVIEW OF GAMIFICATION AND ITS IMPACT ON REPURCHASE INTENTION

1.1. Definition and dimensions of gamification

1.1.1 Definition of gamification

The term gamification got popular in non-gaming context only since 2010 because of a growing concentration the companies started giving on this theme. (Deterding et al., 2011). Gamification is described as the process of enriching services with (motivation) affordances to evoke gameful experiences and reinforce further behavioural outcomes (Hamari, 2013). This radical concept goes far beyond the realm of fun and games, infiltrating into other industries especially online marketing.

The origins of the gamification can be easily traced back to the early 2000s, whereas it received novel academic and commercial interest in the year 2010 (Hamari et al., 2014). Companies started to implement ways through which gamification can enhance user experience, mainly in online retail (Grüsser et al., 2006).

The effectiveness of gamification in online shopping is based on behavioral science. It takes advantage of the human behaviour to play and compete by taking advantage of psychological motivations that affect consumer behavior (Camerer, 2003; Kuo and Chuang, 2016). Another study states that the use of e-commerce applications positively affects RI in e-commerce. (Afiat et al., 2023; Rakhmanita, Hurriyati, and Dirgantari, 2022).

One of the core aspects of gamification is the incorporation of motivational affordances - features that enhance user motivation through elements like points, badges, and leaderboards (PBL) (Feng et al., 2018). These elements are not just extrinsic motivators but also serve to fulfil intrinsic psychological needs, such as the need for competence, autonomy, and relatedness (Hamari, 2013). Points and badges serve as tangible representations of achievement and progress, while leaderboards create a sense of competition and social standing (Werbach & Hunter, 2012). In the context of online shopping, these gamification elements (GE) have shown to deliver more than what they promise, thereby enhancing CS and fostering RI (Keiningham et al., 2020; Miao et al., 2021). For instance, accumulating points could lead to rewards or discounts, badges could signify status or expertise, and leaderboards could create a community of engaged customers (Werbach & Hunter, 2012; Blohm & Leimeister, 2013). The effectiveness of gamification in influencing consumer behaviour is attributed to its ability to create engaging and game-like experiences. These experiences evoke positive emotions, a sense of accomplishment, and high levels of engagement, all of which play a pivotal role in shaping consumer attitudes and behaviours (Anderson & Dill, 2000; Hamari, 2019; Huotari & Hamari, 2017). In essence, the enjoyment derived from participating in gamified activities can lead to more favourable perceptions of the brand or platform, thereby influencing consumers' intentions to make repeat purchases (Afiat et al., 2023; Dirgantari, 2020). This citation underscores the notion that gamification's impact on consumer behaviour is closely tied to the positive and engaging experiences it creates.

Gamification in online shopping has also fit quite well the existing theories such as the Technology Acceptance Model (TAM), and the Self-Determination Theory (SDT). In this regard, TAM indicates to the contributors of perceived usefulness and perceived ease of use to be of utmost significance to technology adoption (B. Wu & X. Chen, 2017; H. P. Lu & Y.

W. Yang, 2014), whereas SDT stipulates the factor of intrinsic motivation in user engagement (Ryan & Deci, 2000). In this regard, gamification properly coincides with these theories such as it increases the perceived usefulness and ease of use of online platforms with enjoyable and motivational game elements (Kuo & Chuang, 2016; Hamari et al., 2014).

The evolution of gamification's trajectory represents a transformation from its original role as an innovative marketing approach to a complex strategy deeply integrated into the realm of online consumer involvement (Jayawardena et al., 2021; Vashisht & S. Pillai, 2017). This evolution is not fixed; instead, it remains dynamic, constantly adjusting to technological advancements and shifting consumer tastes (Deterding et al., 2011; Huotari & Hamari, 2012). Gamification's journey from a nascent concept to a pivotal component in online consumer behaviour exemplifies its transformative potential. The continuing evolution and integration of the game experience into more and more online platforms augur a future in which all kinds of games remain as central to consumer interaction and behaviour with companies as they have been for thousands of years.

1.1.2. Key gamification elements: Points, badges, leaderboards (PBL)

The three core components in gamification which are the Points, Badges and Leaderboards (PBL) makes it possible for its potential to enhance online customer experiences. These are in line with psychological constructs that are underlined as building blocks of human behaviour, engagement, and motivation instead of being mere ornamental addition (Werbach & Hunter, 2012; Feng et al., 2018).

Points. Being one of the elements that is serving as an essential for gamification, Points have a role in it. They are the unit which can be measured for achievement or progress and feedback to the users too. Whatever action that one undertakes on the online shopping platforms including completing purchases, posting reviews and participating in community conversations may earn points to the users. Consumer actions are immediately rewarded with points that serve a critical role of marking progress and giving users visible feedback on inputs within the platform (Feng et al., 2018). This point system adheres to the psychological theories on the need for growth and achievement that are ingrained in human being evident from behavioural research.(Camerer, 2003).

Badges. Badges are used to signal some kind of attainment or achievement and usually represent status or accomplishments reached. They encourage revisiting of the site as well as extended engagement since they help foster identity and a sense of achievement.(Werbach & Hunter, 2012; Kuo & Chuang, 2016).

Leaderboards. Leaderboards offer a social component to gamification providing competitiveness and social standings among users where they are ranked with respect to their achievements or points. Blohm and Leimeister (2013) further added that since the two elements involve social comparison and competition, leaderboards are especially valuable for online purchasing settings as they incite the users to interact more thoroughly with platform in order to raise the rating. This competitive element is consistent with behavioural research results that emphasise how social interactions shape consumer behaviour (Anderson & Dill, 2000).

From these views, adherence to the tenet of the Technology Acceptance Model (TAM) and the Self-Determination Theory (SDT) is inculcated into the online purchasing platforms like leaderboards, badges, and points. The TAM shows that perceived usefulness is the pivotal factor of system acceptance and usage (H. P. Lu & Y. W. Yang, 2014; B. Wu & X. Chen, 2017). Incorporation of PBL elements in the online platforms leads to a higher perception of usefulness as to the shopping experience, it incorporates more engagement and rewards. These components, at the same time, support the intrinsic drives highlighted by the SDT as a need for relatedness (leaderboard rankings) and competence (winning points and badges), which work to foster a better shopping experience and leave the shopper more satisfied and engaged. (Ryan & Deci, 2000; Kuo & Chuang, 2016).

In addition, the PBL implementation into the online shopping space experienced a huge impact on the consumer's behaviour. Points and badges have the considerable power behind purchase decisions and win customers by giving them measurable value as well as recognition. Leaderboards foster repeat purchase along with the development of a group of interested consumers more willing to become brand advocates through their social comparison mechanism (Jayawardena et al., 2021; Vashisht & S. Pillai, 2017). This high involvement and loyalty take a great place in a very competitive online shopping environment where customer retention and brand differentiation is key.

1.2. Theoretical models and their application on the consumer behaviour within the gamification context

1.2.1. Technology acceptance model (TAM) and its relation to gamification in consumer behaviour

The Technology Acceptance Model (TAM), initially conceptualised by Davis in 1989 (Davis, 1989). You can see the TAM model on Figure 1. It provides a theoretical framework for comprehending the adoption and utilisation of technology by users. From a theoretical standpoint, the Technology Acceptance Model (TAM), as described by Syaharani and Yasa (2022), sheds light on how individuals' personal perceptions of objects shape their behavioural interests and attitudes, providing valuable insights into the acceptance and adoption of gamified platforms. Within the gamification space, especially with regard to online shopping platforms, TAM offers insights on how features of game design might impact consumer behaviour.

TAM's foundations: perceived usefulness and ease of use

At its core, TAM posits two primary factors that determine technology acceptance: perceived usefulness and perceived ease of use (Davis, 1989; Koufaris & Hampton-Sosa, 2002). Perceived usefulness in the context of gamification relates to the extent to which a consumer believes that using gamified elements will enhance their shopping experience. This improvement could come in the form of increased engagement, enjoyment, or even efficiency throughout the purchasing process. Another essential component of TAM is PEOU, which measures how easy a user expects a technology to be used.

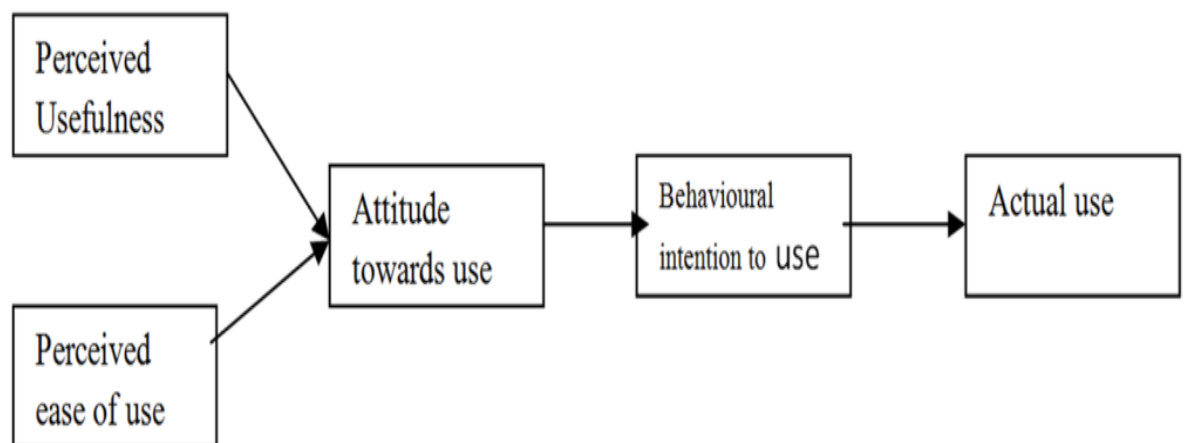


Figure 1. The original technology acceptance model TAM (Davis, 1989)

Interplay of gamification and TAM variables

The integration of gamification in online platforms potentially impacts these TAM variables. Marcucci suggests that the simplicity and clarity of a game's design have a big influence on player behaviour and participation in the gaming context. (Marcucci, 2018). Similarly, in another study it is pointed out that positive emotions can arise when consumers are stimulated through positive brand experiences or associations. (Hawkins & Mothersbaugh, 2010). Additionally, in another study, extrinsic motivation pertains to engaging in an activity for external incentives such as monetary rewards, recognition, or tangible benefits. In contrast, intrinsic motivation drives actions that lead to internal fulfilment or self-perception, like deriving pleasure or experiencing positive emotions (Denny, 2014).

In this regard, the application of TAM in gamified online shopping settings provides a holistic view on measuring how people perceive, accept, and utilize these systems. It clearly establishes the correlation between the perceived usefulness, perceived ease of use and effects of intrinsic motivations in generating engagement and satisfaction among the users. In a nutshell, TAM provides a firm theoretical base for examining consumer behaviour within gamified environments. This means that whether these elements of design of gamification succeed in their fit with the PU and PEOU, along with the intrinsic and extrinsic motivations for the consumers or not, may actually be dependent on how successful gamification in online platforms is.

On the other hand, various outcomes in the gamification circumstances point to a deeper comprehension. Abou-Shouk, Lim and Megicks posit that although a mild indirect relationship with use intentions as mediated by attitude could be established, there is no direct relationship between perception of playfulness and either of the dependent variables of attitude or use intention. This points out to the fact that the effectiveness of gamification may not always be relatively straightforward and could be subject to many mediating constructs (Abou-Shouk et al.).

The reach of TAM also span gaining understanding in both the intrinsic as well as extrinsic motivations paradigm within the specter of gamification. Furthermore, tangible incentives can be part of extrinsic motivations while arising self-satisfaction from gamified activities proper accomplishment can be part of intrinsic motivations (Denny, 2014). On the other hand, researches developed on the basis of Self-Determination Theory (SDT) point that

considerable motivator which triggers play is an intrinsic motivation (Frederick & Ryan, 1995; Ryan et al., 2006)(Deci & Ryan, 1985; Ryan, Rigby, & Przybylski, 2006).

1.2.2. Self-Determination Theory (SDT) and its relation to gamification in consumer behaviour

Definition and dimensions of SDT

Self-Determination Theory (SDT), as proposed by Ryan and Deci, offers a comprehensive theory of human motivation, which is particularly relevant in the context of consumer behaviour within gamified environments. SDT emphasises that human behaviour is driven by intrinsic and extrinsic motivations, and the satisfaction of basic psychological needs - autonomy, competence, and relatedness - is pivotal in nurturing intrinsic motivation (Ryan & Deci, 2000; Deci & Ryan, 1985; Ryan & Deci, 2017).

SDT's Autonomy component. Autonomy, a key component of SDT, is described as the desire to be self-directing and to undertake activities that one finds personally interesting and aligned with their values. (Ryan & Deci, 2002). In the context of gamification within online shopping platform, when consumers perceive that they have meaningful choices and control over their actions, their sense of autonomy is increased. This heightened sense of autonomy leads to an increase in intrinsic motivation, making the shopping experience more engaging and potentially leading to longer site visits and increased purchasing likelihood (Ryan & Deci, 2002; Van Den Brock, 2008).

SDT's competence component. Competence, another crucial element of SDT, involves feeling effective in one's interactions with the environment. The degree to which individuals fulfill innate psychological needs for autonomy just like autonomy and relatedness impacts the individuals' intrinsic motivation, well-being, and satisfaction, according to Deci and Ryan. Gamification addresses this need through the implementation of challenges and rewards within the online shopping platform. For example, customers might feel more capable and productive while they purchase if they receive points or badges for completing specific tasks.

SDT and consumer motivation within the gamification context

SDT suggests that motivations can range from fully self-determined (intrinsic) to controlled (extrinsic). With gamification, intrinsic motivations can involve behaviours that might include increased engagement with gamified elements or persistent efforts in exploring products. Extrinsic motivations, although consisting of external rewards which could include discounts or loyalty points, should perhaps be a complementary force rather than one

undermining intrinsic motivations. Furthermore, in a study, given that the psychological effects of gamification entail behavioural learning, cognition, self-determination, interests, as well as emotions (Sailer et al., 2013). On the other hand, overemphasis on extrinsic rewards can potentially have negative effects on the internal satisfaction that users derive from the gamification activities (Aydin, 2015; Van Den Brock, 2008).

SDT posits that a continuum that depicts various degrees of self-determination reflecting both internal and external control elements can be used to understand individual motivation. The balanced integration of these motivational elements is crucial for ensuring sustained consumer engagement and satisfaction (Tandon et al., 2020; Shamsi et al., 2020; Wang & Hou, 2015). To put in other words, A thorough foundation for understanding how gamification affects customer behaviour is offered by SDT. By fulfilling the innate psychological needs of autonomy, competence, and relatedness, gamification can significantly enhance the intrinsic motivation of consumers, leading to more engaging and satisfying experiences in online shopping circumstances. The successful implementation of gamification in these environments hinges on the ability to create experiences that resonate with both intrinsic and extrinsic motivations of consumers, thereby fostering a more holistic and engaging shopping experience.

1.2.3. Theory of planned behaviour (TPB) and its relation to gamification in consumer behaviour

Definition and dimensions of TPB

The Theory of Planned Behavior (TPB) provides systemic extension to the Theory of Reasoned Action (TRA) propounded by Fishbein (1975) and Ajzen (1975), in understanding consumer behaviour. The theory of planned behaviour (Ajzen 1985, 1991) is a widely used theory of the proximal determinants of behaviour. Ajzen (1991) formulates TPB as proceeding three principal components: attitude, subjective norm, and perceived behavioural control, at that in the alliance to determine upon the behavioural intentions and actions of an individual.

Attitude component of TPB. As defined by TPB, attitude consisted of an individual's positive or negative evaluation to perform a particular behaviour. When re-transferred for the context of gamified online shopping, this could allude to how the consumers would perceive regarding the usage of the points reflected in their online purchases. Dossey and Keegan (2009) as well as Michaelidou and Hassan (2008) emphasized that people's beliefs in certain features of an object, its benefit or consistency with predispositions, are the factors that very

much define people's attitude towards this object. Positive attitudes towards gamified elements may thus make the customer intend to interact with them, and hence enhance their online shopping experience (Blohm & Leimeister, 2013).

Subjective component of TPB. Subjective norm in TPB refers to the perceived social pressure to perform or not perform a behaviour. This aspect is especially relevant to the gamified environment, wherein social features e.g., leaderboards or community challenges, can give a perception of social endorsement or approval and hence impact consumer behavior. In the case that such gamification would positively affect the consumers' perception of the social norms related to the online shopping, then they will strengthen positively their intention to engage with the associated gamified platforms (Fishbein and Ajzen, 1975).

Perceived behavioural control component of TPB. A third critical component of TPB is perceived behavioural control, which pertains to a person's perception of ability to execute a behaviour. It encompasses one's believe in skills and availability of the requisite resources to perform the required behaviour. In online shopping, this can, therefore, connote usability and accessibility of the gamified features. When shoppers perceive themselves as able and competent to effectively interact with the features of a gamification system, they may be more motivated to do so (Leeuw et al., 2015).

Intentions and Behavior in TPB. The TPB postulates that intentions are the best predictors to future behaviour and they, in turn, are determined by attitude, subjective norm and perceived behavioural control (Ajzen, 1985, 1991). In gamification, these three components can influence the consumers to have an intention of purchasing or even get indulged in the online stores. In fact, the theory has been widely applied to different domains such as physical activity and environmental promoting behaviours, respectively (Downs & Hausenblas, 2005; Hagger, Chatzisarantis, & Biddle, 2002; Hausenblas, Carron, & Mack, 1997). TPB provides a useful conceptual framework to grasp how the gamification impacts on consumer behavior in electronic retail settings.

1.3. Analysing the interaction between theoretical models and customer intentions through key variables

1.3.1. Definition and conceptual framework of perceived usefulness

In technology adoption, there is an expression of the conceptualization of perceived usefulness as being variations in users' assessments relating to the extent or level to which a

given technology or system enhances their task performance especially within the Technology Acceptance Model (TAM). This concept was proposed by Davis in 1989 and it's very important to understand how the user interacts with technology that includes even online shopping platforms as well as in fun learning games. At the crux of perceived usefulness is the belief that a certain system or technological tool can improve somebody's performance in some type of job. Davis (1989) described this as the extent to which an individual believes or feels that a given system would enhance his/her job performance. Perceived usefulness in the context of online shopping checks how a platform or its functions can ease better shopping experiences, increase efficiency or deliver valuable information with which may help in buying decision-making.

Davis (1989) has emphasized that determining the likelihood in use of a system, the main important considering factor is perceived usefulness when exploring technology acceptance. This notion is based on the fact that if anyone perceives any technology to be beneficial and improving his or her performance, then he or she is more likely to adopt it in addition to readily using that technology. Similarly, in the context of gamification on online platforms, perceived usefulness of the elements of gamification might be crucial in influencing the attitude and usage intention of users to engage with the gamified features.

1.3.2. Impact of perceived usefulness on user intentions and behaviour

Davis (1989), Bagozzi and Warshaw (1989) argued that perceived usefulness is one of the strongest determinants for any user's intentions to use any system within any given environment especially systems utilized for specific goals or tasks. This implication extends to the usefulness of features in the online platform which may directly impact on users' engagement and interaction with the technology. Hsu and Lu (2004) also studied this domain in studying an online game-based study to find that most of relationships of user effectiveness as well as usefulness perceptions with the user attitudes or intentions were different. Speaking about the impact on attitudes and intentions in gamified environments' context, perceived usefulness might be extremely important but not at the most direct level. Hence, this factor may influence some other mediating variables such as user engagement or satisfaction that will affect target ones.

Impact of perceived usefulness on trust

The relationship between perceived usefulness and trust has been a subject of considerable interest in study on consumer behaviour, particularly in the context of online platforms and technology adoption. Some research has ventured on how the perceived usefulness, which naturally becomes an even much more important concept in TAM, comes to influence the degree to which consumers trust a technology or an online site. Amin et al. (2014) had definitely stressed that the perceived usefulness is very influential on trust and in conjunction with satisfaction. Their findings, applied on mobile websites, show that if people perceive a technologic tool as of use to them, it not only pleases them but also raises their level of trustedness towards the site and the tool. Looking from this perspective one can say that research is important in the context of e-commerce where it is trust which plays a major role in consumer decision.

Similarly, Lee and Jun (2007) pointed out to existence of a positive relationship between perceived usefulness and trust in the mobile commerce context. They argued that when the users perceive a mobile commerce system useful, it enhances the trust towards the effectiveness of the system in satisfying their shopping want effectively. The relationship was also supported by Chinomona (2013) who confirmed that perceptions of usefulness influence positively on users' trust on mobile social software. It states that only in case the users find a technology useful and relevant, there is a potentiality for its benefits to be perceived and for appropriateness to be established on their side. Hampshire (2017) underlined an intriguing detail in connection with the relationship of trust and perceived usefulness. Their study revealed that trust positively relates to the perceived usefulness of mobile payments. Another study pointed out the presence of direct and substantial influence of perceived usefulness on trust (Sekolah Tinggi Ilmu Ekonomi Bulungan Tarakan, 2023).

Sawitri and Giantari (2020) further interpreted the concept perceived usefulness pertaining to repurchase intention online along with trust. According to them, as supported by their findings, only perceived usefulness, hand in hand with ease of use, greatly determines and exerts its influence over both repurchase intention online and trust. This relationship indicates the utility perceived in a platform can directly influence willingness of the users to return and also their trust with the platform.

Impact of perceived usefulness on customer satisfaction

The relationship between perceived usefulness and customer satisfaction has been explored in various studies, whereby it is pointed out that this relationship assumes particular

importance in context with technology use and online consumer behaviour. These papers here together present that in instances where customer perceives usefulness of a technology, system or online platform it affects customers overall satisfaction positively. For example, perceived usefulness has been used to examine customers' satisfaction with using car navigation systems (Park et al., 2013). Their findings indicated that when the users perceived the navigation systems useful, then it led to higher satisfaction with these systems. Therefore, this relationship suggests an important factor affecting how perceive usefulness would shape user experiences and their satisfaction level in a positive manner. Lee and Jun (2007) re-looked at this relationship in the context of mobile commerce. They found out that perceived usefulness has happened to have positive influence over customer satisfaction in the mobile commerce systems. This, therefore, means that the customer associated utility of mobile commerce platforms plays a very critical role in determining their levels of satisfaction. Amin et al. (2014) went ahead to study mobile websites. It is clearly stated in their research that the perceived usefulness of mobile websites statistically positively affects user satisfaction. This is highly important in the digital age where the use of mobile internet browsing is increasing and perceived usefulness may highly impact customer satisfaction with mobile websites. Ariff et al. (2014), on e-satisfaction of users regarding social networking sites, also indicated a positive relationship via perceived usefulness towards satisfaction.

The studies above collectively pointed to a highly situational positive relationship that was shown between perceived usefulness and customer satisfaction across the digital platforms. It could be through mobile websites, or even car navigation systems, social networking sites, or mobile commerce platforms – anywhere consumers using such platforms interact with – their perceptions of utility and effectiveness of the system would play a significant role in generating satisfaction. This relation is important to all businesses and technology developers as this would mean the greater the perceived usefulness of their respective platforms, the same could derive greater customer satisfaction.

Impact of perceived usefulness on commitment

The relationship between PU and COM in the context of consumer behaviour and technology usage is an important area of study, with several researches indicating a positive correlation between the two. Yulianti and Pusparini (2020) explored the impact of PU on affective commitment, particularly in the context of the flexible benefit system. Their study revealed that PU positively affects *affective commitment**, suggesting that when users find a

system or service useful, they are more likely to develop a strong emotional attachment to it. This finding is significant as it highlights the positive relationship between PU and COM among users, beyond mere satisfaction or preference.

In the study by Ali et al. (2022), PU was seen as a factor derived from learning within community members or from brand companies, which positively influences COM. This research underscores the idea that PU extends beyond the functional aspects of a product or service; it also encompasses the knowledge and insights gained from being part of a community or interaction with a brand. The study further demonstrated that COM has a considerable effect on PU, suggesting a reciprocal relationship where COM reinforces the perception of usefulness, and the opposite of it.

1.3.3. Definition and conceptual framework of perceived ease of use

Perceived ease of use refers to an individual's belief in regard to the effortlessness encountered in using a particular technology or e.g. while dealing with online platforms such as. The concept was first introduced by Davis in 1989 and focused on the user's interaction with technology refers to that notion that the technology itself is easily used when it is perceived such form the users who are called upon to adopt it. It implies that the learning, adopting or use of technology should be easy and non-complicated especially in online shopping platforms (Davis, 1989). More specifically, perceived ease of use can be defined as the perceptions by individuals on how much effort would one make in order to achieve a certain level of competency with respect to a new technology or product.(Doll et al., (1998), Rouibah et al. (2011), Amin et al. (2014), and Okpala et al. 2021). Of course, this view applies to the context of online platforms where user-friendliness becomes pivotal.

In the context of online shopping platforms, PEOU is one of the critical assailants of user behaviour. According to Lindsay et al. (2011), one other point that significantly determines user acceptance is the ease of learning, adopting or using any online platform. In such surroundings, the consumer interface in addition to the overall navigational ease can make a huge difference in consumer satisfaction and having a propensity towards time and again using the actual platform (Lindsay et al., 2011)

*Commitment is divided into two as affective and continuance commitment. Affective commitment is the emotional connection with the brand which represents a strong sense of personal identifications.

