

Doctoral thesis summary

Gamification and purchase intention

Gamifikace a nákupní záměr

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ABSTRACT

Gamification has received considerable attention from researchers and practitioners. Disciplines, where gamification is widely studied, are archaeology, education, health, politics, and marketing. Regarding the definition, gamification is considered as an innovative set of activities to motivate and engage in enhancing processes. In consumer behaviour, game elements are viewed as important because the brain dopamine system is activated when games are played, an event that affects the process of inquiry. Employing gamification in the trade industry is expected to assist retail companies to create a fun and enjoyable purchasing experience by focusing less on price and aggressive promotional campaigns. By following the post-positivism paradigm and the deductive method, the research problem has been identified by the theoretical knowledge at disposal, which leads to research design and formulation of research questions and objectives. Therefore, this study aims to develop a comprehensive model and provide empirical evidence concerning purchase intention when game elements are considered towards consumer motivation and engagement within the selected Western Balkan countries, Albania, and Kosovo context. To conduct this study, two frameworks, MDA and TAM, have been taken into consideration. Before beginning with primary data collection, secondary data were considered. The secondary data gathered from different organizations, institutions, and business assisted in improving research quality. Regarding the methodology and data collection technique, the primary data were collected through a survey, which has been chosen as the research method for this study. And, as the data collection technique has been chosen questionnaire since the questionnaire is relatively simple to explain and understand. Considering gamification as a marketing tool towards consumer motivation and engagement, questionnaire statements are based on intrinsic motivation. After the primary data-gathering phase and data analyses with SmartPLS and SPSS, the results of non-parametric tests confirmed the statistically significant differences between respondents from Kosovo and Albania, hence the data analyses were carried out separately. Concerning path analysis, the results indicate that game mechanics, game dynamics, and aesthetics directly and positively affect purchase intention and the relationship is statistically significant. The game experience as a moderator of the relationship between game elements and purchase intention resulted statistically insignificant. Regarding mediation, perceived ease of use is a complementary mediator because it mediates the relationship between game mechanics, game dynamics, aesthetics, and purchase intention. By fulfilling the research aim, this study provides a comprehensive overview of gamification usage in consumer behaviour and sheds novel insights into the nature of gamification as a set of activities towards purchase intention. Moreover, it will assist practitioners to understand the crucial game elements and their significant relationship with purchase intention.

ABSTRAKT

Gamifikaci byla věnována značná pozornost výzkumných pracovníků a odborníků z praxe. Disciplíny, kde je gamifikace široce studována, jsou archeologie, vzdělávání, zdraví, politika a marketing. Pokud jde o definici, gamifikace se považuje za inovativní soubor aktivit, které mají motivovat a zapojit se zlepšováním procesů. V chování spotřebitele jsou herní prvky považovány za důležité, protože mozkový dopaminový systém je aktivován při hraní her, což je událost, která ovlivňuje proces dotazování. Očekává se, že zaměstnávání gamifikace v obchodním průmyslu pomůže maloobchodním společnostem vytvořit zábavný a příjemný nákupní zážitek tím, že se bude méně soustředit na cenu a agresivní reklamní kampaň. Sledováním post-positivistického paradigmatu a deduktivní metody byl výzkumný problém identifikován dostupnými teoretickými znalostmi, které vedly k návrhu výzkumu a formulaci výzkumných otázek a cílů. Tato studie si proto klade za cíl vyvinout komplexní model a poskytnout empirické důkazy týkající se nákupního záměru, když se u herních prvků uvažuje o motivaci a zapojení spotřebitele ve vybraných zemích západního Balkánu, v Albánii a v Kosovu. Při provádění této studie byly vzaty v úvahu dva rámce, MDA a TAM. Před zahájením primárního sběru dat byla zohledněna sekundární data. Sekundární data shromážděná od různých organizací, institucí a podniků pomohla zlepšit kvalitu výzkumu. Pokud jde o metodiku a techniku sběru dat, primární data byla shromážděna prostřednictvím průzkumu, který byl zvolen jako metoda výzkumu pro tuto studii. A protože byla zvolena technika sběru dat, dotazník je poměrně snadno vysvětlitelný a srozumitelný. Vzhledem k tomu, že gamifikace je marketingovým nástrojem zaměřeným na motivaci a angažovanost spotřebitelů, jsou prohlášení v dotazníku založena na vnitřní motivaci. Po primární fázi sběru dat a analýze dat pomocí SmartPLS a SPSS potvrdily výsledky neparametrických testů významné rozdíly mezi respondenty z Kosova a Albánie, proto byly datové analýzy prováděny samostatně. Pokud jde o analýzu trasy, výsledky naznačují, že herní mechanika, dynamika hry a estetika přímo a pozitivně ovlivňují záměr nákupu a vztah je statisticky významný. Zážitek z hry jako moderátora vztahu mezi herními prvky a nákupním záměrem vyústil ve statisticky nevýznamný. Pokud jde o mediaci, vnímaná jednoduchost použití je doplňkovým prostředníkem, protože zprostředkovává vztah mezi herní mechanikou, dynamikou hry, estetikou a nákupním záměrem. Plněním cíle výzkumu poskytuje tato studie komplexní přehled o využití gamifikace ve spotřebitelském chování a vrhá nové pohledy na podstatu gamifikace jako souboru aktivit směřujících k nákupnímu záměru. Rovněž pomůže odborníkům pochopit klíčové herní prvky a jejich významný vztah s nákupním záměrem.