Impact of perceived ease of use on trust

How PEOU relates to trust in online platforms is a very important aspect on how people will relate to the system and what perception that they will have about the system. Research in this area continues to show that there exists a positive relationship between the two variables, and therefore helps derive the fact that user's trust significantly depends on how easy a system is. Al-Emran and Shaalan (2021) argue that PEOU does not limit this concept to usability but instead it relates with the degree of trusting customers on using this online platform. It is given that the usage of a system which is easy to use reduces the effort level exerted by users on the system, which ultimately increases their trust and level of confidence on using such platforms. In online settings, this play of ease of use, trust and platform adoption is crucial where the trust experiences are fundamental in attracting users to use it and continuing with the use of the platform (Al-Emran & Shaalan, 2021).

Aghdaie and his colleagues (2011) added to the area through a fundamental study explicitly linking PEOU to trust. Such findings are critical within online environments in which the ease of use dimension is translated to user confidence in the system. Contrarily, if users find it easy to navigate and interact with an online platform, they develop trust for these platforms naturally. It is not only about the functionality of the system, but also the perceived reliability and credibility related to the platform itself (Aghdaie et al., 2011). In further strengthening this association, Koufaris et al. (2001) and Tang and Chi (2005) reported a similar positive correlation between PEOU and trust. Their research emphasizes the critical requirement of user-friendly design in online platforms to build and sustain consumer trust, not just convenience. Especially to the online shopping behaviour of the customer, this perspective considers trust to have a critical role when it comes to decisions and loyalty (Koufaris et al., 2001; Tang and Chi, 2005). Quintessentially similar to this, the studies made by Chinomona (2013) and Keni (2020) in the context of Indonesian online platform shows the relationship across few contexts of culture and geography. The extent of PEOU constantly having positive effects on trust in such varied e-commerce backgrounds underpins the broad nature as well as the relevance of this phenomenon (Chinomona, 2013; Keni, 2020). In another paper, one contribution again demonstrates the important role of PEOU to enhance trust, especially in the changing dynamics of the internet environment. This research proves the continuing importance of the ease of use in nurturing trust among users of contemporary e-commerce platforms (Sekolah, 2023).

In the context of online shopping platforms, the relationship between PEOU and CT is both crucial and well-documented. This connection is central to understanding how users

interact with and perceive online platforms, influencing their CT and subsequent behaviours, such as RI and CS.

Aghdaie et al. (2011) highlighted that PEOU positively impacts user trust, suggesting that when users find an online platform easy to navigate and use, their trust in the platform increases. This finding is crucial because it underscores the direct impact of usability on the fundamental aspect of trust in online interactions. Supporting this, research by Koufaris et al. (2001), Tang and Chi (2005), and Chinomona (2013) also discovered a positive correlation between PEOU and CT. Their studies suggest that user-friendly design and intuitive interaction mechanisms are essential for fostering trust within online platforms. This is particularly relevant in online consumer behaviour, where CT plays a pivotal role in determining the likelihood of repeat purchases and overall CS.

Further emphasising this relationship, Sawitri and Giantari (2020) found that both perceived ease of use and perceived usefulness significantly affect online repurchase intentions and trust. This study implies that the ease of using an online platform, coupled with its usefulness, can substantially influence a user's decision to revisit and repurchase from the platform.

Wilson et al. (2021) extended this understanding by demonstrating that both PU and PEOU have a significant impact on CS and CT in the computer industry in China. This finding is particularly noteworthy as it shows the broader applicability of these relationships across different industries and cultural contexts.

Taken together, the studies underline the importance of designing such online platforms which don't only have functional comprehensiveness but also user-friendliness. The relationship between PEOU and trust is straightforward, that is, easy to use platforms are more likely to create trust among users which will in turn increase the customer satisfaction as well as repurchase intentions. These insights make for a critical need at the end of online platform developers and managers in terms of implementation of the ease of use as a central tenet of their design and development strategies towards creating and maintaining trustworthiness as well as satisfaction in an online shopping environment.

Impact of perceived ease of use on customer satisfaction

The area of online shopping platforms provides an area of the PEOU-customer satisfaction relationship from which several studies have reported on the importance and impact of the user-friendliness of the website or online applications in influencing customer attitudes and experiences. Research in this field continuously points towards a positive

correlation between how easy customers are able to navigate and get to use a online platform and the satisfaction they derive from the service provided on that same platform. Further evidence to this premise is provided by Rezaei and Amin (2013) through their empirical proof that PEOU positively influences customer satisfaction. Their quality of study also underpins the argument that new technology or product innovation increases customer satisfaction when customers perceive it as easy to understand and use. This is more specifically relevant to those online platforms where the user experience of navigating and interacting with the website may be fundamental to his satisfaction(Rezaei and Amin, 2013). Amin supported this opinion, whereby he proved that PEOU plays a significant positive role in improving customer satisfaction. For example, this study shows that the perceived ease of use of mobile sites to interact largely predicts how satisfied are the users is with the interaction(Amin et al., 2014).

Further supporting this relation, Tu et al. (2012) found that in the e-auction marketplace PEOU influencers the customer satisfaction positively. This finding is significant in a way that it generalizes the importance of PEOU on varied types of online platforms illustrating regardless of what type of online service being showcased, ease of use carries instrumental power toward determining customer satisfaction(Tu et al., 2012). Sibona and Choi (2012) as well as Ariff et al. (2014) also identified the positive relationship of PEOU with customer satisfaction. Such studies illustrate that among various online settings, including social media sites, the amount of supportive interaction users feel they have influences satisfaction with its use(Sibona and Choi, 2012; Ariff et al., 2014). Dahlan (2022) extends this observation to the realm of online transportation services. The study concluded that both PU and PEOU influence customer satisfaction.(Dahlan, 2022). Wilson, Keni and Tan (2021) get into the cumulative effect of the adequacy of perceived ease of use of systems or practicality appropriate to the learning of new systems (PEOU), together with the belief in the benefits of advanced technologies (Perceived Usefulness), on user satisfaction. From their study, it can be noted that proper understanding of such factors is essential in improving user satisfaction, trust, and loyalty towards the existing computer systems(Wilson et al., 2021).

Being driven by all these, PEOU is one of the key dagetermining factors that affect customer satisfaction across various online environments. Whether it is while in shopping, at social media, or the service oriented online environments, the ease with which users operate and easily manage working on systems plays a big role in influencing appra5issal levels of overall satisfaction of having experienced an online service.

Impact of perceived ease of use on commitment

Some of these previous studies analyze the relationship between PEOU and user commitment in a technology usage context. The research that has been carried out by Oloveze et al. (2022), they identified that affective commitment proved to be an effective role as being in the major moderation between ease of use, perceived usefulness along with social image and intention to use the Point of Sale (PoS) terminals. This means that their findings the emotional connection consumers form with technology is affected by the ease and usefulness of the technology.

On a separate study by Liu and Tai (2016) proved that PEOU and PU will strongly predict the intention to use mobile payment services.

It therefore means if in case the technology is easy to use then users are most likely going to make a commitment towards its continued use. Solangi et al. (2019) studied technological ease and customer commitment in the banking sector and found that technical ease influences a great deal on the customer's commitment. In fact, it indicates that the ease of use is one of the determinants that has been very much helpful in promoting committed relationships between the customers and the banking technologies (Solangi et al., 2019). In another study, Kim et al. (2009) investigated the dimension of ease of use in relationship to the attitude of the customers which eventually affects their behavioural intentions with respect to the e-commerce websites of airlines. This study posits that ease of use contributes towards the formation of a positive attitude toward technology that possibly translates to a high level commitment to the usage of technology.

Moreover, Humbani and Wiese (2019) tested commitment in mobile payment apps by suggesting that building commitment is through intention of technology usage.

In this regard, commitment may be vividly understood as supported via the ease of use. Taken together, these studies suggest that PEOU may be an influential factor not only in the initial adoption of the technology but also in fostering a continued commitment towards its use.

1.3.4. Definition and conceptual framework of perceived enjoyment

PE, as a concept in the realm of online user experience, refers to the extent to which users find the use of a system enjoyable in and of itself. This enjoyment is not merely about utility but also encompasses the pleasurable aspects of the user experience. Davis (1989) defined PE as the degree to which the use of a system is considered enjoyable apart from any performance consequences that may be anticipated. This definition places emphasis on the

intrinsic satisfaction derived from the use of the system, irrespective of its practical benefits(Davis, 1989).

Perry & Ballou (1997), Venkatesh (1999), and Webster & Martocchio (1993) discussed the complexity of how users perceive gamification, indicating that the lack of direct relationship between playfulness and attitude or usage intentions might stem from how users perceive gamification in terms of its utility or play. This suggests that the PE in gamification is influenced by how users balance its fun aspects with its practical utility.

This, in a way, can be said that PE can even be construed as a critical factor after all within the wider context of technology usage especially in online platforms. It extends beyond the utilitarian benefit of a technology, where it includes the intrinsic pleasure derived by users from their interactions with the system.

Impact of Perceived Enjoyment on Trust

The link between PE and trust in online environments is an issue of priority concern that underscores ways in which the satisfaction drawn from using a system can mold users' trust in it. The following are some evidence that Rouibah et al. (2016) gleaned regarding this dynamic. In their study, they have noted that the degree of perceived enjoyment has a positive effect on the trust level towards customer especially in regards to the online payment systems. This would mean if the customer gets a sense of enjoyment while interacting in an internet-based system then his/her perception on whether the system is correct or it safeguards his/her data improves. This holds true especially in those environments where the related risks are significant, for instance, when it comes to online financial transactions.

In the further study by Hwang and Kim (2007), the relationship between enjoyment and two of the most important trust dimensions, i.e., integrity as well as ability, came up positively. Along the same line, the enjoyment experienced on a platform by users could be indicative of competence (ability) and integrity (honesty), which are vital components of trust from a user perspective. This implies that the principle of pleasurable experiences gained out of using a system has profound effects on global trust in the system. Gefen et al. (2003) gave a little broader view regarding the relationship between trust and the users' perception of the usefulness of a system. While focusing on the TAM in online purchasing, their study suggests that trust driven through perceived enjoyment may influence the way users are considered the usefulness of a system based on the Internet. This relationship indicates that when the users find the system trustworthy, in part because they gain pleasure from it, then most likely they

will find the system useful. The above studies taken together indicate that PE is a factor that constitutes PE in online systems.

Impact of perceived enjoyment on commitment

Some of the studies sought to shed light about the relationship between perceived enjoyment and commitment in online environments especially since in social media and e-commerce lending differentiated perspectives to how user commitment is influenced by enjoyment.

According to Abed, Dwivedi and Williams (2016), perceived enjoyment is also an antecedent of the behaviour of users in social media for business purposes as well as in social purposes. This is an indication that when users feel enjoyment in their experience on social media platforms, then they are bound to be committed to using the platforms more regularly. The feeling of enjoyment is a very important requirement for enhancing user commitment and engagement. Noori, Hashim, and Yusof (2022) have further extended this notion to the area of s-commerce (social commerce). Their research has confirmed that perceived usefulness and ease of use together with enjoyment, have significant relations with the future behavior intentions of users. This indicates the fact that along with other contributing factors, enjoyment might be essential for growing an individual's commitment to repeatedly make use of s-commerce platforms.

On the other hand, Kanthawongs (2011) found that negative relationships may exist between perceived enjoyment and commitment. This perspective brings in the complication of the relationship, indicating how generally enjoyment and commitment would go hand-in-hand but there might be situations where there would be too much enjoyment on the part of the users likely to result in serious lack of commitment or even detachment from the major objectives of the platform. The wider Information Systems (IS) literature against this, that is to say the studies concerning Bilgihan et al. (2014), Lee and Chen (2010), as well as Shen and Eder (2009), collectively found that enjoyment together with a sense of control and concentration significantly impact behavioural intention of use. This would be especially so with s-commerce where a pleasurable experience may translate to very high commitment of consumers towards the platform itself. While literature generally agrees that perceived enjoyment would have positive effects upon commitment in different online platforms, this relationship does exhibit nuances by itself.

While enjoyment may drive commitment to a platform, there might be cases where enjoyment does not directly translate into serious or sustained engagement. Understanding

this relationship is pertinent to platform developers and managers in the design and management of online environments that are as fun as they foster long-term user commitment.

Impact of Perceived Enjoyment on Customer Satisfaction

In the context of online shopping and digital services, the relationship between PE and CS has been extensively studied, revealing nuanced insights into how enjoyment influences user satisfaction. Ashfaq et al. (2019) explored how shopping experiences could be used to measure users' perceptions of fun and happiness, or PE. Their study suggests that the level of enjoyment users experience during online shopping is a key determinant of their overall CS with the shopping experience. This implies that the more enjoyable the shopping process, the higher the CS. Joo et al. (2017) studied the impact of PE in educational settings, finding that it, along with PU, positively influenced students' CS with digital textbooks. This extends the application of PE to educational technologies, suggesting that enjoyable digital learning tools can enhance student satisfaction.

Childers et al. (2001) highlighted the direct link between the pleasure of an online shopping experience and purchase behaviour. They found that the more pleasurable the online shopping experience on a website, the more likely customers are to make a purchase, underlining the importance of PE in driving e-commerce success (Childers et al., 2001). Moreno, Fabre, and Pasco (2022) described PE as the level of CS customers feel during an online transaction, focusing on the website's ability to provide happiness independent of the quality of service received. This perspective emphasises that the enjoyable aspects of a website can significantly contribute to overall CS.

However, Kanthawongs (2011) offers a contrasting view, suggesting that there might be negative relationships between PE and various factors like COM and attitude. This highlights that while PE generally contributes positively to CS, its impact can vary depending on the context and other influencing factors. After all, it can be said that while PE is generally seen as a positive influence of CS across various online platforms and digital services, its impact can be complex and multifaceted.

1.4. Examining the dynamics of customer commitment, trust, and satisfaction within the context of repurchase intentions through gamification

1.4.1. Definition and conceptual framework of repurchase intention

Repurchase intention in the process of online shopping is an intermediate concept much more nuanced that reflects the influence of psychological, relational and situational factors that can help to shed a greater level of understanding upon how each of these factored interact to shape the customer's ultimate decision-making process. According to Thibaut and Kelley (1959) as well as Rusbult (1980), repurchase intention is explained by the paradigm of Social Exchange Theory as well as the Investment Model of Commitment whereby it is an intention to continue or stay in a relationship, likened to what is referred to as relationship maintenance. This means that customers' decisions to repurchase not just transaction based but also linked to their relational investments and quality of interactions they have with the company.

Lacey and Morgan (2009) give an individualistic view wherein they state that repurchase intention is the judgment of an individual considering not only his situation but also his future possibilities to buy goods again from the same firm. This means that the decisions to repurchase made by the customers are profoundly subjective based on an in-depth analysis of their own individual situations and expectations. Such significance of repurchase intention as a strategic marketing data is outlined by Cronin et al. (2000) who call it an essential part of numerous defensive marketing moves impacting on the success of business. In summary, the business's ability to thus nurture repurchase intentions is an essential component of its overall strategy, especially in keeping customers' relationships intact as well as ensuring that there is continuous patronage. Jackson (1985) describes intent of repurchase as dynamic consumer behaviour indicating a choice to continue, stay and withdraw the service from current supplier.

The research of Chrisnathaniel, Hartini, and Rahayu (2021), and Djohan et al. (2022) point out that RI is influenced by the CS level with a product and the expected outcomes of repeating purchases. This suggests that customers' satisfaction with a product plays a critical role in their decision to repurchase, highlighting the importance of product quality and CS. Hellier et al. (2003), and Nasir et al. (2021) discuss RI as a decision influenced by previous experiences and future expectations. Essentially, customers engage in a reflective process, weighing their past experiences and anticipated future outcomes before deciding to repurchase. Almaudina (2023) emphasises that factors like product cost, quality, values, and

past purchasing experiences influence the repurchase process. This indicates that a variety of factors, including the intrinsic value of the product and past interactions with the company, play significant roles in shaping a customer's decision to repurchase.

Lastly, Syaharani and Yasa (2022), Olaru, Purchase, and Peterson (2008), and Patterson et al. (1997) underline that repurchase behaviour is closely related to CS or dissatisfaction, and it depends largely on the benefits received in past encounters. This highlights that the overall customer experience, encompassing satisfaction with past purchases, significantly influences their willingness to repurchase.

1.4.2. The role of gamification in enhancing repurchase intention

The role of gamification in enhancing repurchase intention has garnered significant attention in recent studies, with a focus on understanding how gamified experiences influence customer behaviour, particularly in online marketplaces. Djohan et al. (2022) explored the impact of gamification in e-marketplaces and found that offering an enjoyable gaming experience and involving customers more deeply in the services significantly encourages them to continue using e-marketplace services. This suggests that gamification, by enhancing user engagement and enjoyment, can positively affect customers' willingness to repurchase in the e-commerce domain (Djohan et al., 2022). Further supporting this idea, Wicaksono and Subari (2021) discovered a strong correlation between gamification and repurchase intention. This indicates that gamification strategies do not just engage customers but also significantly influence their decision to repurchase. In essence, gamification elements like rewards, challenges, and interactive experiences create a compelling environment that fosters repeat purchasing behaviour.

In support of this finding, Shang & Lin (2013) also have observed that evolution of technology has made possible the deployment of more systematic and interactive gamified features which are effective in retaining customers and encouraging them for repeat purchase. It stresses an emerging imperative of marrying technology with gamification for the sustenance of customer interests and loyalty amidst the increasingly digital world marketplace. In a similar prospect, Aparacio et al. (2021) had documented their research affirming that positively perceived gamified e-commerce websites facilitate influence towards repurchase intentions. The finding shows that the application of gamification in e-commerce contexts, customers return to spend more money on the site as well, acting as a good catalyst. Sitthipon et al. (2022) pointed from their researches that gamification has a positive influence on repurchase intention and customer satisfaction mediates this

relationship. This finding should be interpreted as being a portion of the positive effects of gamification upon repurchase intentions come generated from the increase in customer satisfaction. In other words, customers who consider a gamified experience as satisfying are generally more prone to become repeat buyers.

However, it is important to note the divergent view put forth by Kim et al. (2020) who drew the attention of one towards a situation in which gamification could have an amazing negative impact on repurchase behaviour. This would imply that while gamification may be good, prudent considerations must be taken for its implementation due to the adverse effects on customer behavior possibly brought about by either over-stimulation or gamification fatigue (Kim et al., 2020). In line with this approach, other study with Proposed Research Model (Figure 2) has found the indicated similar results. According to this study, gamification doesn't have significant influence towards repurchase intention in e-commerce platforms. And third research shows that while TAM has an additional significant impact towards repurchase intention in e-commerce platforms. In regard to the moderating effect of TAM towards the relationship between gamification into repurchase intention, find that TAM do not have a moderating effect toward the relationship between gamification to repurchase intention.

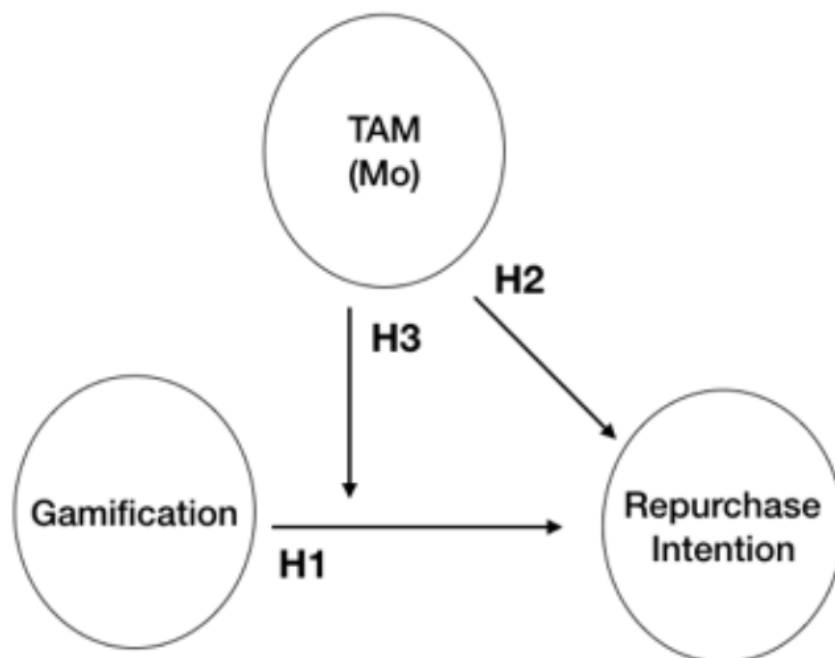


Figure 2: Proposed Research Model. Source: Susilo, 2022

In summary, although most of the results have pointed out that gamification may positively affect the online shopping repurchase intention through the enhancing of engagement and satisfaction of customers, it's vital recognizing the effects which are not positive. Such a nuanced understanding of the role gamification plays, is integral for the companies that would want to implement it correctly in their e-commerce platforms.

The relationship between customer trust and repurchase intention in the context of gamification

An important aspect regarding the understanding of consumer behavior can be related to the relationship between customer trust and repurchase intention, especially within the context of gamification. Chiu et al. (2008) observed the fact that the positive experiences of customers in their purchase along with the perceptions about the trustworthiness of the retailer, in general, increases the buying intention to make a return purchase. This indicates that when customers have a positive experience and perceive the retailer as trustworthy, then they will most likely be return purchasers. In essence, trust is used as the building blocks where repeated business is built upon. Theorists Hennig-Thurau and Klee (1997) add on this to say that trust is one of the essential elements in the decision of repurchasing. The more thus a customer trusts a particular brand or a retailer, the more likely he is to do repeat business with the former/with him. Trust in this aspect can be seen for a critical driver towards customer loyalty and repeat purchasing.

According to Park (2019), trust of the customer is found to be one significant factor that augments customers' repurchase intention. This serves to highlight that trust does directly correlate the probability of customers returning for additional purchases. Trust herein regards not only the product reliability but also attests to the credibility and dependability of the online store or brand. Ha et al. (2010) found that there exists a relationship between trust and the repurchase intention showing that the trust on prior affective experiences will play a very vital role in helping the consumers further have repurchase intentions. This means that in case of emotionally positive past experiences with a retailer, it boosts their trust by far and hence the consequent intention of repurchasing from the same. As noted by Jarvenpaa et al. (2000), trust influences dramatically the buyer's purchasing intention from a given company. Basically, the higher the trust that a customer will have towards a company is high and therefore he or she will be able to purchase from that company. Trust in this sense could be motivated by different factors amongst them being security of transactions, quality of customer service and general reputation of the company.

Thus, empirical research has depicted that trust proportionately increases customers' likelihood of returning to a firm by Doney and Cannon (1997). This respectively again supports the notion that trust is integral context in developing and maintaining customers with subsequent repeated buying behavior. Chiu et al, (2008) and Qureshi et al, (2009) have found customer trust to have a significant relationship with customers' repurchase intention in online shopping. This clearly indicates that the level of trust possessed by customers upon an online shopping platform directly impacts their decision-making concerning re-purchase in future from the designated platforms. Another research study by Upamannyu, Gulati, Chack and Kaur (2015) exhibited a positive and significant influence of customer trust on their re-purchase intention.

This research therefore has upheld the idea that if the customers perceive a brand or retailer to be trustworthy, their repeat purchasing intention will be heightened. It underscores the relationship between customer loyalty and repurchase intention, showing that through trust, generated can be loyalty which further cements repurchase intention. This way, indeed, it became evident in nature that trust is an influential component within the online shopping domain especially in engendering repurchase intention.

Trust in an online retailer or a brand recommences customers for repeat purchases. Trust can be built up through positive experiences, a dependable service, and the view that the brand ranks itself at the top of the list with integrity and customer commitment. In this context, those online retailers who seek to develop the repurchase intention in order to establish long term relationship with the customers will need to work upon developing the trust and carrying out nurturing of the same with the customers.

The relationship between customer satisfaction and repurchase intention in the context of gamification

In gamification, the relation of influence of customer satisfaction on repurchase intention is multi-faceted essentially illustrating how satisfaction drives other sets of consumer behavior with a focus on the repeated purchasing scenario. In particular, Preis (2003) mentions that increased customer satisfaction is a prime factor leading to heightened repurchase intentions. This means that customer satisfaction is an important factor in repeat business and the likelihood of return of customers for future purchases as when they are happy with their first purchase, they will come again to make yet another purchase. Yu & Bastin (2010) and Thanh et al. discuss the link between shopping satisfaction and impulsive buying behaviour. This relationship shows that if the customers are satisfied with the

atmosphere of shopping, then they are most likely make an impulsive purchase thus indirectly which also connects the satisfaction with buying behaviour.

It was evidenced customer satisfaction has a great influence on customers' behavior, their word-of-mouth communication and the intention to repurchase (Dam & Dam, 2021; Landicho et al., 2021; Sivadas & Baker-Prewitt, 2000). With this, it reflects that satisfied customers are likely not only to repurchase but also likely positively influencing other new customer's purchasing decisions through word-of-mouth regarding the brand or product.