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ABBREVIATIONS

TAM – Technology acceptance model

UTAUT2 – The unified theory of acceptance and use of technology

SOR – Stimuli, organism, response

MDA – Mechanics, dynamics, aesthetics

STD – Self-determination theory

MDE – Mechanics, dynamics, emotions

PLS-SEM – Partial least square – structural equation modelling

1. INTRODUCTION

Customers play a significant role in companies' success or failures. The influential factors towards consumer purchasing decision complexity are due to consumers' needs, desires, and want dissimilarities. The purchasing process and purchase decision – making becomes more complex due to technology development and exposure to a high number of products/services. Therefore, gamification is viewed as a favourable strategy to enhance complex processes and simultaneously engage and motivate participants. Game components incorporated within gamification strategy are known as “game elements” (Stockinger, Koelle, Lindemann, Kranz, Diewald, Möller, Roalter 2015). By including game elements in a non-game setting, the gamification goal is to stimulate the feeling of attainment of certain need and intensify that feeling by receiving rewards as an acknowledgement. Moreover, gamification as an integrated part of the marketing strategy allows companies to upgrade the competition level through boosting consumer purchasing experience with fun and enjoyment while focusing less on pricing and heavy promotional strategies (Insley, Nunan 2014). Considering how game elements enhance dull activities by creating a fun and enjoyable experience, gamification in consumer behaviour may be viewed as a motivator that facilitates the recurrence of experience and engagement within the purchasing process by fostering positive attitudes towards purchase intention. Hence, gamification is considered important for businesses, which is the appealing fact of applying fun elements of the game to enhance dull experiences such as purchasing, work, learning, exercising, and healthy food consumption.

Although investigated mostly in human-technology interaction, in this study game elements are examined regarding their impact on purchase intention. The study has followed a deductive approach which has led to the definition of research plan design. As research method is chosen, questionnaire as the research technique, and humans as the research instrument. Although most of the research carried out thus far has employed mostly avatars, points, rewards, leaderboards, and levels (Tobon, Ruiz-Alba, García-Madariaga 2020) to gamified certain processes, this study has adopted additional game elements for research purpose. The game elements investigated in this study are based on the MDA framework (Hunicke, Leblanc, Zubek 2004) because the key gamification elements are designed based on the same framework. Along with the MDA framework, the TAM model is considered in this study due to its simplicity and usage in technology acceptance studies. MDA and TAM combination aims to facilitate technological device usage in the purchase process and enhance the purchasing experience. To the author knowledge, this study is among the pioneer studies conducted which combine game mechanics, dynamics, aesthetics, perceived ease of use, and the purchase intention in the same framework supported by data from European Western Balkan countries.

1.1 Research problem

Technology advancement and internet diffusion have transformed the process of commerce worldwide. With the introduction of electronic commerce (e-commerce) system generally known as web 1.0, retail companies started to incorporate technological devices in their businesses and leading companies with a tech-savvy attitude. Initially, the digital transformation started with the web page embracement in the hypertext mark-up language form designed and utilised on the internet (Moncrief, Marshall, Rudd 2015). Further development in technology led to the web 2.0 advent where social media was introduced (Dragona 2014). Apart from the retail industry, digitization has impacted significantly environment, demographic, culture, and social disciplines. Nowadays, consumers are equipped and exposed to a wider range of information compared to previous years, packed with numerous choices and higher expectations. Subsequently, consumer demand, taste, and preferences are being enhanced and changed. Furthermore, by personalizing the shopping experience, consumers can choose the means of how and where to purchase. It is noted that the purchase means differ based on the product category.

Considering internet diffusion worldwide, online purchase intention has received considerable attention. Qualifies as an online purchase where the purchasing process is finalized by using the internet and technological devices. Concerning factors that impact consumer purchase intention, the most frequently examined are age, culture, gender, educational background, incomes, and behavioural variables. Regarding the research models, the most mentioned are STD, TAM, UTAUT2, and SOR. Moreover, variables that impact purchase intention vary based on the purchase mean. Correspondingly, online purchase intention is determined by habit, price saving, performance expectancy, and facilitating conditions (Escobar-Rodríguez, Carvajal-Trujillo 2013). Apart from the positive impact, the habit of using online devices to purchase mediates online purchase intention (Law, Kwok, Ng 2016).

Gamification as a set of activities has been investigated in numerous fields, in health has been employed as a facilitator to assist patients in self-management (Miller, Cafazzo, Seto, Elliott 2016), learning science in outdoor and gamified classes supported students on their knowledge acquisition and motivation (Su, Cheng 2015), to motivate, increase employees efficiency, create an enjoyable and entertaining working environment (Cardador, Northcraft, Whicker 2017), consumer engagement is reached by labelling an improved performance and tasks completion due to successful gamification appliance (Harwood, Garry 2015).

Due to the limited information provided regarding game elements impact according to the MDE framework (Robson, Plangger, Kietzmann, McCarthy, Pitt 2016; Robson, Plangger, Kietzmann, McCarthy, Pitt 2015) a combination of

MDA (Hunicke, Leblanc, Zubek 2004) and TAM (Davis 1989) constructs, which has been employed on different domains, followed by the instruction provided by Werbach and Hunter (2012) has been considered to design the research framework of this study. The reason to employ MDA (acronym for game mechanics, game dynamics, and aesthetics) framework is that the gamification elements are established from the same framework (Kusuma, Wigati, Utomo, Putera Suryapranata 2018). And, TAM model is employed due to its role as standardised regarding technology adoption and usage. The two constructs, perceived ease of use and behaviour intention, have been adopted to research models. Behaviour intention is reworded as purchase intention as is more explanatory.

The reasoning to investigate game elements is the previous research conducted and its positive results regarding game elements impact. This study aims to investigate the impact of gamification elements on purchase intention while the relationship is mediated by perceived ease of use and moderated by game experience. Although various game elements have been investigated to explain behavioural activities, in consumer behaviour and purchase intention, limited research has been conducted. However, because the current literature does not provide sufficient information in terms of theoretical work and empiricism regarding gamification in retail, it is considered essential to investigate consumer purchase intention. Consequently, to reduce the gap regarding game elements impact on consumer purchase intention and because previous research *has not been able to explore additional game elements and their impact on consumer purchase intention*.

1.2 Research objectives

The main objective of this study is to develop a comprehensive model which will be followed by empirical research. The model includes variables related to consumer behaviour, precisely regarding consumer purchase intention, social commerce ease of usage for purchase purpose and game elements. Due to the lack of research regarding consumer purchase intention, Kosovo and Albanian are the selected countries for empirical testing. Besides, the economy relies heavily on trade and consumers in developing countries are highly focused on prices and is considered as a fruitful direction to identify and investigate the variables which might enhance the purchasing experience. Moreover, the model reliability and validity will be tested empirically. Furthermore, sub-objectives are as follows:

- SOB1: To identify the game elements which affect purchase intention,
- SOB2: To examine the direct effect of game elements on the purchase intention,
- SOB3: To examine the effect of moderating factors in the relationship between game elements and purchase intention,

- SOB4: To examine the mediating factors which impact the relationship between game elements and purchase intention,
- SOB5: To understand the purchase intention in a gamified purchasing process of consumers in the selected Western Balkan countries,
- SOB6: To provide a guide regarding designing ethical gamified purchase processes for retail companies.