It is important to note that Ilyas et al. (2020) and Lin & Lekhawipat (2014) reveal the fact that repurchase intention drivers are very diversified, and customer satisfaction is among them. One may therefore come to the conclusion that a satisfied customer is a necessary success factor contributing to a positive decision concerning the repurchase in relation to an offer or retailer. Fuentes-Blasco et al. (2017) note that a satisfied customer returns to purchase either the same products or identical products at another time. Following this perception, there is no direct link between the level of satisfaction of the customer and the loyalty toward the brand or product.

Innis (1991) and Roest and Pieters (1997) established that satisfaction and attitude are great antecedents to customer repurchase intention. This means that the general customer satisfaction of a certain product or service plays a big role in influencing the decision to make another purchase in future. Zhang et al. (2011) and Rose et al. (2012) further confirm the direct positive relationship of customer satisfaction to repurchase intention from different product and service studies. This underscores that customer satisfaction is not industry specific but rather a universal driver of repurchase intentions. Wijaya, R., Farida, N., & Andriyansah (2018) and Anuwichanont & Mechinda (2009), Kuo & Tang (2011), Eid (2011), Miremadi et al. (2011), and Wahyuni & Ginting (2017) among others have consistently proved that satisfaction has influenced the customer in terms of being able to again reorder a similar item. This body of research verifies that customer satisfaction is one important factor to determine whether the customers will make repeat purchases or not.

However, Gautama et al. (2012) and Dehghana et al. (2015) further elaborate that there are some conditions where customer satisfaction may have not a significant influence on repurchase intention which can be pointer of other factors to affect customers in deciding to make repeat purchase(Wijaya, 2018).

In essence, consensus from several studies is that customer satisfaction constitutes a leading driver of repurchase intentions. Satisfied customers are most likely to return for purchase again and additionally help in influentially speaking good of the product to others

while indicating loyalty towards a brand or a retailer. However, it is noteworthy that satisfaction per se may not necessarily guarantee future repurchase as other factors can intervene in this decision.

The relationship between customer commitment and repurchase intention in the context of gamification

Customer commitment and repurchase intention in the gamified settings have a complex and many-faced condition as studies usually tend to stress out various nuances of this issue. Ercis et al. (2012) define brand commitment as being close to the concept of friendship that a consumer can have for a certain brand. This means that if consumers feel a personal bonding with any brand, just as the case of friendship, then it is expected for them to continue and remain loyal towards that very brand. By referring to Suh and Han (2003), commitment refers to the continuous desire of a customer to remain in a relationship with a certain brand. It therefore follows that committed customers would have an underlying intention to remain with a certain brand that could also influence their decision to purchase again. Morgan and Hunt (1994) further support the relationship between commitment and repurchase intention. Their studies have come up with information showing that continued business relationship, under the commitment of the customer to a brand or supplier, influences the intention to repurchase.

Mukherjee and Nath (2003), as well as Bloemer and Kasper (1995) prove that commitment has a significant impact on the behavioural intentions of customers. The greater is their commitment, the higher is possibility of the intention to repurchase in relation to the brand. Keh et al. (2007) argued that high brand commitment consumers showed a stronger affective attachment towards the brand. This necessitates that emotional attachment within the customers plays an imperative role in governing their repurchase decisions. On the same note, Verhoef (2003) found out that affective commitment had a direct effect on repurchase intention in banking services. This would mean that when customers become emotionally committed to a brand, it directly influences them to have an intention of re-purchasing the service of that brand.

Morgan and Hunt (1994) also argued that commitment actually plays the role of motivating both buyers as well as suppliers to sustain future relationship with the brand. Therefore, this again reflects that through motivation, commitment can be created then ongoing relationships and repeated purchases can exist (Morgan and Hunt, 1994). Thirdly, Moorman, Zaltman, and Deshpande (1992) said that commitment is a major factor which lies

behind repurchase intentions from the standpoint of the customer. Therefore, this validates the significance of commitment as an important factor which determines whether customers are going to repeat the purchase from the same brand or not.

Summarizing, the link of customer commitment and repurchase intention in gamified environments is generally positive, where commitment often drives repurchase intentions. However, it's critical that commitment doesn't regulate repurchase decisions in totality, and repeated-purchases don't necessarily have to signify deep brand commitment.

2. METHODOLOGY OF THE EMPIRICAL RESEARCH ON IMPACT OF GAMIFICATION ON REPURCHASE INTENTION WITHIN ONLINE SHOPPING PLATFORMS

2.1 Purpose of the research, model, and hypotheses

Problem definition

In today's digital area, gamification has emerged to be a vital aspect reshaping the behaviour of consumers who are in the online shopping environments. Even with its growing popularity and application, the field basically lacks a deep understanding of how gamification actually directly impacts repurchase intentions; a gap this research aims to fulfil. As Gatautis et al. (2016) explain, however, online gamification influences the behaviour of consumers who interact with the businesses in question, but its effect on the cyclical nature of purchases in the commercial life cycle remains understudied.

The research will only focus on this aspect and aims to look into the gamification strategies used by online shopping platforms which subsequently reflects in customer behaviour. While studies such as that of Chen, Yan, & Fan (2015) have contributed significantly to our understanding of online consumer behaviour, Sigala(2015) points that research specifically targeting the influence of gamification from a consumer behaviour perspective is scanty. This is a critical gap that this study aims to fill. According to the works of Insley and Nunan (2014), the pivotal function of gamification in online shopping lies within the ability of making a consumer's experiences when shopping turn into an entertaining activity that will enhance his or her involvement with the site. A question yet remains critical as to understanding the subtleties of how these gamified experiences translate to repeated purchase. Rodrigues, Oliveira and Costa (2016) offer a way of classing elements

of gamification which for this study will help dissect the various components that make gamification effective. Moreover, as described by Huynicki et al. (2004), the relation between game mechanics and user behaviour is an important aspect of how consumers engage with such gamified applications. This engagement signifies whether or not such features will be able to create a stronger difference towards repurchase intentions.

The ultimate goal of this research is to provide a comprehensive understanding of the role of point system gamification element in online shopping environments, particularly focusing on platforms such as Hepsiburada and N11. Turkey was selected due to its rapidly evolving gamification sector (Özdemir, 2023). Regarding the 2 platforms chosen, Hepsiburada and N11 were specifically chosen as they uniquely share the implementation of point-based gamification, a common element not consistently observed in other platforms such as Trendyol. The reason to choose these two platforms is to provide more reliable results and minimise limitations. Their concurrent use of point-based GE offers a comparative perspective on their effectiveness for this study. This research aims to research how points-based gamification systems on platforms like Hepsiburada and N11 affect repeating purchase and their impact on consumer RI. Utilising the TAM and Self-Determination Theory (SDT), the study aims to analyse point-based GE'S effect on consumer perceptions of ease, usefulness, and enjoyment, and how these perceptions impact on CT, CS, and COM.

Purpose of the research

The research aims to examine the influence of point-based gamification elements, specifically a quiz game on Hepsiburada and a matching game on N11, on repurchase intentions in online shopping. It explores how the point system gamification element affects perceived ease of use, usefulness, and enjoyment, and their subsequent impact on customer commitment, satisfaction, trust, and ultimately, the intention to repurchase on these platforms.

2.2 Conceptual model and hypotheses of the research

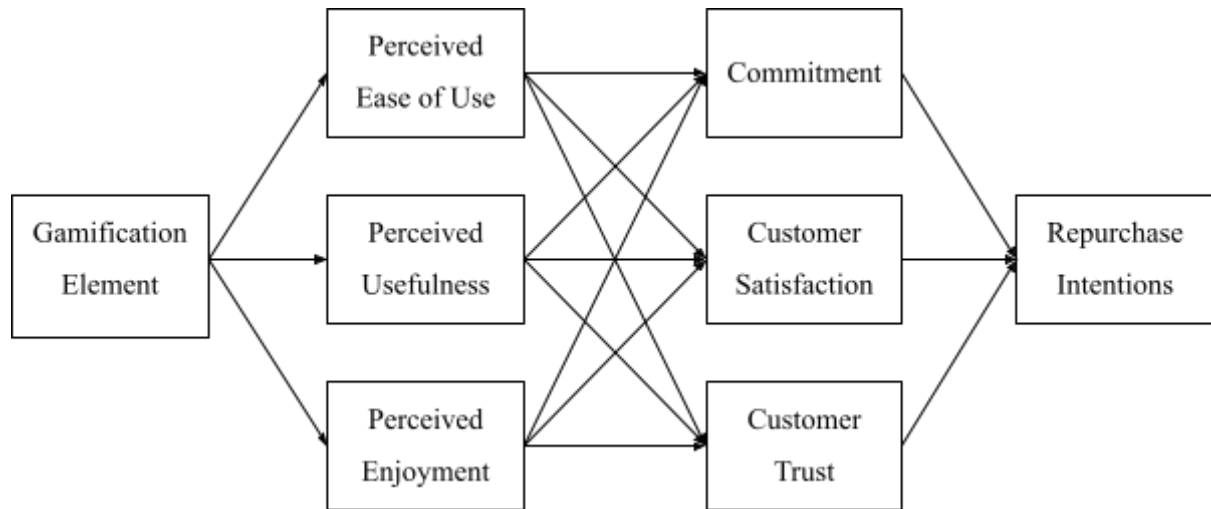


Figure 3. Conceptual model of the research within N11 and Hepsiburada. (Developed by the author)

Hence, this thesis intends to explore the delicate play of gamification elements in online shopping platforms and their subsequent impact on intention to repurchase to further add to the research base that has already explained the very complicated nature of the relationship between gamification and consumers' behaviour. The theoretical framework incorporates seminal models such as the Technology Acceptance Model (TAM) and Self-Determination Theory (SDT), proved central in prior researches conducted to understand user interaction with the technology and its impact on behaviour.

On the other hand, Yang et al. (2019) provided useful insights on how gamification enhances customer participation and purchase intention through the S-O-R model in which competition is one of the elements in gamification. Results of their finding disclosed that such immersion and self-presentation play a mediating role positively in the competition brand engagement relationship which have importance to influence the customers' purchase intentions. This research ascertains an important paradigm to understand the effect of gamification precisely in a marketing context. Elaborating the notion of impulse buying in the context of gamification, Shao et al. (2019) elaborate on several aspects relevant to the S-O-R framework.

They stress the achievement-related attributes in the case of gamification mechanisms consisting of rewards and badges that add to perceived enjoyment and social interaction

provoking the customer to make impulsive purchases. Hence, the study proposes that gamification impacts in a positive way towards impulse purchases with a mediating mechanism of affective reactions and social interaction. Other than this, Xu et al. (2020) applied the Cognitive Evaluation Theory (CET) model in their research and proposed that gamification importance impacts positively in the direction of intention of online purchase. Their research indicates the need of providing gamification elements congruent with their psychological consumer need. Rewards, autonomy and immersion are identified as driving aspects that enhance consumers' enjoyment so as to heighten online purchase intention. This reinforces the intrinsic role of consumers' motivation in gamified contexts.

Though, indeed, the research has been rather focused on the initial purchase intention, such as that of Yang et al. (2019), and some others, the critical matter of repurchase intention has remained relatively unexplored. The Conceptual Model of the Research for this thesis aims to fill this gap by examining how the interactive and engaging gamification features implemented not just a one-time purchase but to an ongoing customer relationship, marked by repeated transactions.

For the research following online shopping platforms were chosen:

1. Hepsiburada: Hepsiburada is a leading online retail platform in Turkey, renowned for its extensive range of products, from electronics to clothing and home goods. It serves as a comprehensive marketplace that caters to the diverse needs of Turkish.
2. N11: Similar to Hepsiburada with the large number of products mapped on their respective columns, N11 differentiates the gamified shopping experience with a unique user engagement strategy. "Eşle Kazan" is the matching game offered by N11 that bestow their customers with points for the successfully matched card pair.

As a point system gamification element:

1. Efsane Bil Kazan (Hepsiburada): "Efsane Bil Kazan" game is integrated into the user experience, and it takes a quiz-based activity rewarding the shoppers with points for every correct answer. These points act as pseudo-currency that increases the purchasing power of the customer and hence provides a buying motive of customers to return and therefore reinforcing repurchase intentions.

2. Eske Kazan (N11): N11 integrates various games to try to make the user experience more fun, and interactive games are one of them. One of them is the "Eşle Kazan," a matching pair game where every successful pairing by the customers wins them scoring points. With scoring points, one is able to redeem some useful points that will be accompanying them as they shop on N11.

In this study, Hepsiburada and N11 to exemplify these online shopping platforms were selected since they enjoy a remarkable position among the leading companies of e-commerce in Turkey. Most popular games of the day were selected as "Efsane Bil Kazan" from Hepsiburada and "Eşle Kazan" from N11. In both games, point-based gamification elements have been used, hence this provides an opportunity for one to explore effects of gamification techniques on consumer behaviours and repurchase intentions.

Yet, while previous studies have focused on the role of gamification in improving the online consumer experience, a gap exists as to what extent this particular interactive practice affects its critical stage, which constitutes repurchase. As shown by Hamari and Koivisto (2015), gamification can lead to major modifications in the first interaction with a firm that could eventually transform into purchase decisions because of the elements of fun and competition, but its effects have not been explored in-depth regarding how these effects can be expanded to revitalize repurchase intentions.

This Conceptual Model of this research has been designed to dig deep within the complex interrelations through which elements of gamification can affect repurchase intentions in the context of online shopping. Fundamentally, it posits that gamification is capable of positively enhancing the experience that consumers have in online shopping which would then impact their subsequent repurchase intention basically. This model posits three key constructs adapted from the Technology Acceptance Model (TAM) and Self-Determination Theory (SDT) in order to identify factors: Perceived Ease of Use (PEU), Perceived Enjoyment (PE), and Perceived Usefulness (PU). The theoretical underpinnings of these constructs moderate the relationship between gamification elements and desired customer loyalty outcomes such as commitment, customer satisfaction, trust, and propensity for repurchase.

Hypotheses

Studies that support the hypothesis "Perceived Ease of Use has a positive effect on intention to use gamification elements" provide for direct positive effect of perceived ease of use (PEOU) to users' intentions. Starting from Malaquias, Malaquias, & Hwang's (2018), Lee & Lehto's (2013), to Sánchez-Mena et al.'s (2016) research, it seals the idea that when users find gamification easy to use, then they are more likely to use those in the future. Al Amri and Almaiah (2020) strengthen this concept by providing evidence that PEOU positively influences perceived usefulness as well as the intention to use mobile gamification in e-learning. This relationship also concurs with findings by Kanchanatane, Suwanno, & Jarernvongrayab (2014), Lu, Papagiannidis, & Alamanos (2019), and Ramayah & Ignatius (2005) who found that PEOU positively influences both perceived usefulness as well as intention to use different technologies. All together, this evidence supports the hypothesis that easiness of use is a determinant significant to intention to engage with the elements of gamification.

H1: Perceived ease of use has a positive effect on the intention to use gamification elements

This hypothesis is derived from the findings of Scherer, Siddiq, & Tondeur (2019), who demonstrated the importance of users' subjective assessments in perceiving the usefulness of gamification platforms. The study indicates that when users perceive gamification as useful, their motivation and participation in using these platforms increase. Similarly, the research by Wu & Chen (2017) and Goodhue (1998) aligns with this view, highlighting that Task-Technology Fit (TTF) influences users' perceived usefulness and ease of use of technology. These insights collectively suggest that when gamification elements are perceived as useful, their adoption and effectiveness are significantly enhanced.

H2: Perceived Usefulness has a positive effect on the intention to use gamification elements

The hypothesis PE positively influences the effectiveness of GE in online platforms is grounded in extensive research demonstrating the crucial role of enjoyment in driving user engagement with gamification. Studies from Hwang (2014), Venkatesh (2003), Wang (2016), Aubert (2012), and others highlight the importance of both intrinsic and extrinsic motivational factors, including enjoyment, in the adoption and usage of IT and gamification

systems. The concept, as detailed by Banerjee & Bhattacharya (2022), suggests that users who find pleasure in online activities are likely to be more engaged and spend more time on the platform. Hamari & Koivisto (2015) further elaborate that gamification offers not just utilitarian benefits, but also hedonic ones like enjoyment, which are essential for its effectiveness. The interaction with gamified elements, therefore, creates playful experiences and influences user willingness to engage with these services. This is supported by findings from researchers like Baek, Gökalp, Atkinson, Kydd, and others, who found PE to be a significant determinant of user behaviour in interactive and entertainment-focused systems. Insley and Nunan (2014) also contribute to this understanding by suggesting that gamification can transform online activities into engaging, entertaining experiences, enhancing user involvement and commitment. This hypothesis aims to explore the intrinsic motivation of enjoyment in enhancing user engagement and satisfaction with gamified elements, potentially making these systems more appealing and successful.

H3: Perceived enjoyment has a positive effect on the intention to use gamification elements

Research supports the hypothesis that PEOU significantly influences COM. Oloveze et al. (2022) found that affective commitment acts as a moderator between ease of use and users' intentions, underscoring the significant role of ease in fostering COM. Similarly, Liu and Tai (2016) highlighted that ease of use is a strong predictor of intention to use mobile payment services, suggesting its influential role in forming users' commitment to technology. Additionally, Kim et al. (2009) emphasised that ease of use affects consumers' attitudes and subsequent behavioural intentions, further supporting the idea that ease of use is a critical factor in developing commitment. This is in line with the findings of Solangi et al. (2019), who discovered that commitment is influenced by the technological ease of systems. The combined insights from these studies provide a solid foundation for the hypothesis that perceived ease of use is a significant determinant of COM in the context of technological adoption and usage.

H4: Perceived Ease of Use positively influences Commitment

The hypothesis that PEOU positively influences customer satisfaction is underpinned by extensive research in the field. Studies had shown that ease of use and understanding of a technology or product by the consumers will result in increased levels of satisfaction of them, as roughly suggested by Rezaei and Amin (2013) as well as one by Amin et al. (2014). This

is because ease of use reduces some of the effort that is needed in learning and interacting with such a new product, thus enhancing the overall user experience. Subject to verification, similarly, Tu et al. (2012), Sibona and Choi (2012), and Ariff et al. (2014) conducted studies in findings that verified this argument by reporting the statistically significant positive relationship of ease of use on customer satisfaction. In the case of online shopping platforms, such findings are highly relevant, whereby the risk posed by how easy customers can navigate through and use the website or application to be able to make a purchase could potentially translate to customer satisfaction and subsequently to their loyalty and repurchase intentions.

H5: Perceived Ease of Use positively influences Customer Satisfaction

Quite a number of academic works diligently supported the hypothesis that Perceived Ease of Use indeed positively affects Customer Trust. Aghdaie et al. (2011) underscored such relationship, as he has noted that ease of use enhances consumer trust. In a similar way, the observations recorded by Koufaris et al. (2001) and Tang and Chi (2005) also reflected high significance between ease of use and trust in online purchase related issues. This relationship has even been more apparent in the context of both Indonesian and e-commerce studies done by Chinomona (2013) as well as Keni (2020). Collectively, these studies affirm the major role to which perceived ease of use plays towards developing the trust among consumers especially in the digital shopping environments.

H6: Perceived Ease of Use positively influences Customer Trust

The hypothesis that PU positively influences COM is supported by empirical evidence. Yulianti and Pusparini (2020) found that PU significantly impacts affective commitment, particularly in the context of a flexible benefit system. Furthermore, Ali et al. (2022) observed that COM is greatly influenced by PU, especially in online platforms like Alibaba. These findings suggest that when customers perceive a service or product as useful, their commitment to it intensifies, illustrating the important role of PU in fostering COM.

H7: Perceived Usefulness positively influences Commitment

Many of the studies have confirmed the hypothesis that perceived usefulness really affects satisfaction of customers. Park et al. (2013) demonstrated that perceived usefulness improves customer satisfaction, particularly on car navigation systems. Lee and Jun (2007) also observed this positive effect of perceived usefulness on satisfaction but in mobile

commerce. Amin et al. (2014) further expanded on these hypotheses as he found that perceived usefulness significantly affected the degree of satisfaction with mobile websites. Further, perceived usefulness positively influences e-satisfaction of users in the social networking sites (Ariff et al. 2014). The pooled results assist confirm on the affirmative note the significant role played by perceived usefulness for raising customer satisfaction, especially within an online and technological environment.

H8: Perceived Usefulness positively influences Customer Satisfaction

Elaborating the hypothesis for positive influence of perceived usefulness on customer trust, various studies further fortify this belief. Amin et al. (2014) and Lee and Jun (2007) found a positive relationship between perceived usefulness and trust. Along similar lines, Horst et al. (2007) had known trust as a determinant in cases of perceived usefulness whilst Chinomona (2013) had noted the existence of a positive effect of perceived usefulness on trust. Hampshire (2017) linked trust positively with perceived usefulness offset by perceived risk. In the same line of thought, finding a positive impact of perceived usefulness on trust, Sawitri and Giantari (2020) affirmed findings by Chen and Barnes, 2007, Primanda et al., 2020, Gefen et al., 2003. This, when combined with the previous findings, highlights the criticality of perceived usefulness in fostering customer trust, especially in the online environment when gamification is featured.

H9: Perceived Usefulness positively influences Customer Trust

In addition, Abed, Dwivedi, & Williams (2016) have underpinned the fact that the perceived enjoyment of the users influences significantly towards its social commerce user behaviour, which indicate towards its pertinence to increase the stakeholder commitment to use social media platforms for his or her business or social purpose. Noori, Hashim, & Yusuf (2022) classify that for continuous use intent ion in s-commerce, perceived usefulness and ease of use, enjoyment significantly affects it which is tantamount to implying the commitment due positive correlation with enjoying the system. Kanthawongs (2011) points to categorical suggestions that some relationships are negative between perceived enjoyment in a player's commitment, holding a counterpoint to explore. Merikivi et al. (2017) identify enjoyment as one key factor of the many associated with a player's degree of commitment to online gaming. Bilgihan et al. (2014), Lee and Chen (2010), Nasri and Charfeddine (2012), and Shen and Eder (2009) found that perceived enjoyment, sense of control and total concentration have a significant impact on behavioural intention to use and hence proposed

that in s-commerce, enjoyable experiences enhance commitment. Together, all these studies appear to suggest that the enjoyment perceived is an important driver towards commitment, especially in relation to online and gamification systems.

H10: Perceived Enjoyment positively influences Commitment

The various researches support the proposition that perceived enjoyment positively influences the customer's contentment on online shopping. Notably, enthusiasm of the shoppers per se is very critical in their satisfaction from online shopping (Ashfaq et al., 2019). Enthusiasm, concurrent with perceived usefulness, led to the students being significantly more satisfied with digital textbooks for Joo et al. (2017). Alexander and Hidayat (2022) reported customer satisfaction as projecting a mediator in association between perceived enjoyment and brand loyalty. Childers et al. (2001) reasoned in support that positive experiences made by shoppers online enhance the possibility of purchases. Moreno, Fabre and Pasco (2022) agreed that satisfaction has a relevant impact on the enjoyment experienced during activities during transactions online as hypothesized. Furthermore, Kanthawongs (2011) suggested that there are potential negative strong correlations between perceived enjoyment and other constructs that imply complex relationship driving to further investigation in the context of satisfaction from online shopping.

H11: Perceived Enjoyment positively influences Customer Satisfaction

Studies highlight the influence of PE on CT in the context of online shopping. Rouibah et al. (2016) demonstrated that PE positively impacts trust formation in users of online payment systems. Similarly, Hwang and Kim (2007) found that enjoyment enhances dimensions of trust, specifically integrity and ability. This notion is supported by Gefen et al. (2003), who underscore the role of trust in determining customers' PU. Furthermore, Noori, Hashim, and Yusof (2022) confirmed that PE, along with ease of use, significantly affects both trust and COM in social commerce. This body of evidence collectively suggests that PE plays a crucial role in cultivating CT, an essential component in the online shopping experience.

H12: Perceived Enjoyment positively influences Customer Trust

Sharan et al. (2019) accentuated that loyalty expressed through long-term commitments is pertinent within the framework of lasting customer relationships and, henceforth, repeat purchases. Ercis et al. (2012) consolidated this reasoning with branding

that customer satisfaction, which often is the cause of repeats, is associated with brand commitment. Moreover, Moorman, Zaltman, and Deshpande (1992) identify customer commitment as a key driver of repurchase intentions. Therefore, commitment either in the form of loyalty, satisfaction, or trust seems to be playing an important role through which customers would motivate toward future purchase, thereby supporting the hypothesis in relation to online purchase platforms based on utilizing the elements of gamification.

H13: Commitment positively influences Repurchase Intention

Studies like Preis (2003) and Yu & Bastin (2010) demonstrate that increased CS correlates with higher RI. This relationship is further substantiated by Dam & Dam (2021), Ilyas et al. (2020), and Fuentes-Blasco et al. (2017), who note that satisfaction plays a critical role in influencing customers' behaviour and their decisions to repurchase. Additionally, Zhang et al. (2011) and Rose et al. (2012) support the direct positive relationship between CS and RI across a variety of product and service contexts. However, it is important to consider contrasting perspectives, such as those presented by Gautama et al. (2012) and Dehghana et al. (2015), which suggest that CS does not always significantly impact RI. Despite these differing views, the prevailing evidence supports the hypothesis that CS is a fundamental factor in driving RI, particularly in the context of gamified online shopping environments.