The first and sixth sub-objectives will be reached during the literature review. The literature review regarding gamification and consumer purchase intention clarifies which game elements should be considered in the purchase intention setting. Afterwards, the game elements will be empirically examined by employing statistical tests, namely, the sub-objective two, and the sub-objectives three and four will be statistically tested. The tests are chosen based on the variable type and the research conducted previously. This leads to the development of a comprehensive overview and fulfils the sub-objective five. Considering the research carried out thus far and the output of the current research, it will be possible to provide novel evidence supported with empirical tests towards purchase intention in a gamified setting. Each sub-objective is expected to provide a considerable contribution in the theoretical and practical aspects regarding enhancing consumer purchasing experience with fun and enjoyable elements.

1.3 Research questions

The main research question for this study is: “how does game elements impact consumer purchase intention towards consumer engagement and motivation?” followed by sub-research questions which are designed based on the research problem of this study. The sub-research questions are established to provide a solution for the research problem:

- SRQ1: Do the employed game mechanics, game dynamics, and aesthetics impact consumers purchase intention?
- SRQ2: Is there a mediating effect of perceived ease of use on purchase intention when game elements are considered?
- SRQ3: What is the effect of the moderator, game experience, on the relationship between game elements and purchase intention?
- SRQ4: Does consumers’ behaviour in the selected countries differ regarding purchase intention in a gamified setting?

2. THEORETICAL BACKGROUND

2.1 Theoretical lenses of the research

The nature of this study is explanatory and quantitative. To design the research properly, the study initially reviewed the variables, indicators, and measurements. The theoretical background of the gamification process design are the majority based on psychological motivations theories and game design. Among the most mentioned theories is self-determination theory. Therefore, the theories which this study is based on are the MDA framework and TAM.

MDA framework

The framework has been taught at Game Developers Conference, San Jose 2001-2004. Driven by the necessity to reduce the gap between game design and development, game criticism, and technical game research, the MDA framework has been developed. The fundamental part of the framework lies in the concept of considering game elements as the content part of the game towards behaviour rather than a media streaming towards the player. Such approach is designed by considering them as part of the system that can lead to behavioural changes by interacting. The concepts of the framework are based on game components rules, system and “fun” (Hunicke, Leblanc, Zubek 2004). The MDA framework is composed of three variables which are acronymed based on mechanics-dynamics-aesthetics. The variables complement each other and are divided into components to formalise the game consumption.

TAM

TAM has been established by Davis (1989) and originated from TRA (Fishbein, Ajzen 1975) and is designed to investigate attitude and behaviour intention towards software systems adoption. The model considers that the actual usage is dictated by users’ behaviour intention to use. The behaviour intention variable is considered as an intermediate variable that may predict the actual behaviour. Moreover, TAM is among the most cited theories regarding technology acceptance prediction (Lai 2017; Lemay, Morin, Bazelais, Doleck 2015). For this research, two variables, perceived ease of use and purchase intention, from the model has been adopted in the research framework. Moreover, the role of TAM as a widely accepted theory to explain online consumer behaviour in terms of information system and individual technology acceptance (Li 2014). Hence, for research purpose, TAM and MDA are combined to provide a comprehensible investigation regarding purchase intention in the gamified setting.

2.2 Literature review

Due to the rapid diffusion of the Internet around the world in the last century, its required continuous investigation due to the changes inflicted in the business and consumer purchase behaviour. Changing from purchasing physically in stores to online purchase has been a major shift in consumer behaviour. Considering that technology keeps evolving constantly it enables consumers to be exposed to numerous products/services as options and information. Therefore, gamification is considered an attractive set of activities for end-user engagement and motivation. Accordingly, the aim of this study to investigate customer purchase intention when game elements are considered, by initially designing a research model which is tested empirically. To investigate the existing literature regarding gamification design methods, a holistic approach concerning literature review is conducted into two phases review. During the first phase, from the relevant databases such as Scopus, Web of Science and Science Direct have been identified books, journal and conference proceeding articles. The keywords used included but not limited to gamification, game design, game elements, game mechanics, game dynamics, aesthetics, perceived ease of use, game experience, purchase intention, online purchase, consumer purchase, purchase, social commerce, social media and developing countries. The second phase included comprehensive reading and evaluation of the obtained literature.