H14: Customer Satisfaction positively influences Repurchase Intention

Moreover, earlier findings of Chiu et al. (2008) and Hennig-Thurau and Klee (1997) which emerge to be signifying in the context of repurchase intention suggested a significant role for trust as they proofed that it emerges out as one of the most essential determinants in the realm of online shopping. This is reiterated by Park (2019) as he says that customer trust accounts for more than 90% of the repurchase decisions. Ha et al. (2010) and Jarvenpaa et al. (2000) expound on this relationship when they say that the establishment of trust grounded in positive experiences enhances repeat buying behavior. This is supported by Doney and Cannon (1997) who pointed that the antecedent of trust has a positive effect on the retention of customers as well as repurchasing. The works of Jayathilaka (2020) and Upamannyu et al. (2015) further strengthen the relationship of trust towards online repurchase intention in their respective studies. Therefore, this understanding forms a core hypothesis of this study.

H15: Customer Trust positively influences Repurchase Intention

2.4. Methods and procedures for data collection

To examine this influence of gamification on repurchase intentions within the context of online shopping platforms, the present research shall adopt a methodology that - taking into the above factors and influences – is informed by contemporary studies on consumer behaviour in a digital scenario. Being aware of the effectiveness of online surveys in capturing the consumers' attitudes and behaviours related to research in e-commerce (Hamari & Koivisto, 2015; Xi & Hamari, 2019), this study will make use of two separate online questionnaires which were designed for Hepsiburada and N11.

This prompted the decision to undertake two unique surveys with the objective of using this as a tool by which to succinctly represent the distinctive gamification model that each platform operated, and the differential degree of effect that these exerted upon the consumer base. The approach will enable conducting a comparative analysis between the different studied platforms to give inputs on nuanced results of the effectiveness of respective gamification. Each of the surveys will be targeting users who have had an experience with the gamification features of "Efsane Bil Kazan" for Hepsiburada and "Eşle Kazan" for N11. The questionnaires will involve several dimensions of user experience entailing PEU, PE, and PU as well as other factors that are relevant to repurchase intentions.

The received data is therefore analysed to understand the moderating role that these constructs play on the relationship between gamification and repurchase intentions. The study will have a factorial nature with a 2x2 design that differentiates whether any kind of point gamification element is present or not on both platforms. This will enable robust evaluation of the hypotheses, facilitating determining up to how much gamification can be a catalyst enhancing customer loyalty and driving repurchase behavior in online retail. On the other hand, it is the set of demographic questions vital to ensure that the sample of respondents mirrors the intended target audience.

As a result, responses are to be gathered from people aged 18 to 52 with an extraordinary focus on the fact that a range of mainly realized surveys were to be composed between the ages of 18-24. Below, you will find the demographic questions designed to help define the anticipated target demographic :

Table 1. Demographic questions

Demographic questions	Gender:
-----------------------	---------

	<p>Male</p> <p>Female</p> <p>Prefer not to say</p> <p>Non-binary</p> <p>Other</p>
	<p>Age:</p> <p>18-24</p> <p>25-31</p> <p>32-38</p> <p>39-45</p> <p>46-52</p> <p>Over 52</p>
	<p>Incomes per person per month:</p> <p>0 - 12,000 TL</p> <p>12,001 - 19,000 TL</p> <p>19,001 - 25,000 TL</p> <p>25,001 - 32,000 TL</p> <p>32,001 - 38,000 TL</p> <p>38,001 - 44,000 TL</p> <p>Over 44,000 TL</p> <p><i>*1 Turkish lira equals 0.031 Euro</i></p> <p>Level of education:</p> <p>High school graduate</p> <p>Bachelor's degree</p>

	Master's degree Doctorate or higher
--	--

Source: developed by author.

The method presented in this paper is the structured questionnaire method, which was used very carefully through most of this study to comprehensively analyze the impact of gamification on purchasing and loyalty, specifically on repurchase intentions within the online shopping environment. The structured questionnaire is composed based on a series of key constructs, in which each construct was evaluated with a carefully selected 5-point Likert-type scale. The constructs and scales are selected based on their proof of reliability and importance associated to the present research topic as guided by their respective Cronbach's Alpha values, all surpassing the widely recommended threshold for reliability in social sciences research. Towards the goal of precision and high construct quality, the scales for different variables used in this study were carefully chosen and modified from previous studies as presented in Table 2.

GE construct assesses the influence of the points system in online shopping platforms on consumer motivation to make purchases. The measurement scale, derived from the work of Tsou and Putra (2023), has a Cronbach's Alpha of 0.90. This high value indicates a strong internal consistency and reliability in capturing the effects of GE on consumer behaviour.

PEOU was adapted from the study by Chiu, Chang, Cheng, and Fang (2008), this construct evaluates the user-friendliness and ease of interaction with the games feature on the platforms. The scale's Cronbach's Alpha is 0.97, demonstrating its reliability in measuring the ease of use and user interface intuitiveness of the GE.

PE construct measures the entertainment and enjoyment derived from interacting with the games, based on a scale from Hero, Punuindoong, Yanuar, Syah, and Anindita (Hero, Punuindoong, Yanuar, Syah, & Anindita, 2020) With a Cronbach's Alpha of 0.87.

PU was assessing how practical the benefits using the online shopping platform were, where this construct uses a scale from Davis (1989) as shown in Table 1. The scale performed at Cronbach's Alpha score of 0.805 indicates its efficacy in consistently measuring how consumers perceive the usefulness of gamification features in improving their shopping experience.

Customer Trust was measured in assessing the trustworthiness and credibility of the online platform whereby this study uses a scale from studies by Gefen (2002), Lee and

Turban (2001) as well as Urban et al. (2009). The Cronbach's Alpha of this scale is 0.858 and as such, there is a very high level of reliability across the items making it robust towards the measurement of trust under e-commerce circumstances.

Customer satisfaction was adapted from Ali et al. (2016), this construct measures the level of overall satisfaction by the consumers on the online shopping platform. For confirmatory tests, convergent validity and reliability of 0.647 were used through which Cronbach's Alpha confirms that scale measuring customer satisfaction is consistent and good to be reliable.

The customer commitment construct, essential for the conception of consumer loyalty, uses scales from Lee et al. (2006) and Mukherjee & Nath (2007). The Cronbach's Alpha of 0.83 in which the scale was validated confirms its capability to accurately gauge emotional attachment and commitment customers held towards Hepsiburada and N11. Repurchase intention was measured in terms of the likelihood for consumers to return to the platform to make subsequent purchases at a later time on a 7-point scale adopted from Zhou et al. (2009) and Kim et al. (2012).

This shows the reliability of this construct, with an indication by its Cronbach's Alpha at 0.844 that gives evidence that this scale is appropriate to capture consumers' intentions to repurchase. Every construct of the questionnaire is critically scrutinised for its suitability to answer the research objectives and also its proven reliability, as mirrored in the Cronbach's Alpha values mostly between 0.80 and 0.97. Taking this approach, one can be confident in the methodological soundness and strength of the questionnaire to capture the multidimensional nature of consumer behaviour in response to gamification in the online shopping environment.

Table 2. Measurement constructs

Variable	Description	Measurement	References	Cronbach's Alpha
Gamification Element	5-point likert type scale	The points system in this online shopping platform' game motivates me to make more purchases on the platform.	Tsou, H.-T., & Putra, M. T. (2023)	0.90

		<p>Earning points in this online shopping platform' game enhances my overall shopping experience, influencing my decision to repurchase.</p> <p>The points I earn in this online shopping platform' game are a significant factor in my decision to repurchase on the platform.</p>		
Perceived ease of use	5-point likert type scale	<p>My interaction with the game on the online shopping platform is clear and easy to understand.</p> <p>Learning to play the game on the online shopping platform is easy for me.</p> <p>The game on the online shopping platform is user-friendly and easy to navigate.</p> <p>Becoming skillful at using the game on the online shopping platform is straightforward for me.</p>	(Chiu, Chang, Cheng, & Fang, 2008)	0.97
Perceived enjoyment	5-point likert type scale	<p>I found the game at this online shopping platform entertaining.</p> <p>I found the game on this online</p>	(Hero, Punuindoon g, Yanuar, Syah, &	0.87

		shopping platform enjoyable. I found the game at this online shopping platform pleasant.	Anindita, 2020)	
Perceived usefulness	5-point likert type scale	The use of the online shopping platform makes me able to shop faster. The use of this online shopping platform makes me reduce the time wasted on unnecessary activities. The use of this online shopping platform saves me time.	(Davis, 1989)	0.805
Customer Trust	5-point likert type scale	This online shopping platform is genuinely interested in customer's welfare. If problems arise, one can expect to be treated fairly by this online shopping platform. This online shopping platform operates scrupulously.	(Gefen (2002); Lee and Turban (2001); Urban et al. 2009)	0.858
Customer satisfaction	5-point likert type scale	I am very satisfied with the store provided by this online shopping platform. This online shopping platform covers my needs. The experience that I have had with this online shopping platform has been satisfactory.	(Ali, Kim, Li, & Jeon, 2016)	0.647
Customer	5-point likert	I feel a sense of personal		0.83

commitment	type scale	<p>connection towards the Hepsiburada platform.</p> <p>The website has become an integral part of my online shopping routine.</p> <p>I feel emotionally attached to the online shopping platform as my preferred online shopping destination.</p>	(Lee et al., 2006; Mukherjee & Nath, 2007)	
Repurchase intention	5-point likert type scale	<p>I will make a purchase again on this online shopping platform.</p> <p>I will visit the online shopping platform again.</p> <p>I intend to recommend the online shopping platform that I regularly use to people around me.</p>	Zhou et al., (2009), Kim et al., (2012)	0.844

Source: developed by author

Defining the sample size

Sample size for this research is determined through a non-probability convenience sampling method. This research method was ideal for our study as it allowed us to access the respondents on the online social media sites effectively. This method focuses on accessing a group of people that is easily accessible and likely to provide relevant insights regarding the subject of research. Comparable previous research which investigated studies in the field of online consumer behaviour, repurchase intention and gamification on related topics was used to determine robust sample size for this study. These studies provide the basic idea or understanding of the number of respondents to be typically taken to give reliable and valid results. (Table 2.)

Analysing the sample sizes that were used in these previous studies grants the baseline of what is feasible and statistically justified for our research vicinity. After reviewing

different studies that fundamentally implemented diverse methodologies and possessed similar topics, an average sample size was derived from the studies' results.

Table 3. Comparable researches

N o.	Author	Type of questionnaire	Sampling	Number of respondents
1	(Wilson, Keni, & Tan, 2021)	Online questionnaire	Non-probability	400
2	(Chou & Chen, 2018)	Face-to-face survey	Non-probability	300
3	(Murhadi et al., 2022)	Online questionnaire	Non-probability	198
4	(Ercis et al., 2012)	Face-to-face survey	Non-probability	400
5	(Jayathilaka, 2020)	Online questionnaire	Non-probability	158
6	(Hamari & Koivisto, 2015)	Online questionnaire	Non-probability	200
7	(Al Amri & Almaiah, 2020)	Online questionnaire	Non-probability	397
8	(Xu et al., 2020)	Online questionnaire	Non-probability	322
9	(Doğan-Südaş et al., 2023)	Online questionnaire	Non-probability	351
10	(Hall & Toke, 2018)	Online questionnaire	Non-probability	88
AVERAGE:				281.4

Source: developed by author

In light of the above facts, as well as from the point of view of the previous studies conducted, the sample size for this study has been selected at a level of 282 respondents. This number was deemed optimal so as to strike a balance between a manageable sample size and the need of enough data that would ensure acceptable reliability and validities of the results

obtained. This also complies with accepted standards and practices in the field in general as well, making our research comparable with existing studies.

3. STATISTICAL ANALYSIS OF THE RESEARCH ON IMPACT OF GAMIFICATION AND ITS IMPACT ON REPURCHASE INTENTION

3.1. Demographic characteristics of questionnaire respondents

Distribution of respondents by gender

In total, 2 surveys were presented, with the final number of 485 respondents. The surveys were specifically designed for the N11 and Hepsiburada online shopping platforms, aiming to measure the impact of the points system gamification on RI. Each participant in the surveys was exposed to scenarios that reflected the gamification elements of the respective platforms, providing valuable insights into their perceptions and behaviors in relation to the points system. The collected data focused on assessing whether the gamification strategies employed by N11 and Hepsiburada effectively influenced the likelihood of customers returning for subsequent purchases. This approach enabled a comparative analysis of the effectiveness of GE in fostering RI across these two prominent online shopping platforms.

Table 4. Distribution of respondents by gender

Questionnaire \ Total amount of respondents	Total amount of respondents	Male	Female	Prefer not to say	Non-binary	Other
1	284	52.3%	47.7%	-	-	-
2	201	52.2%	47.3%	-	0.5%	-
In total:	485	52.25%	47.5%	-	0.25%	-

Source: developed by author based on statistical analysis

Table 5. Distribution of respondents by age

Questionnaire\ Age	18-24	25-31	32-38	39-45	46-52	Over 52
1	22.7%	58.1%	13.0%	5.1%	0.4%	0.7%
2	24.8%	58.4%	13.9%	2.5%	0.5%	0%
In total :	23.75%	58.25%	13.45%	3.80%	0.45%	0.35%

Source: developed by author based on statistical analysis

Table 6 provides data pertaining to the distribution of respondents' personal income after taxes. On this note, the greatest proportion of respondents making up 29.55% belong from the range of 19,001-25,000 TL. A close second is represented by 27.50% between the 12,001-19,000 TL level in annual incomes. The least represented group is, on the other hand, 32,001 to 38,000 TL with a total of 8.30% respondents while only 0.95% reported to have an annual income of over 44,000 TL.

Table 6. Distribution of respondents by personal income after taxes

Questionnaire\ Income	1	2	In total
0 - 12,000 TL	16.3%	12.1%	14.20%
12,001 - 19.000	25.7%	29.3%	27.50%
19,001 - 25,000 TL	30.8%	28.3%	29.55%
25,001 - 32,000 TL	15.9%	17.2%	16.55%
32,001 - 38,000 TL	6.5%	10.1%	8.30%
38,001 - 44,000 TL	4.3%	1.5%	2.90%
Over 44,000 TL	0.4%	1.5%	0.95%

3.2. Analysis of adapted scales

3.2.1 Reliability analysis

Reliability analysis: no1. The reliability of the survey scales applied in the present research has been checked through the Cronbach Alpha coefficient, where each scale seeks to show satisfactory internal consistency. For the different scales i.e. Gamification Elements, Perceived Enjoyment, Perceived Ease of Use, Perceived Usefulness, Commitment, Customer Satisfaction, Customer Trust and Repurchase Intention, the Cronbach Alpha values ranged between 0.662 to 0.901 representing a range of 254 to 281 cases. All values are greater than the conventionally accepted indicator of 0.6, which provides evidence that meaningfully and consistently interrelated item sets can be considered to exist within each scale. The overall reliability is thus supportive of use of these scales for subsequent steps in the analysis programme, such as hypothesis testing within the study.

Table 7. Questionnaire no1: Reliability of scales

Name of the scale	N of statements	Sample size (number of cases)	Cronbach Alpha
GE	3	254	0.868
PE	3	254	0.834
PEOU	4	254	0.901
PU	3	281	0.827
COM	4	281	0.900
CS	3	281	0.852
CT	3	281	0.662
RI	3	281	0.746

Source: developed by author based on statistical analysis.

Reliability analysis: no2. Cronbach Alpha coefficient ensures acceptable internal

consistency across the board, which confirms reliability for the applied scales in the study. On the contrary side, the scales covering GE, PE, PEOU, PU, COM, CS, CT and RI were reported with high Cronbach Alpha values ranging from 0.640 to 0.922 with the sample size varying between 187 to 202 respondents. With the exception of CT, which barely meets the acceptable limit, all other values are far above the generally accepted standard of 0.7 indicative of a dependable inter-relation among the item within each scale. This consistency, at least objectively, validates the scales for abstraction and subsequent analysis in the research including hypothesis testing as well as interpretative examination.

Table 8. Questionnaire no2: Reliability of scales

Name of the scale	N of statements	Sample size (number of cases)	Cronbach Alpha
GE	3	187	0.866
PE	3	188	0.844
PEOU	4	188	0.903
PU	3	202	0.878
COM	4	202	0.922
CS	3	202	0.852
CT	3	202	0.640
RI	3	202	0.770

Source: developed by author based on statistical analysis.

3.3. Impact of perceived ease of use, usefulness, and enjoyment on users' intention to use gamification elements

Previously, in the literature analysis, it was identified that the relationship between PEOU, PU, and PE with users' intention to use GE has been significantly established. Studies like those of Malaquias et al. (2018), Lee and Lehto (2013), and Sánchez-Mena et al. (2016)

have consistently shown that PEOU positively influences attitudes towards technology and intentions to use gamification in various contexts. Further, Al Amri and Almaiah (2020) emphasised the positive effect of PEOU on both PU and the intention to use mobile gamification in e-learning. Similarly, PU, as highlighted by Scherer, Siddiq, and Tondeur (2019), reflects the users' belief in gamification platforms enhancing motivation and achieving training goals, suggesting a direct relationship with users' intentions. The concept of Task-Technology Fit, as explored by Wu and Chen (2017) and Goodhue (1998), supports these findings, indicating a direct effect on users' PU and ease of use of GE.

3.3.1 Tests of Normality

In the research conducted, initially a normality distribution test was carried out to identify the appropriate method for correlation analysis. Thereafter the skewness and kurtosis values were undertaken in order to assess the normal distribution of the data. The skewness values generated of the variables GE, PEOU, PE, and PU turned out to be .134, -.409, -.009, and .095 while standing in order of their kurtosis values as -.244, -.251, -.276, and -.189. These values fell within the acceptable range of normal distribution and hence the conclusion that data has a normal distribution. The best technique for use in the study is therefore Pearson's Correlation Analysis. This decision is based on the literature: Hair et al. (2013) recommended that skewness values higher than +1 or less than -1 indicate substantially skewed distributions, while George & Mallery (2010) reported that kurtosis value falling within ± 1.0 is excellent and between ± 2.0 is also usually acceptable. This alignment with established guidelines affirmed the selection of Pearson's correlation analysis for the study.

Table 9. Questionnaire no1, no2 (Respectively): Tests of normality

Variables	Skewness		Kurtosis	
	GE	.134	.071	-.244
PEOU	-.409	-.018	-.251	-.284
PE	-.009	-.251	-.276	-.414
PU	.095	-.082	-.189	-.249

Source: developed by author based on statistical analysis.

In this research, the connection of different perceived factors with the intention to use gamification elements has been systematised. Hypotheses were developed on three major perceived factors: ease of use, usefulness, and enjoyment. The correlation analyses were made by applying Pearson's method and the findings are further discussed below:

H1: Perceived ease of use has a positive effect on the intention to use gamification elements

The correlation analysis of the PEOU and intention to use GE gave a Pearson Correlation value at 0.484, significant at the 0.01 level (1-tailed) where significance (1-tailed) equals 0.000. The sample size for the present analysis was $N = 284$. The above results, as presented through SPSS, indicated a moderate positive correlation between perceived ease of use and the intention to use gamification elements. Hence, on this basis H1 has been supported by data.

H2: Perceived Usefulness has a positive effect on the intention to use gamification elements

Similarly, correlation analysis for PU with intention to use GE reveals the Pearson Correlation as 0.555 which is significant at 0.01 level (1-tailed). The significance (1-tailed) value was 0.000 and the sample size was $N = 284$. It means this result is indicating a stronger positive relation between perceived usefulness and intention to use the gamification elements thus, the H2 hypothesis has been supported by this result.

H3: Perceived enjoyment has a positive effect on the intention to use gamification elements

Finally, it was analysed if there existed any relationship between PE and intention to use the GE. The Pearson Correlation value came out to be 0.581, and its significance (1-tailed) was found to be 0.000. This analysis as well revealed a sample size of $N = 284$. The correlation is significant at the 0.01 level (1-tailed). In due connection with H3, these results indicate that there exists a strong positive relationship between perceived enjoyment and intention to use various gamification elements.

Table 10. Questionnaire no1: Pearson Correlation

Hypothesis	Variables	Pearson Correlation	Sig. (1-tailed)	N
H1	PEOU and GE	0.484	0.000	284
H2	PU and Intention to use GE	0.555	0.000	284
H3	PE and intention to use GE	0.581	0.000	284

Source: developed by author based on statistical analysis.

In the second questionnaire of our study, we tested the correlation of the perceived factors with the intention to adopt gamification elements. The findings revealed that there was a moderate positive correlation as between PEOU and GE at 0.467 (N=205, $p < 0.001$), followed by the stronger positive and strong correlation of PU to intention to use GE at 0.591 (N=205, $p < 0.001$), and then the same strong correlation of PE with an intention to use GE amounting to 0.578 (N=205, $p < 0.001$). Thus, hypotheses H1, H2, and H3 are accepted.

Table 11. Questionnaire no2: Pearson Correlation

Hypothesis	Variables	Pearson Correlation	Sig. (1-tailed)	N
H1	PEOU and GE	0.467	0.000	205
H2	PU and Intention to use GE	0.591	0.000	205
H3	PE and intention to use GE	0.578	0.000	205

Source: developed by author based on statistical analysis.

The conclusions of the first research in the study find support and leverage in these findings from Questionnaire No. 2 but they stand on their own. The two studies find, therefore, that perceived usefulness, enjoyment, and ease of use are significant determinants in influencing the users' intention to use the components of gamification in the user interface. These are thus the found patterns from the both researches.

3.4. The influence of perceived ease of use on trust, commitment, and satisfaction in online shopping environments

As it was analysed in the literature review, the positive relationship between PEOU and key variables like CT, COM, and CS has been well-established. Studies by Koufaris and Hampton-Sosa (2002), Aghdaie et al. (2011), and others such as Koufaris et al. (2001), Tang and Chi (2005), Chinomona (2013), and Keni (2020) have consistently demonstrated that PEOU enhances CT. Furthermore, the findings of Rezaei and Amin (2013), Amin et al. (2014), Tu et al. (2012), Sibona and Choi (2012), and Ariff et al. (2014) have confirmed the positive impact of PEOU on CS. Additionally, the relationship between PEOU and COM has been substantiated by Oloveze et al. (2022), Liu and Tai (2016), Solangi et al. (2019), and Humbani and Wiese (2019), who noted the significant influence of PEOU in fostering COM. These studies collectively provide a comprehensive understanding of how PEOU contributes significantly to building CT, CS, and COM among consumers in e-commerce contexts.

Each of the three hypotheses tested-out for the Perceived Ease of Use to the Commitment, Customer Satisfaction, and Customer Trust through a linear regression analyses in this research. The findings of each hypothesis are summarized below:

H4: Perceived Ease of Use positively influences Commitment

Similarly, for Hypothesis H4 concerning the relationship between PEOU and COM, from a value of R Square at 0.180, it was noted by the regression model that PEOU accounted for an 18% variance in COM. The F-statistic of 61.785, accompanied by the p-value less than 0.000, confirms the significance of the model. The coefficient PEOU in the unstandardized was 0.453 where it stated significant positive influence towards COM with a t-value equals to 7.860. Hence, the Hypothesis H4 got accepted.

H5: Perceived Ease of Use positively influences Customer Satisfaction

The investigation of Hypothesis H5 showed that PEOU significantly influences CS. The results of the regression analysis indicated that changes in the CS Can be explained by 21.6% from variations in PEOU (R Square = 0.216), and also, the model fitted well (F = 77.666, $p < 0.000$). The coefficient of PEOU was 0.482 and unstandardized exposing a sturdy and positive effect on CS indicated by the significant t-value of 8.813. Therefore, Hypothesis H5 stands.

H6: Perceived Ease of Use positively influences Customer Trust

In exploring Hypothesis H6, which pertained to the impact of PEOU on CT, it was found that PEOU was responsible for 21.5% of the variance in CT, with an R Square of 0.215. The model's significance was underscored by an F-statistic of 77.257 and a p-value less than 0.000. The analysis further revealed that the unstandardized coefficient for PEOU was 0.391, demonstrating a significant and favourable influence on CT, as reflected in the t-value of 8.790. Therefore, Hypothesis H6 was accepted.

Table 12. Questionnaire no1: Linear Regression for H4, H5, H6

Metric / Hypothesis	H4	H5	H6
Dependent Variable	Commitment	Customer Satisfaction	Customer Trust
Model Fit	R: 0.424, R ² : 0.18	R: 0.465, R ² : 0.216	R: 0.464, R ² : 0.215
ANOVA	F: 61.785, Sig.: 0.0	F: 77.666, Sig.: 0.0	F: 77.257, Sig.: 0.0
Coefficients	B: 0.453, Beta: 0.424	B: 0.482, Beta: 0.465	B: 0.391, Beta: 0.464

In the second questionnaire of our study, It was explored the influence of PEOU on various customer-oriented metrics. The results were thought-provoking: Hypothesis H4 pertained PEOU with COM, showed a moderate positive correlation with a Model Fit of R: 0.334, R²: 0.112, and an ANOVA result of F: 25.534, Sig.: 0.0 (Coefficients: B: 0.387, Beta: 0.334). For the Hypothesis H5 proposed a PEOU effect over the CS for which correlation was stronger as evidenced by R: 0.525, R²: 0.275, and ANOVA F: 77.192, Sig.: 0.0 (Coefficients: B: 0.555, Beta: 0.525). Similarly, Hypothesis H6 testing the impact of PEOU on CT has also shown a very strong positive relationship with R: 0.435, R²: 0.190, ANOVA F: 47.473, Sig.: 0.0 (Coefficients: B: 0.373, Beta: 0.435). These results together fulfilled hypotheses H4, H5 and H6 putting firm emphasis on the crucial role that PEOU plays in shaping COM, CS and CT.

Table 13. Questionnaire no2: Linear Regression for H4, H5, H6

Metric / Hypothesis	H4	H5	H6
Dependent Variable	Commitment	Customer Satisfaction	Customer Trust
Model Fit	R: 0.334, R ² : 0.112	R: 0.525, R ² : 0.275	R: 0.435, R ² : 0.190
ANOVA	F: 25.534, Sig.: 0.0	F: 77.192, Sig.: 0.0	F: 47.473, Sig.: 0.0
Coefficients	B: 0.387, Beta: 0.334	B: 0.555, Beta: 0.525	B: 0.373, Beta: 0.435

3.5. Impact of perceived usefulness on commitment, customer satisfaction, and trust in online shopping environments

Most of the studies have indicated a strong positive relationship between perceived usefulness with trust, commitment, and customer satisfaction - keystone variables particularly in the online shopping context. Studies by Park et al. (2013), Lee and Jun (2007), Amin et al. (2014), and Ariff et al. (2014) have consistently reported perceived usefulness as one of the antecedents which positively affects the customer's satisfaction, therefore must be improved to enhance their experiences. As such, in the context of trust, direct positive effects of perceived usefulness on trust have been identified by Amin et al. (2014), Horst et al. (2007), Lee and Jun (2007), Chinomona (2013), among other researchers. This was further affirmed by Hampshire (2017), Swatir and Giantari (2020) and another research from Chen and Barnes (2007) where it was noted that the perceived usefulness instils trust in online platforms. Moreover, studies conducted by Yulianti and Pusparini (2020) and Ali et al. (2022) demonstrated that perceived usefulness indeed has a significant effect on commitment, thus emphasising the most crucial determination of relationship development with customers. Thus, collectively, these findings together underscore the critical role of perceived usefulness in developing customer trust, satisfaction, and commitment to the e-commerce settings.

In the research, linear regression analyses were carried out to explore the impact of Perceived Usefulness on Commitment, Customer Satisfaction, and Customer Trust. The

methodological approach and findings for each hypothesis are discussed

H7: Perceived Usefulness positively influences Commitment

H7 analysis was on the relationship that PU had with COM. The model indicated a variance of 15.7% on COM as explained by PU, an R Square value of 0.157. It was statistically significant with the value of F at 52.649 on less than 0.000. Furthermore, the unstandardized coefficient of PU was found to be 0.461 and significant t-value at 7.256. This positive coefficient suggested a notable influence of PU on COM. Therefore, Hypothesis H7 was accepted.

H8: Perceived Usefulness positively influences Customer Satisfaction

Hypothesis H8, which tried to establish the effect of PU on CS, seems much stronger in its results. Regression analysis showed that PU explained 36.5% variation in CS (R Square = 0.365). Significance of the model was robust (F = 161.996, $p < 0.000$). The unstandardized coefficient for PU was fairly high at 0.681 and supported by a significant t-value of 12.728 implying strong and positive effect on CS. Therefore, Hypothesis H8 was accepted.

H9: Perceived Usefulness positively influences Customer Trust

Hypothesis H9 about the influence of PU on CT was included into the regression model, where it was observed that 17.1% of the variance of CS can be explained with PU, and R Square is equal to 0.171. The model was statistically significant as F-statistic 58.014 and p-value less than 0.000. The estimated unstandardized coefficient for PU in this model is 0.379, whose t-value is significant at 7.617, so PU has positive relationship with CT in the crude model. Therefore, Hypothesis H9 was accepted.

Table 14. Questionnaire no1: Linear Regression for H7, H8, H9

Metric / Hypothesis	H7	H8	H9
Dependent Variable	Commitment	Customer Satisfaction	Customer Trust
Model Fit	R: 0.397, R ² : 0.157	R: 0.604, R ² : 0.365	R: 0.413, R ² : 0.171
ANOVA	F: 52.649, Sig.: 0.0	F: 161.996, Sig.: 0.0	F: 58.014, Sig.: 0.0

Coefficients	B: 0.461, Beta: 0.397	B: 0.681, Beta: 0.604	B: 0.379, Beta: 0.413
--------------	-----------------------	-----------------------	-----------------------

It was impossible in the second questionnaire of our research because we relied on the analysis of the available association between PU and other dimensions of customer engagement. The results were quite informative. For Hypothesis H7 stating that PU positively influences COM, the result of the analysis reveals strong positive correlation where Model Fit = R: 0.467, R²: 0.218, and ANOVA F: 56.541, Sig.: 0.0 (Coefficients: B: 0.548, Beta: 0.467). In Hypothesis H8, where the check of the effect of PU on CS was done, the correlation was stronger. The Model Fit indicated the R-value 0,680, R²: 0,463, with an ANOVA result of F: 174,682, Sig.: 0,0 (Coefficients: B: 0,729, Beta: 0,680). Lastly, with regard to Hypothesis H9 of the impact of PU on CT, significant outcomes were derived therein, with a Model Fit of R: 0.445, R²: 0.198 and an ANOVA F-value of 50.225, Sig.: 0.0 (Coefficients: B: 0.386, Beta: 0.445). These findings collective substantiate Hypotheses H7, H8 and H9 raising the significance of PU in assisting to increase COM, CS and CT.

Table 15. Questionnaire no2: Linear Regression for H7, H8, H9

Metric / Hypothesis	H7	H8	H9
Dependent Variable	Commitment	Customer Satisfaction	Customer Trust
Model Fit	R: 0.467, R ² : 0.218	R: 0.680, R ² : 0.463	R: 0.445, R ² : 0.198
ANOVA	F: 56.541, Sig.: 0.0	F: 174.682, Sig.: 0.0	F: 50.225, Sig.: 0.0
Coefficients	B: 0.548, Beta: 0.467	B: 0.729, Beta: 0.680	B: 0.386, Beta: 0.445

3.6. Impact of perceived enjoyment on commitment, customer satisfaction, and trust in online shopping environments

Literature analysis shows that PE was found to significantly and positively relate to

CT, COM, and CS. Apart from an increase in user engagement, the involvement of a PE enhances deeper emotional bonding as indicated by the studies. For instance, Abed, Dwivedi, and Williams (2016) remarked that fact that perceived enjoyment is significantly decisive for user behaviour as well as the commitment in social media upon the both goals of social and business. Additionally, Noori, Hashim, and Yusof (2022) determined that enjoyment as well as perceived usefulness and ease of use have stronger effects on continuous use intention of users in social commerce. This hence presents the notion of the perceived enjoyment being instrumental in guaranteeing a commitment in continuing to engage with platforms. Moreover, Kanthawongs (2011) has stated that despite such positive relation of enjoyment to commitment, enjoyment can develop complex relationships. All this practically represented importance of perceived enjoyment towards driving commitment, increasing satisfaction among customers and developing a feeling of trust for various online mediums together.

H10: Perceived Enjoyment positively influences Commitment

The regression analysis indicates that PE explains 24.7% of the variance in COM, with an R Square of 0.247. The F statistic is significant at 92.739 ($p < .000$). The unstandardized coefficient for PE is 0.590, with a highly significant t-value of 9.630. This suggests a strong positive influence of PE on COM. Thus, Hypothesis H10 is accepted.

H11: Perceived Enjoyment positively influences Customer Satisfaction

PE accounts for 20.7% of the variance in CS, as denoted by an R Square of 0.207. The significance of the model is confirmed with an F value of 73.719 ($p < .000$). With an unstandardized coefficient of 0.523 and a significant t-value of 8.586, PE has a significant positive effect on CS. Therefore, Hypothesis H11 is accepted.

H12: Perceived Enjoyment positively influences Customer Trust

The regression model shows that PE contributes to 19.8% of the variance in CT (R Square = 0.198). The model's F statistic is 69.592 ($p < .000$), indicating significance. The unstandardized coefficient for PE is 0.416, and the t-value is 8.342, signifying a positive relationship with CS. Consequently, Hypothesis H12 is accepted.

Table 16. Questionnaire no1: Linear Regression for H10, H11, H12

Metric / Hypothesis	H10	H11	H12
Dependent Variable	Commitment	Customer Satisfaction	Customer Trust
Model Fit	R: 0.497, R ² : 0.247	R: 0.455, R ² : 0.207	R: 0.445, R ² : 0.198
ANOVA	F: 92.739, Sig.: 0.0	F: 73.719, Sig.: 0.0	F: 69.592, Sig.: 0.0
Coefficients	B: 0.590, Beta: 0.497	B: 0.523, Beta: 0.455	B: 0.416, Beta: 0.445

The second set questionnaire in the research centered on the effect of PE on customer designated metrics. The findings turned out to be an important realization. Under hypothesis H10 that PE will positively affect COM we find a moderate positive correlation with a Model Fit of R: 0.376, R²: 0.142 and an ANOVA stating F: 33,496, Sig.: 0.0 (Coefficients: B: 0.446, Beta: 0.376). The Hypothesis H11 that measured the impact of PE on CS showed even more substantial results. The Model Fit showed R-value 0.525, R²: 0.275 and ANOVA yielded F: 77.186, Sig.: 0.0 (Coefficients: B: 0.567, Beta: 0.525). Lastly, Hypothesis H12 described the effect of PE on CT and obtained a strong positive relationship. Model Fit exhibited R: 0.463, R²: 0.214, where its ANOVA indicated F: 55.352, Sig.: 0.0 (Coefficients: B: 0.405, Beta: 0.463). The overall findings lend support to the Hypotheses H10, H11 and H12 that emphasise the important role played by PE in shaping COM, CS, and CT.

Table 17. Questionnaire no2: Linear Regression for H10, H11, H12

Metric / Hypothesis	H10	H11	H12
Dependent Variable	Commitment	Customer Satisfaction	Customer Trust
Model Fit	R: 0.376, R ² : 0.142	R: 0.525, R ² : 0.275	R: 0.463, R ² : 0.214
ANOVA	F: 33.496, Sig.: 0.0	F: 77.186, Sig.: 0.0	F: 55.352, Sig.: 0.0
Coefficients	B: 0.446, Beta: 0.376	B: 0.567, Beta: 0.525	B: 0.405, Beta: 0.463

--	--	--	--

3.7. Impact of commitment, customer satisfaction, and trust on enhancing repurchase intention in online shopping

The earlier literature exhibited a consistent strong significant correlation between the COM, CT, and CS with the RI. For instance, Chiu et al. (2008) pinpointed that repurchase intention improved with positive customer experiences and trust injection from the retailers. Hennig-Thurau and Klee (1997), in their theory, postulated that trust plays a critical role in repurchase decisions whereby the extent of customer trust heightens significantly purchase intention. This is evidenced from Park's (2019) study who evermore on a contradicting side established that amongst the basis forming repurchase decisions is customer trust. Ha et al. (2010) also stressed that trust developed upon prior affective experiences would be conducive to further enhancing the intent of repurchase. According to Jarvenpaa et al. (2000) and Doney and Cannon (1997), trust not only influences the willingness for buying from a company but also elevates the customer's intent to return. Further, publications of Qureshi et al. (2009) and Jayathilaka (2020) among others outline the fact that there does indeed exist a strong relationship amid online shopping RI and CT. Upamannyu et al. (2015) demonstrated positive influence of CT and loyalty towards RI. Collectively, these studies infer that to enhance RI, online retailers must have a focused approach on developing and maintaining good quality CT, COM, and CS.

H13: Commitment positively influences Repurchase Intention

Hypothesis H13 is that COM influences RI in the positive direction, which is strongly supported by regression analysis. The data exhibited that 25.2% of the variance in RI is explained by COM while R Square was found to be 0.252. Since it is indicative of good robustness of the model, the F statistic was established as 95.179 accompanied by the significance level considerably lower than 0.000. Moreover, the unstandardized coefficient of COM was 0.443, with a significant value Beta 0.502 and also pointed to a substantial t-value of 9.756. This supported Hypothesis H13 that pays attention to COM which had a strong positive impact on RI.

H14: Customer Satisfaction positively influences Repurchase Intention

H14 tested the impact of CS over RI and hence, results from a regression held special interest. 66.1% of variation in RI was explained by CS itself with an R Square value equal to 0.661. Analyzing the output, F statistic value came out highly significant at 549.011. The unstandardized coefficient for CS was an impressive 0.740 with a Beta of 0.813 again further underscored by a t-value that could be considered as exceptionally high: 23.431. Given these findings, Hypothesis H14 was accepted, indicating a potent positive effect of CS on RI.

H15: Customer Trust positively influences Repurchase Intention

The regression analysis showed that CT contributed to 26.7% of the variance in RI, with an R Square of 0.267. The model's statistical significance was clear, evidenced by an F statistic of 102.717. The coefficient for CT was 0.578, with a Beta of 0.517, and was supported by a significant t-value of 10.135. These results support the acceptance of Hypothesis H15, confirming the substantial positive influence of CT on RI.

Table 18. Questionnaire no1: Linear Regression for H13, H14, H15

<i>Metric / Hypothesis</i>	<i>H13</i>	<i>H14</i>	<i>H15</i>
<i>Dependent Variable</i>	<i>Repurchase Intention</i>	<i>Repurchase Intention</i>	<i>Repurchase Intention</i>
<i>Model Fit</i>	<i>R: 0.502, R²: 0.252</i>	<i>R: 0.813, R²: 0.661</i>	<i>R: 0.517, R²: 0.267</i>
<i>ANOVA</i>	<i>F: 95.179, Sig.: 0.0</i>	<i>F: 549.011, Sig.: 0.0</i>	<i>F: 102.717, Sig.: 0.0</i>
<i>Coefficients</i>	<i>B: 0.443, Beta: 0.502</i>	<i>B: 0.740, Beta: 0.813</i>	<i>B: 0.578, Beta: 0.517</i>

In the second questionnaire of our study, we explored the effects of COM, CS, and CT on RI. The results are: In the case of Hypothesis H13, COM positively influenced RI with a Model Fit of R: 0.463, R²: 0.214, and an ANOVA result was F: 55.384, Sig.: 0.0 (Coefficients: B: 0.387, Beta: 0.463). Similarly, Hypothesis H14 was posited to indicate a very strong positive correlation between CS and RI evidenced with R-value of 0.853, R²:

0.727, and ANOVA of F: 541.508, Sig.: 0.0 (Coefficients: B: 0.781, Beta: 0.853). Finally, Hypothesis H15 on the impact of CT on RI also showed a significant positive relationship yielding to a Model Fit of R: 0.554, R²: 0.306 and ANOVA F: 89.674, Sig.: 0.0 (Coefficients: B: 0.626, Beta: 0.554). Thus, Hypotheses H13, H14 and H15 find support to reinforce the critical role play by these customer related factors in resulting in augmenting the likelihood of making repeat purchase.

Table 19. Questionnaire no2: Linear Regression for H13, H14, H15

Metric / Hypothesis	H13	H14	H15
Dependent Variable	Repurchase Intention	Repurchase Intention	Repurchase Intention
Model Fit	R: 0.463, R ² : 0.214	R: 0.853, R ² : 0.727	R: 0.554, R ² : 0.306
ANOVA	F: 55.384, Sig.: 0.0	F: 541.508, Sig.: 0.0	F: 89.674, Sig.: 0.0
Coefficients	B: 0.387, Beta: 0.463	B: 0.781, Beta: 0.853	B: 0.626, Beta: 0.554

3.7.1. Summary of statistical analysis

In the current research, 15 hypotheses were formulated intending to analyze the impact of gamification on repurchase intention within online shopping platforms. The representation and summary of the results of derived hypotheses are been provided below in table.

Table 20. Status of hypotheses

Hypotheses	Results
<i>H1. Perceived ease of use has a significant relationship with users' intention to use of gamification element</i>	Confirmed

<i>H2. Perceived usefulness has a significant relationship with users' intention to use of gamification element</i>	Confirmed
<i>H3. Perceived enjoyment has a significant relationship with users' intention to use of gamification element</i>	Confirmed
<i>H4. Perceived ease of use positively influences commitment</i>	Confirmed
<i>H5. Perceived ease of use positively influences customer satisfaction</i>	Confirmed
<i>H6. Perceived ease of use positively influences customer trust</i>	Confirmed
<i>H7. Perceived usefulness positively influences commitment</i>	Confirmed
<i>H8. Perceived usefulness positively influences customer satisfaction</i>	Confirmed
<i>H9. Perceived usefulness positively influences customer trust</i>	Confirmed
<i>H10. Perceived enjoyment positively influences commitment</i>	Confirmed
<i>H11. Perceived enjoyment positively influences customer satisfaction</i>	Confirmed
<i>H12. Perceived enjoyment positively influences customer trust</i>	Confirmed
<i>H13. Commitment positively influences repurchase intention</i>	Confirmed
<i>H14. Customer satisfaction positively influences repurchase intention</i>	Confirmed
<i>H15. Customer trust positively influences repurchase intention</i>	Confirmed

Source: developed by author based on statistical analysis

Performed statistical analysis showed that:

Perceived factors on intention to use point based gamification elements: The relationship Relationship Perceived factors on intention to use point based gamification

elements: The research confirmed there was significant relationship between PEOU, PU and PE with users' intention to use the gamification element. This all also in line with previous study. According to Sánchez-Mena et al. (2016) and Al Amri and Almaiah (2020), PEOU is evidenced even the indication of positive effect related with gamification on users' intention to engage with GE. Baek and Touati (2017) in their study of PE and gamification concluded that 'Enjoyment' is one of the fundamental constructs upon which to build explanations of peoples' use of mobile learning game applications. In regard to PU and gamification, Scherer, Siddiq, and Tondeur (2019) state how gamification has the potential to enhance instructor's motivation and participation. Further on, Gökalp (2014) avouches that PE onto students' behavioural intentions in the case of mobile game usage elaborating one of the most significant drivers, in its turn, in the case of gamification - enjoyment.

PEOU positively influences COM, CS and CT consistent to what previous studies have found. The influence of PEOU on CT, COM, and CS in customer dynamics is statistically significant. Easiness has a positive effect on CT as it enhances the extent to which customers show trust, in accordance with Aghdaie's et al. (2011), Koufaris' et al. (2001) studies. As indicated by Rezaei and Amin (2013), as well as Tu et al. (2012) based on the results that emerged from their research on customer satisfaction, there are some positive effects of PEOU on CS. More so, the effect on COM is specifically highlighted in research by Oloveze, Oteh, Nwosu, and Obasi (2022), Liu and Tai (2016), and Solangi et al. (2019) as ease of use fosters COM, intention to use technology.

PU strongly impacts COM, CS, and CT, in line with studies by previous studies. Amin et al. (2014), Lee and Jun (2007) as well as Park et al. (2013) studies demonstrate how PU enhances CS that means it contributes to enhancing user's experience and his/her loyalty. PU has positive effects on trust, as other studies of Horst et al. (2007), Chinomona (2013), and Hampshire (2017) indicated that PU increases usefulness in establishing consumer's trust to the technology. Further, the impact towards commitment is highlighted in the study of Yulianti and Pusparini (2020) and Ali et al. (2022), respectively emphasizing towards PU that induces affective commitment for technology and brands.

PE influences COM, CS, and CT positively. PE plays an important function in influencing CT, CS, and COM. Studies done by Rouibah et al. (2016) and Hwang & Kim (2007) on varied occasions bring the positive impact of PE in promoting CT to the limelight signifying its importance in building confidence in technology and services. In the context of

CS, Ashfaq et al. (2019), Joo et al. (2017), and Childers et al. (2001) showed through their research that PE increased CS, thereby indicating its critical role in making the online experience pleasant and interesting. In addition, support to the influence on COM to use of social media for business purposes is found in Abed et al. (2016) and Merikivi et al. (2017) and the users' COM on social media for the purpose of social interaction and in online gaming environments, finding PE significantly enhances the level of confidence with using social media.

The significant predictors of RI are COM, CT, and CS, which are in line with the previous studies. Level of CT would increase RI as supported in the research conducted by Chiu et al. (2008), Hennig-Thurau and Klee (1997), and Park (2019). In addition, CS directly influences RI proofing from studies of Preis (2003), Yu and Bastin (2010) as well Zhang et al. (2011), who stated that satisfied customers are prone to repeating their purchases. Similarly, an equally dominant role of commitment in affecting RI is apparent from works by Moorman, Zaltman and Deshpande (1992), Sharan et al. (2019) and Erçiş et al. (2012). Studies have also shown that a strong attachment to a brand or service greatly enhances the likelihood of customers making a purchase again sometime in the future, thereby pointing out how crucial it is to develop relationships with customers for the long term.

FINDINGS, LIABILITIES AND RECOMMENDATIONS

This study conclusively demonstrates the major influence of gamification aspects on online consumer behaviour, such as point-based quizzes on Hepsiburada and matching games on N11. The following are the lits the outcomes of this research:

1. The first goal of this research was to evaluate how the gamification element, especially the point-based quiz in Hepsiburada and the matching game in N11, affects consumers' perceptions of ease of use, usefulness and enjoyment, and to evaluate the findings. The result of this focus was based on these perceived factors and users' interaction with gamification elements, and vital relationships between intentions were confirmed in direct proportion to previous experiences. The positive impact of perceived ease of use on users' intentions to interact with gamification components was reconfirmed by Sánchez-Mena et al. (2016) and Al Amri and Almaiah (2020). Similarly, in terms of perceived fun and gamification, the study's findings are consistent with those of Baek and Touati (2017); Baek found that fun was a key factor

in determining individuals' use of mobile learning game applications, highlighting the perceived usefulness of Gamification, as demonstrated in the work of Scherer, Siddiq, and Tondeur (2019) , which demonstrated how gamification can increase instructors' motivation and engagement.

2. The second goal of the research was to investigate how these gamification elements affect important psychological structures such as loyalty, customer satisfaction, and trust. As a result of the research, it was discovered that perceived ease of use (PEOU) positively affected these structures, and previous studies yielded similar results. This is a critical relationship. It is especially important in the context of customer dynamics on online shopping platforms, where PEOU is an important predictor of trust, satisfaction, and loyalty, and Aghdaie et al. (2011) and Koufaris et al. (2001) both confirmed that ease of use increases consumer trust in online platforms. In terms of customer satisfaction, Rezaei and Amin (2013), Amin et al. (2014), and Tu et al. (2012) discovered that perceived ease of use had a beneficial influence. The impact on commitment was also significant, as highlighted in the work of Oloveze, Oteh, Nwosu, and Obasi (2022), Liu and Tai (2016), and Solangi et al. (2019), demonstrating that ease of use fosters customer commitment and the intention to use technology. Furthermore, perceived usefulness was found to have a strong impact on these psychological constructs. This is in line with the research by Amin et al. (2014), Lee and Jun (2007), and Park et al. (2013), which showed the positive influence of perceived usefulness on customer satisfaction, highlighting its role in enhancing the user experience and loyalty. Trust is also positively affected by perceived usefulness, as evidenced in studies by Horst et al. (2007), Chinomona (2013), and Hampshire (2017), indicating that usefulness strengthens consumer confidence in technology. The impact on commitment is similarly emphasised in the work of Yulianti and Pusparini (2020) and Ali et al. (2022), showing that perceived usefulness fosters affective commitment towards technology and brands.
3. Regulating users' relationship with these psychological structures and their intentions is among the three goals of this study. Customers' commitment, satisfaction, and trust are identified as important predictors of business intention, confirming previous results. Chiu et al. (2008), Hennig-Thurau and Klee (1997), and Park (2019) revealed accrued effects of trust on customers' intentions. It is important to maintain the trust of friends in the context of the importance of Bâtir and achats in ligne. Moreover, customer satisfaction drives intentions, as Preis (2003) , Yu and Bastin (2010) , and

Zhang et al. (2011). These results are a testament to the fundamental role of customer satisfaction in gaming performance; This shows that in addition to customer satisfaction, there are also people who are sensitive to repeat transactions. Additionally, the role of interaction in influencing intentions is evident from the studies of Moorman, Zaltman, and Deshpande (1992) , Sharan et al. (2019) and Erciş et al. (2012) noted that being highly commitment to a brand or service significantly increases its likelihood for the future. For permanent commercial success, attention should be paid to the importance of customer relations in the long term.

In summary, these results highlight the diverse effects of gamification elements on online consumer behaviour. User experience, satisfaction, loyalty, etc.

For understanding of the scope of the research:

This thesis encompasses some limitations. These limitations should be acknowledged. Even if this research provide essential insights into the impact of gamification on repurchase intentions within online shopping platforms, there is need to indicate the limitations. These arise mainly from the methodological research that has been used in this study, the nature of the surveys conducted, and the scope of the study.

-Sample and demographic limitations. In this study, 2 surveys were conducted. These surveys were among a select group of online shoppers, mainly from urban regions and these respondents have the internet access. This findings can be considered as demographic concentration limits. Another points is that the main respondents were between 18-35 y.o. and this can give another limitation. Because this results might not truly represent the rate and behaviours of older age (older than 35).