2.2.1 Consumer purchasing behaviour

Consumer behaviour is defined as a set of behavioural activities manifested by consumers while searching for information, purchasing, using, evaluating, and arraying a product, service, idea or experience which has occurred to fulfil a need and/or desire (Schiffman, Kanuk 2007). Due to its complexity as multidiscipline, consumer behaviour has received considerable attention from social science. Following the increased attention on consumptions and its impact on daily activities, identity formation, political and economic development, the course of global culture, consumer culture is spreading globally. Although the purchase as an act is a significantly important part, consumer behaviour is defined as an ongoing process (Solomon, Bamossy, Askegaard, Hogg 2006). The changes in consumer behaviour are occurring because thinking, feelings, and actions of individual consumers, targeted consumer groups, and society are going through changes (Peter, Olson 2010). The importance of additional research in the consumer purchase behaviour domain lies in the changes occurring in the environment and consumers.

Marketing strategy success is greatly affected by consumer response. Knowledge regarding consumers and developments in consumer behaviour may be used as information to design the marketing plan. Such information assists marketers to identify and minimise threats by simultaneously maximising

opportunities that excessively impact consumer receiving product activity. Market segmentation is considered the initial phase of getting to know a consumer. By dividing consumers into groups, using certain variables aiming to establish groups that share similar characteristics, presumably, needs are easier to be recognized and fulfilled. Besides the traditional market segmentation variables, demographic, geographic, psychographic and behavioural, marketers have been required to pay close attention to new market segments the gay community, single females and people with disabilities (Solomon, Bamossy, Askegaard, Hogg 2006).

The complex part of consumer behaviour is purchasing decision-making because consumers are constantly exposed to various products and services, where they are required to make choices. The importance of recognizing the consumer decision-making process lies on the possibility to match the company marketing strategy with the phases that consumer follows to decide which product/service to purchase. With the internet revolution, the consumer decision-making process has faced many changes, specifically regarding information research. The influential factors affecting consumer purchasing act and post-purchasing are mood, time pressure, shopping experience, satisfaction and product disposal. Online consumerism has changed the impact level of every influential factor. Nowadays, the Internet led to a situation whereby consumers are connected strongly through passion regarding products, brands, and other product attributes. The pre-purchasing process from the consumer perspective starts with the availability of information to decide regarding the tools used to fulfil the existing need. But purchasing is usually described in the context, of whether the experience qualifies as pleasant or unpleasant. Hence, post-purchasing provides information regarding product usage, and if it has met the requirement (Solomon, Bamossy, Askegaard, Hogg 2006).

2.2.2 Gamification

Gamification is aligned as an indispensable set of activities concerning engagement and motivation for patients, end-users, students, consumers and its successful appliance is proven in many domains. Therefore, gamification is described as the process of adding game elements in a non-gaming environment (Zichermann, Cunningham 2011). Importantly, gamification is viewed as a solution to provide the consumer with a non-monetary reward (Jang, Kitchen, Kim 2018; Hofacker, de Ruyter, Lurie, Manchanda, Donaldson 2016). However, is important to clarify the differences between game theory and gamification due to significant dissimilarities. Game theory analyses the strategic situation and gamification employees' game elements to achieve desirable behaviour. Moreover, the usage of game elements besides entertainment purpose is considered as serious games (Yam, Russell-Bennett, Foth, Mulcahy 2017). Serious games develop a theory for games deployment and stimulation for various

purpose, among others education and training; human performance engineering; applications of games to health, public policy, and strategic communication; game evaluation; serious game development. On the other hand, the gamification approach is closer to game elements adjustment in a non-game setting rather than developing a theory. Considering the above definition about gamification it could be concluded that gamification is an interdisciplinary science that is influenced by social and computer science which uses game design tool in non-game context to augment certain processes. According to Werbach and Hunter (2012), the importance of considering gamification from business lies on three pillars engagement, experimentation and results. The challenge of creating an appealing gamified system should combine elements which are meaningful and inherently engaging.