-Survey design and implementation. When it comes to humans, the results of studies conducted in social sciences may not be reliable at some points. People may not have marked the survey questions by giving their own opinions while filling out the survey. In other words, they may tend to give socially accepted answers when answering. This is an indication that the survey results reveal their limitations. Particularly in online surveys, participants may fill out the survey based on thoughts that do not belong to them. On the other hand, when participants answer questions on a Likert scale regarding the subject, responding within certain patterns may also limit the results. Especially using 5-scale Likert may not be the best choice in this sense.

-Data analysis limitations. As stated before in the methodology section, quantitative data analysis techniques were used in this study, and the data in which this technique was used may bring some limitations. Quantitative analysis may overlook qualitative aspects of user experiences with gamification in online shopping. In other words, emotional behaviours and complex behaviours may not be revealed with numerical data.

-Generalizability and scope. The study areas of the surveys also bring with them some limitations. Because the findings obtained as a result of the research are limited to the region where the research was conducted. In other words, different online platforms, different business models and studies conducted in different geographies may produce different results.

Further research and business implications:

Based on the extensive examination carried out in this research, a number of recommendations can be formulated with regard to online retailers and other stakeholders for gamification plans and, especially, point based system initiatives, providing some assistance increasing the customer's level of engagement and repurchase intentions:

-Online retailers should apply point-based gamification elements to their online shopping platforms marketing and customer interaction strategies. These gamification features can be designed to reward a variety of customer activities, such as purchases, product reviews, or social media sharing. Tangible benefits can be listed as follows: Rewards, discounts and special offers or special access to products or services as a result of accumulating points. An interaction of this nature will persuade and motivate customers to visit the platform again and again, and as a result, will increase loyalty and increase the likelihood of repurchasing.

-Customization of the gamification experience based on individual customer preferences and shopping patterns is crucial. Online platforms should employ advanced data analytics to gain insights into customer behaviours and preferences. This knowledge can be used to tailor the gamification experience, making it more relevant and appealing to each customer. Such personalization can significantly enhance CS, CT, and COM, ultimately driving higher RI.

-With the positive influence of perceived enjoyment on user behaviours, online platforms should thus focus on developing gamification experiences that are enjoyable and entertaining. For this to happen, therefore, it may entail the inclusion of funny and interactive game components probably to allure users in the participation process while at the same time fostering the level of achievement and satisfaction.

-Given how important the trust is, in influencing the repurchase intention, online retailers need to ensure that gamification elements are designed for building as well as reinforcing the customer trust. That is possible by ensuring fairness in rewarding gaming elements, ensuring consistency regarding rewards, and making sure there is transparency, particularly in all the gamification related communications.

-Given the significant role of trust in influencing repurchase intentions, online retailers should design gamification elements that build and reinforce customer trust. This can be achieved by ensuring fairness in the gaming elements, providing consistent rewards, and maintaining transparency in all gamification-related communications.

-Bringing the above to limelight in this research is the role commitment plays in driving repurchase intentions. Thus, therefore gamification strategies should look not just at acquisition of customers but also shaping the long-term relationships. In regard, game elements should be created that will keep them constantly busy apart from a holistic recognition and rewarding of long-term customers.

-In light of all the theoretical contributions brought about by this study, future research should be directed towards assessing the evolving nature of gamification and its impact on consumer behaviour across various industries. Specifically, researchers are called upon to look at the future possible long-term effect of gamification as well as the role it plays in changing the face of online marketing.

These recommendations should provide the online store owners as well as the researchers working in this domain with actionable insights in order to impact the strategic use of gamification elements increasing customers' loyalty as well as boosting repurchase intentions.

LIST OF REFERENCES

- A. Leeuw, P. Valois, I. Ajzen, and P. Schmidt, "Using the theory of planned behavior to identify key beliefs underlying pro-environmental behavior in high-school students: Implications for educational interventions", *Journal of Environmental Psychology*, vol. 42, pp. 128-138, 2015.
- ABED, S.S., DWIVEDI, Y.K., and WILLIAMS, M.D. (2016) Social commerce as a business tool in Saudi Arabia's SMEs. *International Journal of Indian Culture and Business Management*, 13 (1), pp. 1-19.
- Abou-Shouk, M., & Soliman, M. (2021). The impact of gamification adoption intention on brand awareness and loyalty in tourism: The mediating effect of customer engagement. *Journal of Destination Marketing & Management*, 20, 100559. <https://doi.org/10.1016/j.jdmm.2021.100559>.
- Afiat, M. N., Rijal, S., Sulbahri, R. A., & Fachrurazi. (2023). Gamification's Influence on Tokopedia E-Commerce Repurchase Intentions. *GEMILANG: Jurnal Manajemen dan Akuntansi*, 3(2), 61-76.
- Aghdaie, S.F.A., Piraman, A., and Fath, S. (2011), "An Analysis of Factors Affecting the Consumer's Attitude of Trust and their Impact on Internet Purchasing Behavior," *International Journal of Business and Social Science*, Vol. 2 (23): 147-158.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 11-39). Springer.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi:10.1016/0749-5978(91)90020-T.
- Al Amri, M. M., & Almaiah, M. A. (2020). The use of mobile gamification technology for sustainability learning in Saudi higher education. *International Journal of Advanced Trends in Computer Science and Engineering*, 9(5), 8236-8244. doi:10.30534/ijatcse/2020/191952020.

- Alexander, J., & Hidayat, D. (2022). The Effect of Perceived Quality, Perceived Enjoyment, and Social Influence toward Brand Loyalty of Valorant. *Journal of Business, Management, and Social Studies*, 2(1), 1-8. Journal Website: www.jbms.site.
- Ali, A., Kim, W. G., Li, X., & Jeon, H. M. (2016). Influence of brand image and product involvement on luxury fashion brand purchase intention in China and South Korea. *Journal of Global Fashion Marketing*, 7(3), 142-153.
- Ali, F., Kim, W.G., Li, J., Jeon, H.M., 2016. Make it delightful: customers' experience, satisfaction and loyalty in Malaysian theme parks. *J. Destin. Market. Manag.* 7, 1–11.
- Ali, R., Wahyu, F. R. M., Darmawan, D., Retnowati, E., & Lestari, U. P. (2022). Effect of Electronic Word of Mouth, Perceived Service Quality, and Perceived Usefulness on Alibaba's Customer Commitment. *Journal of Business and Economics Research (JBE)*, Vol. 3, No. 2, 232–237. DOI: 10.47065/jbe.v3i2.1763.
- Almaudina, M., Ramdan, A. M., Jhoansyah, D., & Mat Deli, M. (2023). The Effectiveness of Perceived Enjoyment and Brand Engagement in Correlating Gamification Marketing with Online Repurchase Intention in Shopee Game Users. *International Journal of Economics Development Research*, 4(2), 356-369.
- Amin, M., Rezaei, S., and Abolghasemi, M. (2014), "User satisfaction with mobile websites: the impact of perceived usefulness (PU), perceived ease-of-use (PEOU) and trust," *Nankai Business Review International*, Vol. 5 (3): 258-274.
- Anderson, C. A., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology*, 78(4), 772–790. doi:10.1037/0022-3514.78.4.772 PMID:10794380
- Anuwichanont, J., & Mechinda, P. (2009). The Impact of Perceived Value on Spa Loyalty and Its Moderating Effect of Destination Equity. *Journal of Business & Economics Research*, 7, 73–90.
- Aparicio, M., Costa, C. J., & Moises, R. (2021). Gamification and reputation: key determinants of e-commerce usage and repurchase intention. *Heliyon*, 7(3), e06383.
- Ariff, M.S.M., Shan, T.K., Zakuan, N., Ishak, N., and Wahi, M.R. (2014), "Examining Users' E-Satisfaction in the Usage of Social Networking Sites; Contribution from Utilitarian and Hedonic Information Systems," *IOP Conf. Series: Materials Science and Engineering* 58.
- Ashfaq, M., Yun, J., Waheed, A., Khan, M. S., & Farrukh, M. (2019). Customers' Expectation, Satisfaction, and Repurchase Intention of Used Products Online: Empirical Evidence From China. *SAGE Open*, 9(2), 215824401984621.

- Atkinson, M., & Kydd, C. (1997). Individual characteristics associated with World Wide Web use: An empirical study of playfulness and motivation. *The DATA BASE for Advances in Information Systems*, 28(2), 53–62.
- Aubert, B. A., Schroeder, A., & Grimaudo, J. (2012). IT as enabler of sustainable farming: An empirical analysis of farmers' adoption decision of precision agriculture technology. *Decision Support Systems*, 54, 510-520.
- Baek Y, Touati A. Exploring how individual traits influence enjoyment in a mobile learning game. *Computers in Human Behavior*. 2017 Apr 1;69:347-57.
- Banerjee, T., & Bhattacharya, S. 2022, Analyzing customer engagement online using gamification. <https://doi.org/10.18137/cardiometry.2022.24.663672>.
- Bilgihan, A., Okumus, F., Nusair, K., Bujisic, M. (2014). Online experiences: Flow theory, measuring online customer experience in e-commerce and managerial implications for the lodging industry. *Information Technology and Tourism*, 14(1), 49-71.
- Blohm, I., & Leimeister, J. M. (2013). Gamification: Design of IT-based enhancing services for motivational support and behavioral change. *Business & Information Systems Engineering*, 5(4), 275-278. doi:10.1007/s12599-013-0270-6.
- Camerer, C.F., 2003. Behavioural studies of strategic thinking in games. *Trends Cognit. Sci.* 7 (5), 225–231.
- Canio, F. D., Fuentes-Blasco, M., & Martinelli, E. (2021). Engaging Shoppers Through Mobile Apps: The Role of Gamification. *International Journal of Retail & Distribution Management*, 49(7), 919-940.
- Chen, Y., Yan, X., & Fan, W. (2015). Examining the Effects of Decomposed Perceived Risk on Consumer Online Shopping Behavior: A Field Study in China. *Engineering Economics*, 26, 315-326. <https://doi.org/10.5755/j01.ee.26.3.8420>.
- Chiang, T. H. C., Yang, S. J., & Hwang, G. J. (2014). An Augmented Reality-Based Mobile Learning System to Improve Students' Learning Achievements and Motivations in Natural Science Inquiry Activities. *Educational Technology & Society*, 17, 352-365.
- Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior. *Journal of Retailing*, 77, 511-535. [https://doi.org/10.1016/S0022-4359\(01\)00056-2](https://doi.org/10.1016/S0022-4359(01)00056-2).
- Chinomona, R. (2013), "The influence of perceived ease-of-use and perceived usefulness on trust and intention to use mobile social software: technology and innovation," *African Journal for Physical Health Education, Recreation and Dance*, Vol. 19 (2): 258-273.

- Chiu, C. M., Lin, H. Y., Sun, S. Y., & Hsu, M. H. (2008). Understanding customers' loyalty intentions towards online shopping: An integration of technology acceptance model and fairness theory. *Behavior & Information Technology*, 28(4), 347-360.
- Chiu, C.-M., Chang, C.-C., Cheng, H.-L., & Fang, Y.-H. (2008). Determinants of customer repurchase intention in online shopping. *Customer Repurchase Intention*, 761. Retrieved from www.emeraldinsight.com/1468-4527.htm
- Chou, S., & Chen, C. W. (2018). The influences of relational benefits on repurchase intention in service contexts: The roles of gratitude, trust, and commitment. *Journal of Business & Industrial Marketing*, 33(5), 680–692. doi: 10.1108/JBIM-08-2017-0187.
- Chrisnathaniel, H., Hartini, S., & Rahayu, S. P. (2021). Analisis Gamification Shopee. com Sebagai Media Pemasaran Terhadap EWOM, Positive Emotion, & Repurchase Intention (Pada Aplikasi Shopee. com). *Jurnal Nusantara Aplikasi Manajemen Bisnis*, 6(1), 15-32.
- Cronin, J.J. Jr, Brady; M.K., Hult, G.T.M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, Vol. 76 No.2, pp.193-218.
- D. Hero, F. Punuindoong, T. Yanuar, R. Syah, and R. Anindita, “Affecting Factors over Repurchase Shop Intention at E-Commerce Industry,” *J. Multidiscip. Acad.*, vol. 4, no. 2, pp. 77–81, Mar. 2020.
- Dahlan, K. (2022). The Effect of Perceived Usefulness, Perceived Ease of Use, and Perceived Price on Customer Loyalty in Gojek Through Customer Satisfaction (Study on Gojek Apps Users in Jabodetabek). *Journal of Business & Applied Management*, 15(2), 171-185. <https://doi.org/10.30813/jbam.v15i2.3866>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319. <https://doi.org/10.2307/249008>.
- Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989), “User acceptance of computer technology: a comparison of two theoretical models”, *Management Science*, Vol. 35 (8): 982-1003.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*, New York: Plenum Press.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Dehghana, N. A., Alizadeh, H., & Mirzaei-Alamouti, S. (2015). Exploring the Customer Perceived Values as Antecedent of Purchase Behavior. *Serbian Journal of Management*, 10(2), 173–188. doi:10.5937/sjm10-7844.
- Denny, J. (2014). Gamification: Intrinsic motivation for lasting engagement. *eLearning Industry*.

- Deterding, S., Dixon, D., Khaled, R., Nacke, L., 2011. From game design elements to gamefulness: defining gamification. In: Proceedings of the 15th International Academic MindTrek Conference on Envisioning Future Media Environments - MindTrek, '11, pp. 9–11.
- Djohan, S. A., Handhana, D., Castafiore, V. B., & Hendriana, E. (2022). Can Gamification Stimulate Customers to Repurchase in the E-Marketplace? The Mediation Effect of Customer Experience and Engagement. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 5(1), 4781-4796.
- Doğan-Südaş, H., Kara, A., & Karaca, E. (2023). Effects of Gamified Mobile Apps on Purchase Intentions and Word-of-Mouth Engagement: Implications for Sustainability Behavior. *Sustainability*, 15, 10506. <https://doi.org/10.3390/su151310506>.
- Doll, W. J., Hendrickson, A., & Deng, X. (1998). Using Davis's Perceived Usefulness and Ease-of-use Instruments for Decision Making: A Confirmatory and Multigroup Invariance Analysis. *Decision Sciences Journal*, 29(4), 839-869.
- Doney, P. M. , and Cannon, J. P., "An Examination of the Nature of Trust in Buyer-Seller Relationships," *Journal of Marketing*, Volume 61, Number April 1997, 1997, pp. 35- 51.
- Downs, D. S., & Hausenblas, H. A. (2005). The theories of reasoned action and planned behavior applied to exercise: A meta-analytic update. *Journal of Physical Activity and Health*, 2(1), 76-97. doi:10.1123/jpah.2.1.76.
- Dwyer FR (1987). "Channels member satisfaction: Laboratory insights", *J. Retail.* 56:59-74.
- Hennig-Thurau T, Klee A (1997). "The impact of customer satisfaction and relationship quality on customer retention: A critical reassessment and model development", *Psych. Market.* 14(8): 73764.
- Eid, M. I. (2011). Determinants of E-Commerce Customer Satisfaction, Trust, and Loyalty in Saudi Arabia. *Journal of Electronic Commerce Research*, 12, 78–93.
- Ercis, A., Candan, F. B., & Yildirim, H. (2012). The effect of brand satisfaction, trust and brand commitment on loyalty and repurchase intentions. *Procedia - Social and Behavioral Sciences*, 58, 1395-1404. doi:10.1016/j.sbspro.2012.09.1124.
- Feng, Y., Jonathan, H., Yu, Y., Yang, C., & Cui, T. (2018). Computers in Human Behavior Gamification artifacts and crowdsourcing participation : Examining the mediating role of intrinsic motivations. *Computers in Human Behavior*, 81, 124– 136. <https://doi.org/10.1016/j.chb.2017.12.018>.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.

- Gatautis, R., Vitkauskaitė, E., Gadeikiene, A., & Piligrimienė, Ž. (2016). Gamification as a Mean of Driving Online Consumer Behaviour: SOR Model Perspective. *The Engineering Economist*, 27(1). Advance online publication. doi:10.5755/j01.ee.27.1.13198.
- Gautama, V., Surjani, R. M., & Hidayat, M. A. (2012). Pengaruh Kualitas Layanan Terhadap Kepuasan Pelanggan Dalam Membentuk Loyalitas Di Papaya Fresh Gallery Margorejo Surabaya. *Jurnal Ilmiah Mahasiswa Universitas Surabaya*, 1.
- Gefen, D. (2002). Customer loyalty in e-commerce. *Journal of the Association for Information Systems*, 3(1), 27-51.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51–90.
- George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 17.0 update (10a ed.) Boston: Pearson.
- Gökalp, E. (2014, September). Determinants of Acceptance of Mobile Games through Structural equation Modeling. In *MCIS* (p. 11).
- Goodhue, D. L. (1998). Development and measurement validity of a task-technology fit instrument for user evaluations of information system. *Decision Sciences*, 29(1), 105–138. doi: 10.1111/j.1540-5915.1998.tb01346.x.
- Grüsser, S. M., Thalemann, R., & Griffiths, M. D. (2006). Excessive Computer Game Playing: Evidence for Addiction and Aggression? *Cyberpsychology & Behavior*, 10(2).
- Ha, H. Y., Janda, S., & Muthaly, S. K. (2010). A new understanding of the satisfaction model in e-repurchase situations. *European Journal of Marketing*, 44(7/8), 997-1016.
- Hagger, M. S., Chatzisarantis, N. L. D., & Biddle, S. J. H. (2002). A meta-analytic review of the theories of reasoned action and planned behavior in physical activity: Predictive validity and the contribution of additional variables. *Journal of Sport and Exercise Psychology*, 24(1), 3-32. doi:10.1123/jsep.24.1.3.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2013). *Multivariate Data Analysis*: Pearson Education Limited.
- Hall, D. E., & Toke, Z. (2018). *Gamification: Gamified Elements' Impact on Online Trust*. Department of Informatics, Lund School of Economics and Management, Lund University. Presented in June 2018.
- Hamari, "Transforming Homo Economicus into Homo Ludens: A Field Experiment on Gamification in a Utilitarian Peer-To-Peer Trading Service", *Electronic Commerce Research and Applications*, 12(4), 2013, pp. 236- 245.

- Hamari, J. (2019). Gamification. In G. Ritzer, & C. Rojek (Eds.). *The Blackwell Encyclopedia of Sociology*.
- Hamari, J., & Koivisto, J. (2015). Why do people use gamification services? *International Journal of Information Management*, 35, 419–431.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? – A literature review of empirical studies on gamification. *Proceedings of the 47th Hawaii International Conference on System Sciences*, Hawaii, 6-9 January. Gamification elements include awards, points, levels, leaderboards, badges, goals, stories, teammates, and avatars (Hamari et al., 2014)
- Hampshire, C. (2017). A mixed methods empirical exploration of UK consumer perceptions of trust, risk and usefulness of mobile payments. *International Journal of Bank Marketing*, 35(3), 354-369.
- Hausenblas, H. A., Carron, A. V., & Mack, D. E. (1997). Application of the theories of reasoned action and planned behavior to exercise behavior: A meta-analysis. *Journal of Sport & Exercise Psychology*, 19(1), 36-51. doi:10.1123/jsep.19.1.36.
- Hawkins, D. I., & Mothersbaugh, D. L. (2010). *Building Marketing Strategy Consumer Behavior*. McGraw-Hill.
- Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer Repurchase Intention: A General Structural Equation Model. *European Journal of Marketing*, Vol. 37, No.11, pp. 1762-1800.
- Nasir, M., Adil, M., & Dhamija, A. (2021). The Synergetic Effect of After Sales Service, Customer Satisfaction, Loyalty and Repurchase Intention on Word of Mouth. *International Journal of Quality and Service Sciences*, 13, 489-505.
- Horst, M., Kittschreuter, M., and Gutteling, J.M. (2007), “Perceived usefulness, personal experiences, risk perception and trust as determinants of adoption of e-government services in The Netherlands,” *Computers in Human Behavior*, Volume 23 No. 4., pp. 1838-1852.
- Humbani, Michael dan Wiese, Melanie Wiese 2019. An Integrated Framework For The Adoption and Continuance Intention To Use Mobile Payment Apps. *International Journal of Bank Marketing* Vol. 37 No. 2.
- Hunicke, R., LeBlanc, M., Zubek, R., 2004. MDA: a formal approach to game design and game research. In: *Workshop on Challenges in Game AI*, pp. 1–4.
- Huotari, K., & Hamari, J. (2012). Defining gamification – A service marketing perspective. In *Proceedings of the 16th international academic MindTrek conference Tampere, Finland*, 3–5 October, 2012, (pp. 17–22).
- Huotari, K., & Hamari, J. (2017). A definition for gamification: anchoring gamification in the service marketing literature. *Electronic markets*, 27(1), 21-31.

- Hwang, Y. (2014). User experience and personal innovativeness: An empirical study on the Enterprise Resource Planning systems. *Computers in Human Behavior*, 34, 227-234.
- Hwang, Y., & Kim, D. J. (2007). Customer Self-Service Systems: The Effects of Perceived Web Quality with Service Contents on Enjoyment, Anxiety, and e-Trust. *Decision Support Systems*, 43, 746-760. <https://doi.org/10.1016/j.dss.2006.12.008>.
- Ilyas, G. B., Rahmi, S., Tamsah, H., Munir, A. R., & Putra, A. H. P. K. (2020). Reflective Model of Brand Awareness on Repurchase Intention and Customer Satisfaction. *The Journal of Asian Finance, Economics, and Business*, 7(9), 427-438.
- Lin, C., & Lekhawipat, W. (2014). Factors Affecting Online Repurchase Intention. *Industrial Management & Data Systems*, Vol. 114, No. 4, pp. 597-611.
- Innis, D.E. (1991), "Customer service, repurchase intentions, market orientation and firm performance in the channel", unpublished doctoral thesis, Ohio State University, Columbus.
- Roest, H. and Pieters, R. (1997), "The nomological net of perceived service quality", *International Journal of Service Industry Management*, Vol. 8 No. 4, pp. 336-351.
- Insley, V., Nunan, D., 2014. Gamification and the online retail experience. *Int. J. Retail Distrib. Manag.* 42 (5), 340–351.
- Jackson, Barbara B. (1985). *Winning and Keeping Industrial Customers: The Dynamics of Customer Relationships*. Lexington, MA: D.C. Heath and Company.
- Jayathilaka, A.K.K.R. (2020) Relationship between Online Repurchase Intention and E-Satisfaction: Quantitative Research Study Based on Young People in Western Province in Sri Lanka. *OpenAccessLibraryJournal*, 7: e7007. <https://doi.org/10.4236/oalib.1107007>.
- Jayawardena, N. S., Ross, M., Quach, S., Behl, A., Gupta, M., & Lang, L. D. (2021). Effective online engagement strategies through gamification: A systematic literature review and a future research agenda. *Journal of Global Information Management*, 30(5), 1–25. doi:10.4018/JGIM.290370
- Joo, Y. J., Park, S., & Shin, E. K. (2017). Students' expectation, satisfaction, and continuance intention to use digital textbooks. *Computers in Human Behavior*, 69, 83-90.
- Kanchanatane, K., Suwanno, N., & Jarernvongrayab, A. (2014). Effects of attitude toward using, perceived usefulness, perceived ease of use, and perceived compatibility on intention to use E-marketing. *Journal of Management Research*, 6(3), 1.
- Kanthawongs, P. (2011). Technology acceptance model and motivational model contributing to student satisfaction in ERP-simulated web-enhanced course. *Review of Business Research*, Volume 11, Number 1, 117-121.

- Keh H .T., Pang, J., & Peng S.Q. (2007). Understanding and measuring brand love, Society, Advertising and Consumer Psychology Conference Proceedings.
- Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer Experience Driven Business Model Innovation. *Journal of Business Research*, 116, 431-440.
- Kim, C., Costello, F. J., & Lee, K. C. (2020). The unobserved heterogeneous influence of gamification and novelty-seeking traits on consumers' repurchase intention in the omnichannel retailing. *Frontiers in Psychology*, 11, 1664.
- Kim, H.B., Kim, T. and Shin, S.W. (2009), "Modelling roles of subjective norms and eTrust in customers' acceptance of airline B2C eCommerce websites", *Tourism Management*, Vol. 30 No. 2, pp. 266-277.
- Koufaris, M., & Hampton-Sosa, W. (2002). Customer trust online: Examining the role of the experience with the website. CIS Working Paper Series, CIS-2002-05. Department of Statistics & Computer Information Systems, Zicklin School of Business, Baruch College.
- Koufaris, M., Kambil, A., and Labarbera, P. A. (2001), "Consumer Behavior in Web-Based Commerce: An Empirical Study," *International Journal of Electronic Commerce* Vol. 6 No. 2, pp. 115-138.
- Kuo, C. W., & Tang, M. L. (2011). Relationships among Service Quality, Corporate Image, Customer Satisfaction, and Behavioral Intention for the Elderly in High Speed Rail Services. *Journal of Advanced Transportation*, 47(5), 512–525. doi:10.1002/atr.179.
- Kuo, M. S., & Chuang, T. Y. (2016). How gamification motivates visits and engagement for online academic dissemination - An empirical study. *Computers in Human Behavior*, 55, 16–27. doi:10.1016/j.chb.2015.08.025
- Lacey R, Morgan RM (2009). Customer advocacy and the impact of B2B loyalty programs. Department of Management and Marketing, University of Alabama, Tuscaloo. *J. Bus. Ind. Market.* 24(1):3–13.
- Lee, J. R., Yoo, D. K., & Lee, Y. K. (2006). Effects of relational efforts on behavioral intentions in Internet Book Site: The mediating roles of relationship quality. *Daehan Journal of Business*, 19(5), 1843–1866.
- Lee, M. S., Geistfeld, L. V., & Stoel, L. (2007). Cultural differences between Korean and American apparel websites. *Journal of Fashion Marketing and Management*, 11(4), 511–528.
- Lee, S. M., & Turban, E. (2001). A trust model for consumer Internet shopping. *International Journal of Electronic Commerce*, 6(1), 75-91.

- Lee, S.S., Chen, L. (2010). The impact of flow on online consumer behavior. *Journal of Computer Information Systems*, 50(4), 1-10.
- Lee, T. and Jun, J. (2007), "Contextual perceived value?: Investigating the role of contextual marketing for customer relationship management in a mobile commerce context," *Business Process Management Journal*, Vol. 13 No. 6, pp. 798-814.
- Lindsay, R., Jackson, T.W. and Cooke, L. (2011), "Adapted technology acceptance model for mobile policing," *Journal of Systems and Information Technology*, Vol. 13 No. 4, pp. 389-407. <https://doi.org/10.1108/13287261111183988>
- Liu, Gia-Shie dan Tai, Pham Tan. 2016 . A Study of Factors Affecting the Intention to Use Mobile Payment Services in Vietnam *Economics World*, Nov.-Dec. 2016, Vol. 4, No. 6, 249-273.
- Lu, C.-Y., Chiang, B.-L., Chi, W.-K., Chang, M.-H., Ni, Y.-H., Hsu, H.-M., Twu, S.-J., Su, I.-J., Huang, L.-M., & Lee, C.-Y. (2004). Waning immunity to plasma-derived hepatitis B vaccine and the need for boosters 15 years after neonatal vaccination. *Hepatology*, 40(5), [insert page range here]. <https://doi.org/10.1002/hep.20490>
- Lu, H. P., & Yang, Y. W. (2014). Toward an understanding of the behavioral intention to use a social networking site: An extension of task-technology fit to social-technology fit. *Computers in Human Behavior*, 34, 323–332. doi:10.1016/j.chb.2013.10.020.
- Lu, Y., Papagiannidis, S., & Alamanos, E. (2019). Exploring the emotional antecedents and outcomes of technology acceptance. *Computers in Human Behavior*, 90, 153–169.
- Merikivi, J., Tuunainen, V., & Nguyen, D. (2017). What makes continued mobile gaming enjoyable? *Computers in Human Behavior*, 68, 411-421.
- Miao, M., Jalees, T., Zaman, S. I., Khan, S., Hanif, N.-u.-A., & Javed, M. K. (2021). The influence of e-customer satisfaction, e-trust and perceived value on consumer's repurchase intention in B2C e-commerce segment. *Asia Pacific Journal of Marketing and Logistics*.
- Michaelidou, N., & Hassan, L. M. (2008). The role of health consciousness, food safety concern, and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies*, 32(2), 163-170. doi:10.1111/j.1470-6431.2007.00620.x.
- Miremadi, A., Babakhani, N., Yousefian, M., & Fotoohi, H. (2011). Importance of the Corporate Reputation in B2B Context in Iran: An Empirical Study. *International Journal of Marketing Studies*, 3(4), 146–157. doi:10.5539/ijms.v3n4p146.
- Moorman, Christine, Gerald Zaltman, and Rohit Deshpande (1992), "Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organizations," *Journal of Marketing Research*, 29 (August), 314-328.

- Moreno, D. E., Fabre, E., & Pasco, M. (2022). Atmospheric Cues Roles: Customer's Online Trust, Perceived Enjoyment, and Impulse Buying Behavior. *Open Journal of Business and Management*, 10, 223-244. <https://doi.org/10.4236/ojbm.2022.101014>.
- Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58 No. 3, pp. 20-38.
- Mukherjee, A. and Nath, P. (2003), "A model of trust in online relationship banking", *International Journal of Bank Marketing*, Vol. 21 No. 1, pp. 5-15.
- Mukherjee, A., & Nath, P. (2007). Role of electronic trust in online retailing: A reexamination of the commitment-trust theory. *European Journal of Marketing*, 41(9/10), 1173a–1202.
- Murhadi, W. R., et al. (Eds.). (2022). Title of the Proceedings (INYSMA 2022, AEBMR 223, pp. 796-804). Publisher. DOI: 10.2991/978-94-6463-008-4_100.
- Nasri, W. and Charfeddine, L. (2012) Factors Affecting the Adoption of Internet Banking in Tunisia: An Integration Theory of Acceptance Model and Theory of Planned Behaviour. *The Journal of High Technology Management Research*, 23, 1-14. <http://dx.doi.org/10.1016/j.hitech.2012.03.001>.
- Noori, A. S., Hashim, K. F., & Yusof, S. A. M. (2022). The mediating impact of trust and commitment on s-commerce continuous use intention. *Journal of Southwest Jiaotong University*, Vol. 57, No. 3, ISSN: 0258-2724. DOI: 10.35741/issn.0258-2724.57.3.34.
- Okpala, I., Nnaji, C., & Awolusi, I. (2021). Wearable sensing devices acceptance behavior in construction safety and health: assessing existing models and developing a hybrid conceptual model. *Construction Innovation*.
- Olaru, Doina, Sharon Purchase, and Nathan Peterson (2008). From Customer Value to Repurchase Intentions and Rec-ommendations. *Journal of Business and Industrial Marketing*, 23 (8), 554–565.
- Oloveze, A. O., Oteh, O. U., Nwosu, H. E., & Obasi, R. O. (2022). How user behaviour is moderated by affective commitment on point of sale terminal. *Rajagiri Management Journal*, Vol. 16, No. 1, 2-20. DOI: 10.1108/RAMJ-05-2020-0019.
- P. Yang, Y. Zhao, T. Xu and Y. Feng, "The impact of gamification element on purchase intention," 2019 16th International Conference on Service Systems and Service Management (ICSSSM), Shenzhen, China, 2019, pp. 1-6, doi: 10.1109/ICSSSM.2019.8887654.
- Perry & Ballou, 1997; Venkatesh, 1999; Webster & Martocchio, 1993.
- Preis, M. (2003). The impact of interpersonal satisfaction on repurchase decisions. *Journal of Supply Chain Management*, 39(3), 30-38.

- Primanda, R., Setyaning, A. N. A., Hidayat, A., & Ekasasi, S. R. (2020). The role of trust on perceived usefulness and perceived ease of use toward purchase intention among Yogyakarta's Students. *INOBIIS: Jurnal Inovasi Bisnis dan Manajemen Indonesia*, 3(3), 316–326.
- Qureshi, I., Fang, Y., Ramsey, E., McCole, P., Ibbotson, P., & Compeau, D. (2009). Understanding online customer repurchasing intention and the mediating role of trust—an empirical investigation in two developed countries. *European Journal of Information Systems*, 18(3), 205-222.
- R. F. Malaquias, F. F. Malaquias, and Y. Hwang, “Understanding technology acceptance features in learning through a serious game,” *Comput. Hum. Behav.*, vol. 87, pp. 395–402, Oct. 2018, doi: 10.1016/j.chb.2018.06.008. D. Y. Lee and M. R. Lehto, “User acceptance of YouTube for procedural learning: An extension of the technology acceptance model,” *Comput. Edu.*, vol. 61, pp. 193–208, Feb. 2013, doi: 10.1016/j.compedu.2012.10.001.
- R. Scherer, F. Siddiq, and J. Tondeur, “The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers’ adoption of digital technology in education,” *Comput. Edu.*, vol. 128, pp. 13–35, Jan. 2019, doi: 10.1016/j.compedu.2018.09.009.
- Rakhmanita, A., Hurriyati, R., & Dirgantari, P. D. (2022). Strategy of Gamification, Product and Pricing: Does It Matter on Buying Interests of Fore Coffee consumers. *SENTRALISASI*, 11(1), 28-36.
- Ramayah, T., & Ignatius, J. (2005). Impact of perceived usefulness, perceived ease of use, and perceived enjoyment on intention to shop online. *ICFAI Journal of Systems Management (IJSM)*, 3(3), 36–51.
- Rezaei, S. and Amin, M. (2013), “Exploring online repurchase behavioural intention of university students in Malaysia,” *Journal for Global Business Advancement*, Vol. 6 No. 2, pp. 92-119.
- Rodrigues, L.F., Oliveira, A., Costa, C.J., 2016. Playing seriously—how gamification and social cues influence bank customers to use gamified e-business applications. *Comput. Hum. Behav.* 63 (May), 392–407.
- Rouibah, K., Abbas, H., & Rouibah, S. (2011). Factors affecting camera mobile phone adoption before e-shopping in the Arab world. *Technology in Society*, 33(3/4), 271-283.
- Rouibah, K., Lowry, P. B., & Hwang, Y. (2016). The Effects of Perceived Enjoyment and Perceived Risks on Trust Formation and Intentions to Use Online Payment Systems: New Perspectives from an Arab Country. *Electronic Commerce Research and Applications*, 19, 33-43. <https://doi.org/10.1016/j.elerap.2016.07.001>.

- Ryan, R. M., & Deci, E. L. (2002). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M., Rigby, C. S., & Przybylski, A. (2006). The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30(4), 344-360.
- Sailer, M., Hense, J., Mandl, H., & Klevers, M. (2013). Gamification As An Innovative Approach To Foster Motivation. *Interaction Design and Architecture*, 19(1), 28-37.
- Sawitri, N. L. P. W., & Giantari, I. G. A. K. (2020). The Role of Trust Mediates the Effect of Perceived Ease of Use and Perceived Usefulness on Online Repurchase Intention. *American Journal of Humanities and Social Sciences Research (AJHSSR)* e-ISSN:, 4(1), 374-381.
- Sekolah Tinggi Ilmu Ekonomi Bulungan Tarakan. (2023). The Effect of Perceived Ease of Use and Perceived Usefulness on Trust, Loyalty of E-Commerce Customers. In W. R. Murhadi et al. (Eds.), *INSYMA 2022, AEBMR 223*, pp. 796-804. https://doi.org/10.2991/978-94-6463-008-4_10.
- Shang, S. S., & Lin, K. Y. (2013). An understanding of the impact of gamification on purchase intentions. Paper presented at the Proceedings of the Nineteenth Americas Conference on Information Systems, Chicago, Illinois.
- Shao, Z., Zhang, L., Zhang, R., & Pan, Z. (2019). Impact of Gamification on Consumers' Online Impulse Purchase: The Mediating Effect of Affect Reaction and Social Interaction. In *PACIS 2019 Proceedings*, 21.
- Sharan, S., Jha, V. (2019). Analyzing Core Drivers Of Societal Changes In Ready To Wear Garment Industry Of India. *IJVA*, 2(5), 21-32. <https://doi.org/10.2507/ijva.5.2.2.63>.
- Shen, J., & Eder, L. (2009). Determining Factors in the Acceptance of Social Shopping Websites. In *15th Americas Conference on Information Systems 2009, AMCIS 2009*, 3, 2123-2131.
- Sibona, C., & Choi, J. H. (2012). Factors Affecting End-User Satisfaction on Facebook. Paper presented at the Sixth International AAAI Conference on Weblogs and Social Media.
- Sitthipon, T., Limna, P., Jaipong, P., Siripipattanakul, S., & Auttawechasakoon, P. (2022). Gamification Predicting Customers' Repurchase Intention Via E-Commerce Platforms Through Mediating Effect of Customer Satisfaction in Thailand. *Review of Advanced Multidisciplinary Sciences, Engineering & Innovation*, 1(1), 1-14.
- Solangi, Benazir, Urooj Talpur, Sanober Salman Shaikh dan Tania Mushatque dan Muhammad Asif Channa, 2019. Relationship Marketing as an Orientation to Customer Retention: Evidence from Banks of Pakistan, *International Business Research, Canadian Center of Science and Education*, Vol. 12 7, pages 133-140, July.

- Suh, B., & Han, I. (2003). The impact of customer trust and perception of security on the acceptance of electronic commerce, *International Journal of Electronic Commerce*, 7 (3), 135-161.
- Susilo, C. L. (2022). The effect of gamification towards repurchase intention in eCommerce platform with Technology Advancement Model (TAM) as a moderating variable. *Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi (JMBI UNSRAT)*, 9(2), 689-702.
- Syahrani, D. P., & Yasa, N. K. (2022). The Role of Trust as Mediation between Perceived Usefulness and Perceived Ease of Use on Repurchase Intention. *European Journal of Development Studies*, 2(3), 36-40.
- Tabachnick and Fidell, 2013 B.G. Tabachnick, L.S. Fidell Using Multivariate Statistics (sixth ed.) Pearson, Boston (2013).
- Thibaut, J. W., and Kelley, H. H. (1959). *The Social Psychology of Groups*. New York: John Wiley & Sons.
- Rusbult, C. E. (1980a). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology*, 16, 172-186.
- Tsou, H.-T., & Putra, M. T. (2023). How gamification elements benefit brand love: The moderating effect of immersion. *Gamification*, 1015. Retrieved from <https://www.emerald.com/insight/0263-4503.htm>
- Tu, C.C., Fang, K., and Lin, C.Y. (2012), "Perceived Ease-of-use, Trust, and Satisfaction as Determinants of Loyalty in e-Auction Marketplace," *Journal of Computers*, Vol. 7 No. 3, pp. 645-652.
- Upamannyu, N. K., Gulati, C., Chack, A., & Kaur, G. (2015). The effect of customer trust on customer loyalty and repurchase intention: The moderating influence of perceived CSR. *International Journal of Research in IT, Management and Engineering*, Volume 5, Issue 4. ISSN 2249-1619.
- Urban, G. L., Sultan, F., & Qualls, W. J. (2009). Placing trust at the center of your Internet strategy. *MIT Sloan Management Review*, 51(1), 53-61.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work & Stress: An International Journal of Work, Health & Organisations*, 22(3), 277-294. doi:10.1080/02678370802393672.
- Vashisht, D., & Pillai, S. (2017). Are you able to recall the brand? The impact of brand prominence, game involvement and persuasion knowledge in online – advergames. *Journal of Product & Brand Management*, 26(4), 402–414. <https://doi.org/10.1108/JPBM-02-2015-0811>.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27, 425-478.

- Verhoef, P. (2003). Understanding the effect of relationship management efforts on customer retention and customer share development. *Journal of Marketing*, 67(October), 30-45.
- Wahyuni, S., & Ginting, M. (2017). The Impact of Product Quality, Price, and Distribution on Purchasing Decision on the Astra Motor Products in Jakarta. *Arthatama: Journal of Business Management and Accounting*, 1(1), 18.
- Wang, W., Qiu, L., Kim, D., & Benbasat, I. (2016). Effects of rational and social appeals of online recommendation agents on cognition- and affect-based trust. *Decision Support Systems*, 86, 48-60.
- Werbach, K., & Hunter, D. (2012). *For the Win: How Game Thinking Can Revolutionize Your Business*. Wharton Digital Press, Philadelphia.
- Wicaksono, B., & Subari, F. A. (2021). GAMIFIKASI DAN KORELASINYA DENGAN MINAT MENGUNJUNGI ULANG PADA MARKETPLACE “X”. *Jurnal Administrasi Bisnis*, 17(1), 101-114.
- Wilson, N., Keni, K., Tan, P. H. P. (2021). The Role Of Perceived Usefulness and Perceived Ease-of-use Toward Satisfaction And Trust Which Influence Computer Consumers’ Loyalty In China. *GADJAH MADA INT. J. BUS.*, 3(23), 262. <https://doi.org/10.22146/gamaijb.32106>
- Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, 67, 221–232. doi: 10.1016/j.chb.2016.10.028.
- Xu, Y., Chen, Z., Peng, M. Y-P., & Anser, M. K. (2020). Enhancing Consumer Online Purchase Intention Through Gamification in China: Perspective of Cognitive Evaluation Theory. *Frontiers in Psychology*, 11, 581200. doi:10.3389/fpsyg.2020.581200.
- York. NY. Park, E., Kim, K.J. and Del Pobil, A.P. (2013), “An examination of psychological factors affecting drivers’ perceptions and attitudes toward car navigation systems,” *IT Convergence and Security 2012*, Springer, Netherlands, pp. 555-562.
- Yu, C., & Bastin, M. (2010), Hedonic Shopping Value and Impulse Buying Behavior in Transitional Economies: A Symbiosis in the Mainland China Marketplace. *Brand Management*, 18, 105-114. <https://doi.org/10.1057/bm.2010.32>. Dam, S. M., & Dam, T. C. (2021). Relationships Between Service Quality, Brand Image,

- Yulianti, M. D., & Pusparini, E. S. (2020). The Effect of Perceived Usefulness and Perceived Ease of Use on Affective Commitment and Actual Usage of the Flexible Benefit System: The Mediating Role of Individual Absorptive Capacity. In *Advances in Economics, Business and Management Research* (Vol. 184), Proceedings of the Business Innovation and Engineering Conference 2020 (BIEC 2020). Department of Management, Faculty of Economic and Business, University of Indonesia, Depok, Indonesia.
- Zhang, Y., Fang, Y., Wei, K., Ramsey, E., McCole, P. and Chen, H. (2011), "Repurchase intention in B2C e-commerce – a relationship quality perspective", *Information and Management*, Vol. 48 No. 6, pp. 192-200.
- Rose, S., Clark, M., Samouel, P. and Hair, N. (2012), "Online customer experience in e-retailing: an empirical model of antecedents and outcomes", *Journal of Retailing*, Vol. 88 No. 2, pp. 308-322.
- Zhou, T., Lu, Y., & Wang, B. (2009). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, 25(2), 490-501.
- Zhou, T., Lu, Y., & Wang, B. (2009). The relative importance of website design quality and service quality in determining consumers' online repurchase behavior. *Information Systems Management*, 26, 4, 327-337.

LIST OF APPENDICES

Appendix 1. Survey 1

Dear Participant,

I am Melike Halat, a Master's student at Vilnius University Business School, and I am conducting a study on the impact of gamification* on repurchase intentions in online shopping, specifically focusing on the Hepsiburada* platform with *Efsane Bil Kazan game. Your insights will be invaluable in understanding customer behaviour and decision-making influenced by gamification.

It will take only 5 minutes. Your participation is greatly appreciated and will significantly contribute to this research. If you have any questions, please contact me at melike.halat@vm.stud.vu.lt.

Thank you for your time and valuable input. :)

**Gamification refers to the incorporation of game-like elements into non-gaming contexts to encourage engagement and participation. On Hepsiburada, this includes the use of a point system.*

**Hepsiburada is a prominent online shopping platform that offers a diverse range of products and services. Gamification elements have been integrated into the platform to enhance the overall shopping experience.*

**"Efsane Bil Kazan", which translates to "Win with Legendary Knowledge" is an interactive quiz game available on Hepsiburada. In this game, users can participate in trivia quizzes related to various products and brands. Correct answers to the quiz questions earn you additional points. And by collecting those points you will earn additional discounts on your shoppings.*

Sevgili Katılımcı,

Ben Vilnius Üniversitesi'nde yüksek lisans öğrencisi, Melike Halat. Hepsiburada platformunda çevrimiçi alışverişte oyunlaştırmanın yeniden satın alma niyetleri üzerindeki etkisini inceleyen bir çalışma yürütüyorum. Araştırmam özellikle Hepsiburada* platformundaki *Efsane Bil Kazan oyununa odaklanıyor. Oyunlaştırma tarafından etkilenen müşteri davranışı ve karar verme süreçlerini anlamada görüşleriniz çok değerli olacaktır.

Katılımınız bu araştırmaya önemli bir katkı sağlayacak ve büyük takdir görecektir. Herhangi bir sorunuz olursa, lütfen melike.halat@vm.stud.vu.lt adresinden benimle iletişime geçin.

Zamanınız ve değerli katkılarınız için teşekkür ederim. :)

Anketimize katılmanız sadece 5 dakika sürecektir. Katılımınız bu araştırmaya büyük ölçüde katkı sağlayacak ve çok takdir edilecektir. Herhangi bir sorunuz olursa, lütfen melike.halat@vm.stud.vu.lt adresinden benimle iletişime geçin

**Oyunlaştırma, katılımı ve etkileşimi teşvik etmek için oyun benzeri öğelerin oyun dışı bağlamlara dahil edilmesini ifade eder. Hepsiburada'da bu, bir puan sisteminin kullanımını içerir.*

**Hepsiburada, çeşitli ürün ve hizmetler sunan önde gelen bir çevrimiçi alışveriş platformudur. Platformun genel alışveriş deneyimini artırmak için oyunlaştırma öğeleri entegre edilmiştir.*

**Totally Disagree, "Kesinlikle Katılmıyorum" - Totally Agree "Kesinlikle Katılıyorum" anlamına gelir.*

Have you ever made any purchases from Hepsiburada? (Hepsiburada'dan hiç alışveriş yaptınız mı?)

- Yes
- No

Have you ever attended "Efsane Bil Kazan" game on Hepsiburada online shopping platform before? (Daha önce hiç Hepsiburada çevrimiçi alışveriş platformunda bulunan "Efsane Bil Kazan" oyununu oynadın mı?)

- Yes
- No

In the past year, how frequently have you used the Hepsiburada online shopping platform? (Geçen yıl içinde Hepsiburada çevrimiçi alışveriş platformunu ne sıklıkla kullandınız?)

- Less than 5 times (5 defadan az)
- 5-10
- 10-15
- 15-20
- More than 20 (20 defadan fazla)

What is your age? (Yaşınız nedir?)

- 18-24
- 25-31
- 32-38
- 39-45
- 46-52
- Over 52 (52 yaş ve üzeri)

Gamification element questionnaire :	1	2	3	4	5
The points system in the Hepsiburada Efsane Bil Kazan motivates me to make more purchases on the platform." (Hepsiburada Efsane Bil Kazan oyunundaki puan sistemi, platformda daha fazla alışveriş yapmam için beni motive ediyor.)					
Earning points in the Hepsiburada Efsane Bil Kazan enhances my overall shopping experience, influencing my decision to repurchase." (Hepsiburada Efsane Bil Kazan oyununda puan kazanmak, genel alışveriş deneyimimi artırıyor ve yeniden satın alma kararımı etkiliyor.)					
The points I earn in the Hepsiburada Efsane Bil Kazan are a significant factor in my decision to repurchase on the platform. (Hepsiburada Efsane Bil Kazan oyununda kazandığım puanlar, platformda yeniden satın alma kararımı önemli ölçüde etkiliyor.)					

Perceived enjoyment questionnaire :	1	2	3	4	5
I found the Efsane Bil Kazan at Hepsiburada online shopping platform entertaining. (Hepsiburada çevrimiçi alışveriş platformundaki Efsane Bil Kazan oyununu eğlenceli buldum.)					
I found the Efsane Bil Kazan at Hepsiburada online shopping platform enjoyable. (Hepsiburada çevrimiçi alışveriş platformundaki Efsane Bil Kazan oyununu keyifli buldum.)					
I found the Efsane Bil Kazan at Hepsiburada online shopping platform pleasant. (Hepsiburada çevrimiçi alışveriş platformundaki Efsane Bil Kazan oyununu hoş buldum.)					

Perceived ease of use questionnaire :	1	2	3	4	5

My interaction with the Efsane Bil Kazan on Hepsiburada is clear and easy to understand. (Hepsiburada'daki Efsane Bil Kazan oyunu ile etkileşimi açık ve anlaşılması kolay.)					
Learning to play the Efsane Bil Kazan on the Hepsiburada platform is easy for me. (Hepsiburada platformunda Efsane Bil Kazan oyununu oynamayı öğrenmek benim için kolay.)					
The Efsane Bil Kazan on the Hepsiburada website is user-friendly and easy to navigate. (Hepsiburada web sitesindeki Efsane Bil Kazan oyunu özelliği kullanıcı dostu ve gezinmesi kolay.)					
Becoming skillful at using the Efsane Bil Kazan on Hepsiburada is straightforward for me. (Hepsiburada'daki Efsane Bil Kazan oyunu özelliğini kullanmada yetenekli hale gelmek benim için basit.)					

Perceived usefulness questionnaire :	1	2	3	4	5
The use of Hepsiburada online shopping platform website makes me able to shop faster. (Hepsiburada çevrimiçi alışveriş platformu web sitesini kullanmak, daha hızlı alışveriş yapmamı sağlıyor.)					
The use of Hepsiburada online shopping platform makes me reduce the time wasted on unnecessary activities. (Hepsiburada çevrimiçi alışveriş platformunu kullanmak, gereksiz aktivitelerle geçen zamanı azaltmamı sağlıyor.)					
The use of Hepsiburada online shopping platform saves me time. (Hepsiburada çevrimiçi alışveriş platformunu kullanmak, zamandan tasarruf etmemi sağlıyor.)					

Commitment questionnaire :	1	2	3	4	5

I feel a sense of personal connection and loyalty towards the Hepsiburada platform. (Hepsiburada platformuna karşı kişisel bir bağ ve sadakat hissediyorum.)					
Hepsiburada has become an integral part of my online shopping routine. (Hepsiburada, çevrimiçi alışveriş rutinimin ayrılmaz bir parçası haline geldi.)					
I feel emotionally attached to the Hepsiburada platform as my preferred online shopping destination. (Tercih ettiğim çevrimiçi alışveriş noktası olarak Hepsiburada platformuna duygusal olarak bağlı hissediyorum.)					
My positive experiences with Hepsiburada make me inclined to maintain a long-term association with the platform. (Hepsiburada ile olan olumlu deneyimlerim, platformla uzun süreli bir ilişki sürdürmeye meyilli olmamı sağlıyor.)					

Customer satisfaction questionnaire :	1	2	3	4	5
I am very satisfied with the store provided by Hepsiburada online shopping platform. (Hepsiburada çevrimiçi alışveriş platformunun sağladığı mağazadan çok memnunum.)					
Hepsiburada online shopping platform covers my needs. (Hepsiburada çevrimiçi alışveriş platformu ihtiyaçlarımı karşılıyor.)					
The experience that I have had with Hepsiburada online shopping platform has been satisfactory. (Hepsiburada çevrimiçi alışveriş platformu ile yaşadığım deneyim tatmin edici oldu.)					

Customer trust questionnaire :	1	2	3	4	5
--------------------------------	---	---	---	---	---

Hepsiburada online shopping platform is genuinely interested in customer's welfare. (Hepsiburada çevrimiçi alışveriş platformu gerçekten müşterilerin refahıyla ilgileniyor.)					
If problems arise, one can expect to be treated fairly by Hepsiburada online shopping platform. (Sorunlar ortaya çıktığında, Hepsiburada çevrimiçi alışveriş platformunda adil bir şekilde muamele göreceğini bekleyebilirsiniz.)					
Hepsiburada online shopping platform operates scrupulously. (Hepsiburada çevrimiçi alışveriş platformu titiz bir şekilde işletiliyor.)					

Repurchase intention questionnaire :	1	2	3	4	5
I will make a purchase again on Hepsiburada online shopping platform. (Hepsiburada çevrimiçi alışveriş platformunda tekrar alışveriş yapacağım.)					
I will visit the website again in Hepsiburada online shopping platform. (Hepsiburada çevrimiçi alışveriş platformunun web sitesini tekrar ziyaret edeceğim.)					
I intend to recommend Hepsiburada online shopping platform that I regularly use to people around me. (Düzenli olarak kullandığım Hepsiburada çevrimiçi alışveriş platformunu çevremdeki insanlara tavsiye etmeyi düşünüyorum.)					

Appendix 1. Survey 2

Dear Participant,

I am Melike Halat, a Master's student at Vilnius University Business School, and I am conducting a study on the impact of gamification* on repurchase intentions in online shopping, specifically focusing on the N11* platform with *Eşle Kaza game. Your insights

will be invaluable in understanding customer behaviour and decision-making influenced by gamification.

It will take only 5 minutes. Your participation is greatly appreciated and will significantly contribute to this research. If you have any questions, please contact me at melike.halat@vm.stud.vu.lt.

Thank you for your time and valuable input. :)

**Gamification refers to the incorporation of game-like elements into non-gaming contexts to encourage engagement and participation. On N11, this includes the use of a point system.*

**N11 is a prominent online shopping platform that offers a diverse range of products and services. Gamification elements have been integrated into the platform to enhance the overall shopping experience.*

**"Eşle Kazan", which translates to "Match and Win" is an interactive matching game available on N11. Correct answers to the questions earn you additional points. And by collecting those points you will earn additional discounts on your shoppings.*

Sevgili Katılımcı,

Ben Vilnius Üniversitesi'nde yüksek lisans öğrencisi, Melike Halat. N11 platformunda çevrimiçi alışverişte oyunlaştırmanın yeniden satın alma niyetleri üzerindeki etkisini inceleyen bir çalışma yürütüyorum. Araştırmam özellikle N11* platformundaki *Eşle Kazan oyununa odaklanıyor. Oyunlaştırma tarafından etkilenen müşteri davranışı ve karar verme süreçlerini anlamada görüşleriniz çok değerli olacaktır.

Katılımınız bu araştırmaya önemli bir katkı sağlayacak ve büyük takdir görecektir. Herhangi bir sorunuz olursa, lütfen melike.halat@vm.stud.vu.lt adresinden benimle iletişime geçin.

Zamanınız ve değerli katkılarınız için teşekkür ederim. :)

Anketimize katılmanız sadece 5 dakika sürecektir. Katılımınız bu araştırmaya büyük ölçüde katkı sağlayacak ve çok takdir edilecektir. Herhangi bir sorunuz olursa, lütfen melike.halat@vm.stud.vu.lt adresinden benimle iletişime geçin

**Oyunlaştırma, katılımı ve etkileşimi teşvik etmek için oyun benzeri öğelerin oyun dışı bağlamlara dahil edilmesini ifade eder. N11'de bu, bir puan sisteminin kullanımını içerir.*

**N11, çeşitli ürün ve hizmetler sunan önde gelen bir çevrimiçi alışveriş platformudur. Platformun genel alışveriş deneyimini artırmak için oyunlaştırma öğeleri entegre edilmiştir.*

**Totally Disagree, "Kesinlikle Katılmıyorum" - Totally Agree "Kesinlikle Katılıyorum" anlamına gelir.*

Have you ever attended "Eşle Kazan" game on N11 online shopping platform before? (Daha önce hiç N11 çevrimiçi alışveriş platformunda bulunan "Eşle Kazan" oyununu oynadın mı?)

- Yes
- No

In the past year, how frequently have you used the N11 online shopping platform? (Geçen yıl içinde N11 çevrimiçi alışveriş platformunu ne sıklıkla kullandınız?)

- Less than 5 times (5 defadan az)
- 5-10
- 10-15
- 15-20
- More than 20 (20 defadan fazla)

What is your age? (Yaşınız nedir?)

- 18-24
- 25-31
- 32-38
- 39-45
- 46-52
- Over 52 (52 yaş ve üzeri)

Gamification element questionnaire :	1	2	3	4	5
--------------------------------------	---	---	---	---	---

The points system in the N11 Eşle Kazan motivates me to make more purchases on the platform." (N11 Eşle Kazan oyunundaki puan sistemi, platformda daha fazla alışveriş yapmam için beni motive ediyor.)					
Earning points in the N11 Eşle Kazan enhances my overall shopping experience, influencing my decision to repurchase." (N11 Eşle Kazan oyununda puan kazanmak, genel alışveriş deneyimimi artırıyor ve yeniden satın alma kararımı etkiliyor.)					
The points I earn in the N11 Eşle Kazan are a significant factor in my decision to repurchase on the platform. (N11 Eşle Kazan oyununda kazandığım puanlar, platformda yeniden satın alma kararımı önemli ölçüde etkiliyor.)					

Perceived enjoyment questionnaire :	1	2	3	4	5
I found the Eşle Kazan at N11 online shopping platform entertaining. (N11 çevrimiçi alışveriş platformundaki Eşle Kazan oyununu eğlenceli buldum.)					
I found the Eşle Kazan at N11 online shopping platform enjoyable. (N11 çevrimiçi alışveriş platformundaki Eşle Kazan oyununu keyifli buldum.)					
I found the Eşle Kazan at N11 online shopping platform pleasant. (N11 çevrimiçi alışveriş platformundaki Eşle Kazan oyununu hoş buldum.)					

Perceived ease of use questionnaire :	1	2	3	4	5
My interaction with the Eşle Kazan on N11 is clear and easy to understand. (N11'deki Eşle Kazan oyunu ile etkileşimim açık ve anlaşılması kolay.)					
Learning to play the Eşle Kazan on the N11 platform is easy for me. (N11 platformunda Eşle Kazan oyununu oynamayı öğrenmek benim için kolay.)					

The Eşle Kazan on the N11 website is user-friendly and easy to navigate. (N11 web sitesindeki Eşle Kazan oyunu özelliği kullanıcı dostu ve gezinmesi kolay.)					
Becoming skillful at using the Eşle Kazan on N11 is straightforward for me. (N11'deki Eşle Kazan oyunu özelliğini kullanmada yetenekli hale gelmek benim için basit.)					

Perceived usefulness questionnaire :	1	2	3	4	5
The use of N11 online shopping platform website makes me able to shop faster. (N11 çevrimiçi alışveriş platformu web sitesini kullanmak, daha hızlı alışveriş yapmamı sağlıyor.)					
The use of N11 online shopping platform makes me reduce the time wasted on unnecessary activities. (N11 çevrimiçi alışveriş platformunu kullanmak, gereksiz aktivitelerle geçen zamanı azaltmamı sağlıyor.)					
The use of N11 online shopping platform saves me time. (N11 çevrimiçi alışveriş platformunu kullanmak, zamandan tasarruf etmemi sağlıyor.)					

Commitment questionnaire :	1	2	3	4	5
I feel a sense of personal connection and loyalty towards the N11 platform. (N11 platformuna karşı kişisel bir bağ ve sadakat hissediyorum.)					
N11 has become an integral part of my online shopping routine. (N11, çevrimiçi alışveriş rutinimin ayrılmaz bir parçası haline geldi.)					
I feel emotionally attached to the N11 platform as my preferred online shopping destination. (Tercih ettiğim çevrimiçi alışveriş noktası olarak N11 platformuna duygusal olarak bağlı hissediyorum.)					

My positive experiences with N11 make me inclined to maintain a long-term association with the platform. (N11 ile olan olumlu deneyimlerim, platformla uzun süreli bir ilişki sürdürmeye meyilli olmamı sağlıyor.)					
--	--	--	--	--	--

Customer satisfaction questionnaire :	1	2	3	4	5
I am very satisfied with the store provided by N11 online shopping platform. (N11 çevrimiçi alışveriş platformunun sağladığı mağazadan çok memnunum.)					
N11 online shopping platform covers my needs. (N11 çevrimiçi alışveriş platformu ihtiyaçlarımı karşılıyor.)					
The experience that I have had with N11 online shopping platform has been satisfactory. (N11 çevrimiçi alışveriş platformu ile yaşadığım deneyim tatmin edici oldu.)					

Customer trust questionnaire :	1	2	3	4	5
N11 online shopping platform is genuinely interested in customer's welfare. (N11 çevrimiçi alışveriş platformu gerçekten müşterilerin refahıyla ilgileniyor.)					
If problems arise, one can expect to be treated fairly by N11 online shopping platform. (Sorunlar ortaya çıktığında, N11 çevrimiçi alışveriş platformunda adil bir şekilde muamele göreceğini bekleyebilirsiniz.)					
N11 online shopping platform operates scrupulously. (N11 çevrimiçi alışveriş platformu titiz bir şekilde işletiliyor.)					

Repurchase intention questionnaire :	1	2	3	4	5
I will make a purchase again on N11 online shopping platform. (N11 çevrimiçi alışveriş platformunda tekrar alışveriş yapacağım.)					
I will visit the website again in N11 online shopping platform. (N11 çevrimiçi alışveriş platformunun web sitesini tekrar ziyaret edeceğim.)					
I intend to recommend N11 online shopping platform that I regularly use to people around me. (Düzenli olarak kullandığım N11 çevrimiçi alışveriş platformunu çevremdeki insanlara tavsiye etmeyi düşünüyorum.)					

Appendix 3. EFA

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	5584.107
	df	325
	Sig.	.000

Table. *Questionnaire no1: KMO and Bartlett's Test*

Communalities

	Initial	Extraction
SMEAN(GE1)	1.000	.842
SMEAN(GE2)	1.000	.782
SMEAN(GE3)	1.000	.859
SMEAN(PE1)	1.000	.783
SMEAN(PE2)	1.000	.843
SMEAN(PE3)	1.000	.753
SMEAN(PEOU1)	1.000	.837
SMEAN(PEOU2)	1.000	.796
SMEAN(PEOU3)	1.000	.730
SMEAN(PEOU4)	1.000	.831
SMEAN(PU1)	1.000	.831
SMEAN(PU2)	1.000	.853
SMEAN(PU3)	1.000	.757
SMEAN(COM1)	1.000	.807
SMEAN(COM2)	1.000	.832
SMEAN(COM3)	1.000	.788
SMEAN(COM4)	1.000	.808
SMEAN(CS1)	1.000	.791
SMEAN(CS2)	1.000	.758
SMEAN(CS3)	1.000	.800
SMEAN(CT1)	1.000	.680
SMEAN(CT2)	1.000	.869
SMEAN(CT3)	1.000	.845
SMEAN(RI1)	1.000	.840
SMEAN(RI2)	1.000	.796
SMEAN(RI3)	1.000	.783

Extraction Method: Principal Component Analysis.

Table. *Questionnaire no1: Communalities*

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11.227	43.181	43.181	11.227	43.181	43.181	6.565
2	2.189	8.420	51.601	2.189	8.420	51.601	6.871
3	2.155	8.289	59.890	2.155	8.289	59.890	6.330
4	1.757	6.758	66.648	1.757	6.758	66.648	6.098
5	1.390	5.346	71.994	1.390	5.346	71.994	2.966
6	.863	3.320	75.314	.863	3.320	75.314	2.783
7	.713	2.743	78.057	.713	2.743	78.057	.928
8	.600	2.306	80.363	.600	2.306	80.363	5.454
9	.507	1.948	82.311				
10	.472	1.814	84.126				
11	.406	1.563	85.688				
12	.396	1.522	87.210				
13	.378	1.452	88.663				
14	.357	1.372	90.034				
15	.321	1.233	91.267				
16	.310	1.193	92.461				
17	.278	1.071	93.532				
18	.265	1.020	94.552				
19	.233	.895	95.447				
20	.229	.881	96.327				
21	.204	.783	97.110				
22	.196	.753	97.864				
23	.170	.653	98.517				
24	.149	.573	99.090				
25	.127	.488	99.578				
26	.110	.422	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table. *Questionnaire no1: Principal Component Analysis*

Pattern Matrix^a

	Component							
	1	2	3	4	5	6	7	8
SMEAN(CS3)	.906							
SMEAN(CS2)	.786							
SMEAN(RI1)	.739							
SMEAN(CS1)	.709							
SMEAN(RI2)	.586						-.390	
SMEAN(PEOU1)		-.877						
SMEAN(PEOU2)		-.794						
SMEAN(PEOU4)		-.775						
SMEAN(PEOU3)		-.772						
SMEAN(PE3)		-.728						
SMEAN(PE2)		-.455				-.401		
SMEAN(COM2)			-.874					
SMEAN(COM3)			-.869					
SMEAN(COM1)			-.853					
SMEAN(COM4)			-.714					
SMEAN(CT1)			-.546					
SMEAN(GE1)				-.909				
SMEAN(GE2)				-.778				
SMEAN(GE3)				-.728			.312	
SMEAN(CT2)					.922			
SMEAN(CT3)					.852			
SMEAN(RI3)						-.629		
SMEAN(PE1)		-.365				-.592		
SMEAN(PU1)								.825
SMEAN(PU3)								.724
SMEAN(PU2)							.372	.698

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 20 iterations.

Table: Questionnaire no1:Pattern Matrix

Appendix 4. Reliability of scale of gamification element

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.866	.868	3

*Table: Questionnaire no1:Reliability Statistics***Appendix 5.** Reliability of scale of perceived ease of use**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.900	.901	4

*Table: Questionnaire no1:Reliability Statistics***Appendix 6.** Reliability of scale of perceived usefulness**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.826	.827	3

*Table: Questionnaire no1:Reliability Statistics***Appendix 7.** Reliability of scale of perceived enjoyment**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.823	.834	3

Table: Questionnaire no1:Reliability Statistics

Appendix 8. Reliability of scale of trust

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.653	.662	3

Table: Questionnaire no1:Reliability Statistics

Appendix 9. Reliability of scale of commitment

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.899	.900	4

Table: Questionnaire no1:Reliability Statistics

Appendix 10. Reliability of scale of satisfaction

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.852	.852	3

Table: Questionnaire no1:Reliability Statistics

Appendix 11. Reliability of scale of repurchase intention

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.744	.746	3

Table: Questionnaire no1:Reliability Statistics

Appendix 12. Normality test via Skewness & Kurtosis

Descriptives

		Statistic	Std. Error	
M_GE	Mean	3.1307	.04307	
	95% Confidence Interval for Mean	Lower Bound	3.0459	
		Upper Bound	3.2154	
	5% Trimmed Mean	3.1228		
	Median	3.1307		
	Variance	.527		
	Std. Deviation	.72576		
	Minimum	1.33		
	Maximum	5.00		
	Range	3.67		
	Interquartile Range	1.00		
	Skewness	.134	.145	
	Kurtosis	-.244	.288	
M_PEOU	Mean	3.7250	.04764	
	95% Confidence Interval for Mean	Lower Bound	3.6312	
		Upper Bound	3.8188	
	5% Trimmed Mean	3.7537		
	Median	3.7500		
	Variance	.645		
	Std. Deviation	.80284		
	Minimum	1.50		
	Maximum	5.00		
	Range	3.50		
	Interquartile Range	1.00		
	Skewness	-.409	.145	
	Kurtosis	-.251	.288	
M_PE	Mean	3.2840	.04294	
	95% Confidence Interval for Mean	Lower Bound	3.1995	
		Upper Bound	3.3685	
	5% Trimmed Mean	3.2785		
	Median	3.3333		
	Variance	.524		
	Std. Deviation	.72358		
	Minimum	1.33		
	Maximum	5.00		
	Range	3.67		
	Interquartile Range	1.00		
	Skewness	-.009	.145	
	Kurtosis	-.276	.288	
M_PU	Mean	3.1215	.04381	
	95% Confidence Interval for Mean	Lower Bound	3.0353	
		Upper Bound	3.2078	
	5% Trimmed Mean	3.1087		
	Median	3.3333		
	Variance	.545		
	Std. Deviation	.73826		
	Minimum	1.33		
	Maximum	5.00		
	Range	3.67		
	Interquartile Range	1.33		
	Skewness	.095	.145	
	Kurtosis	-.189	.288	

Table: Questionnaire no1:Normality Tests

Appendix 13. Correlation analysis of gamification element and perceived ease of use

		M_GE	M_PEOU
M_GE	Pearson Correlation	1	.484**
	Sig. (1-tailed)		.000
	N	284	284
M_PEOU	Pearson Correlation	.484**	1
	Sig. (1-tailed)	.000	
	N	284	284

** . Correlation is significant at the 0.01 level (1-tailed).

Table: Questionnaire no1:Correlations

Appendix 14. Correlation analysis of gamification element and perceived enjoyment

		M_GE	M_PE
M_GE	Pearson Correlation	1	.581**
	Sig. (1-tailed)		.000
	N	284	284
M_PE	Pearson Correlation	.581**	1
	Sig. (1-tailed)	.000	
	N	284	284

** . Correlation is significant at the 0.01 level (1-tailed).

Table: Questionnaire no1:Correlations

Appendix 15. Correlation analysis of gamification element and perceived usefulness

Correlations

		M_GE	M_PU
M_GE	Pearson Correlation	1	.555**
	Sig. (1-tailed)		.000
	N	284	284
M_PU	Pearson Correlation	.555**	1
	Sig. (1-tailed)	.000	
	N	284	284

** . Correlation is significant at the 0.01 level (1-tailed).

Table: Questionnaire no1:Correlations

Appendix 16. Regression analysis of perceived ease of use and commitment

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.424 ^a	.180	.177	.77860

a. Predictors: (Constant), M_PEOU

Table: Questionnaire no1:Regression Model Summary

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.455	1	37.455	61.785	.000 ^b
	Residual	170.953	282	.606		
	Total	208.408	283			

a. Dependent Variable: M_COM

b. Predictors: (Constant), M_PEOU

Table: Questionnaire no1:ANOVA

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.888	.220		8.595	.000
	M_PEOU	.453	.058	.424	7.860	.000

a. Dependent Variable: M_COM

Table: Questionnaire no1:Coefficients

Appendix 17. Regression analysis of perceived ease of use and customer satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.465 ^a	.216	.213	.73794

a. Predictors: (Constant), M_PEOU

*Table: Questionnaire no1:Regression Model Summary***ANOVA^a**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.294	1	42.294	77.666	.000 ^b
	Residual	153.566	282	.545		
	Total	195.860	283			

a. Dependent Variable: M_CS

b. Predictors: (Constant), M_PEOU

*Table: Questionnaire no1:ANOVA***Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.903	.208		9.141	.000
	M_PEOU	.482	.055	.465	8.813	.000

a. Dependent Variable: M_CS

*Table: Questionnaire no1:Coefficients***Appendix 18.** Regression analysis of perceived ease of use and customer trust

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.464 ^a	.215	.212	.60097

a. Predictors: (Constant), M_PEOU

Table: Questionnaire no1:Regression Model Summary

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.903	1	27.903	77.257	.000 ^b
	Residual	101.849	282	.361		
	Total	129.752	283			

a. Dependent Variable: M_CT

b. Predictors: (Constant), M_PEOU

Table: Questionnaire no1:ANOVA

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.867	.170		11.011	.000
	M_PEOU	.391	.044	.464	8.790	.000

a. Dependent Variable: M_CT

*Table: Questionnaire no1:Coefficients***Appendix 19.** Regression analysis of perceived usefulness and commitment

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.397 ^a	.157	.154	.78916

a. Predictors: (Constant), M_PU

Appendix 20. Regression analysis of perceived usefulness and customer satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.604 ^a	.365	.363	.66418

a. Predictors: (Constant), M_PU

Table: Questionnaire no1:Regression Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.461	1	71.461	161.996	.000 ^b
	Residual	124.399	282	.441		
	Total	195.860	283			

a. Dependent Variable: M_CS

b. Predictors: (Constant), M_PU

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.572	.172		9.165	.000
	M_PU	.681	.053	.604	12.728	.000

a. Dependent Variable: M_CS

Appendix 21. Regression analysis of perceived usefulness and customer trust

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.413 ^a	.171	.168	.61774

a. Predictors: (Constant), M_PU

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.138	1	22.138	58.014	.000 ^b
	Residual	107.614	282	.382		
	Total	129.752	283			

a. Dependent Variable: M_CT

b. Predictors: (Constant), M_PU

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.141	.160		13.421	.000
	M_PU	.379	.050	.413	7.617	.000

a. Dependent Variable: M_CT

Appendix 22. Regression analysis of perceived enjoyment and commitment**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497 ^a	.247	.245	.74575

a. Predictors: (Constant), M_PE

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.576	1	51.576	92.739	.000 ^b
	Residual	156.832	282	.556		
	Total	208.408	283			

a. Dependent Variable: M_COM

b. Predictors: (Constant), M_PE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.638	.206		7.953	.000
	M_PE	.590	.061	.497	9.630	.000

a. Dependent Variable: M_COM

Appendix 23. Regression analysis of perceived enjoyment and customer satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455 ^a	.207	.204	.74203

a. Predictors: (Constant), M_PE

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.590	1	40.590	73.719	.000 ^b
	Residual	155.271	282	.551		
	Total	195.860	283			

a. Dependent Variable: M_CS

b. Predictors: (Constant), M_PE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.978	.205		9.650	.000
	M_PE	.523	.061	.455	8.586	.000

a. Dependent Variable: M_CS

Appendix 24. Regression analysis of perceived enjoyment and customer trust

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445 ^a	.198	.195	.60749

a. Predictors: (Constant), M_PE

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.682	1	25.682	69.592	.000 ^b
	Residual	104.070	282	.369		
	Total	129.752	283			

a. Dependent Variable: M_CT

b. Predictors: (Constant), M_PE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.956	.168		11.659	.000
	M_PE	.416	.050	.445	8.342	.000

a. Dependent Variable: M_CT

Appendix 25. Regression analysis of commitment and repurchase intention**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502 ^a	.252	.250	.65608

a. Predictors: (Constant), M_COM

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.970	1	40.970	95.179	.000 ^b
	Residual	121.386	282	.430		
	Total	162.355	283			

a. Dependent Variable: M_RI

b. Predictors: (Constant), M_COM

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.955	.167		11.698	.000
	M_COM	.443	.045	.502	9.756	.000

a. Dependent Variable: M_RI

Appendix 26. Regression analysis of customer satisfaction and repurchase intention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.813 ^a	.661	.659	.44201

a. Predictors: (Constant), M_CS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	107.261	1	107.261	549.011	.000 ^b
	Residual	55.095	282	.195		
	Total	162.355	283			

a. Dependent Variable: M_RI

b. Predictors: (Constant), M_CS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.805	.120		6.724	.000
	M_CS	.740	.032	.813	23.431	.000

a. Dependent Variable: M_RI

Appendix 27. Regression analysis of customer trust and repurchase intention**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517 ^a	.267	.264	.64963

a. Predictors: (Constant), M_CT

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.348	1	43.348	102.717	.000 ^b
	Residual	119.008	282	.422		
	Total	162.355	283			

a. Dependent Variable: M_RI

b. Predictors: (Constant), M_CT

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.619	.193		8.371	.000
	M_CT	.578	.057	.517	10.135	.000

a. Dependent Variable: M_RI