The categories in which gamification is classified are internal (enterprise gamification), external, behaviour change (enterprise program) and behaviour change (individual) gamification (Werbach, Hunter 2012). Following the definitions of each category, this research is arrayed in the external gamification since the research investigates the customers' purchase intention. Furthermore, gamification is considered close to intrinsic motivation. Intrinsic motivation is defined as the utmost self-determined type of motivation and supposedly that an act is performed to obtain a distinguishable output and is usually linked with positive output close to persistence, positivity effect and flow (Deci, Ryan 2002; Ntoumanis 2012). Another gamification important characteristic of explaining gamification is brought up by Landers, Auer, Collmus and Armstrong (2018). Accordingly, the research carried out thus far has been centred on person-focused constructs game elements, targeted organization, individual changes and personal and situational contexts. Game elements are the starting point which are usually viewed as factors that influence the result. The correlation between game elements and results is mediated by individual psychological and behavioural changes.

Considering the positive impact of gamification throughout various disciplines, presenting the history of gamification would provide additional information regarding the research carried out thus far. Within the history description details concerning the importance of empirical research within the field of study are included.

2.2.3 Gamification and game science

The definition of gamification various based on discipline and context used. Among definitions are some that contradict one another and their base lack of empirical research foundation. For instance, Ian Bogost describes gamification as bullshit (Bogost 2011a) and "exploitationware" (Bogost 2011b). Such rhetoric has been taken into consideration by game researchers, including Klabbers (2018) research work that is based on and supports the same approach. Although the

definition and conclusions drawn by Klabbers (2018) are purely based on his view about gamification rather than empirical or data analysis. The definition is limited because gamification is beyond a management method and behavioural approach. On the other hand, the research conducted thus far that is based on theoretical and empirical investigation confirm the positive results of gamification in enhancing and inducing fun and joy dull processes.

Games history is as old as human history. In the past used as a tool that would facilitate human interaction and transition into a leisure activity. To increase the physical contact sports were established, from observation of random behaviour were established luck games, casting of lots and boardgames. Elements that make a game interesting for a play is uncertainty, excellent narrative, anticipation, positive reinforcement, negative reinforcement loops, and adjust continuously the dynamic of difficulty (Costikyan 2013). Game science is an interdisciplinary study that uses tools, assumptions and epistemological foundations from engineering, natural and social science (Klabbers 2018). Most research carried out in game science uses a logical positivist and/or post-positivist philosophical research approach. When compared with gamification the differences are noticeable. Gamification considered a post-positivist subdiscipline of game science, uses game design techniques, and related game structure that may be used to incorporate game elements in the non-related game process. Moreover, making inferences based on gamification is commonsensical to consider post-positivist philosophy because it emphasises the human behaviour reacts and responds to science and interventions. Hence, merging two science fields causes conflicts between research philosophy, post-positivist and logical positivist (Landers, Auer, Collmus, Armstrong 2018).

Gamification as a science field is widely studied in the human-computer interaction field (Rapp, Hopfgartner, Hamari, Linehan, Cena 2018) while in essence gamification is cross-disciplinary of social and computer science (Landers, Auer, Collmus, Armstrong 2018). As a scientific field the strategy, components and technique used to gamify a process is based on the outcome. When the desired outcome is set, the game elements are selected to accomplish the outcome. Considering gamification-based frameworks is another feature to consider which should be aligned with the desired outcome. Afterwards is required to design the research methodology, psychometric measures and experimental design to augment and capitalize the gamified process. However, is important that stakeholder and participants of the process be informed regarding the complexity, desired outcome and game elements used within the process. In gamified processes, game elements are considered as the initial input towards the desired outcome. The relationship between game elements and desired outcomes are usually mediated by psychological and behavioural mediators. Since the desired outcome is contextualized to the application domain where gamification is practised, the ultimate expected outcomes of gamification are generalized.

Determining clearly the gamification goals and empirically examine the success or failure of game elements in goals achievement (Landers, Auer, Collmus, Armstrong 2018). The appropriate game elements combination should allow participants to express their creativity, tasting the success by mastering the skills, experiencing the sense of meaning and infused with good vibe, energy and strengthen the relationship and connection (Chou 2016). Only indirect effects, which can be measured by adding mediators, on other states allow game elements to influence desired outcomes. Changes or improvements in participants psychological states, considering to measure the impact of such changes on their attitudes as well, is critical to determine when and why gamification produces the desired improvement by organizations or stakeholders (Landers, Auer, Collmus, Armstrong 2018).

Gamification and games share few similarities but differences exist as well. Although the interaction between two scientific fields exist the differentiations are substantial. The difference lies in the structure, games are a structured form of play (Makedon 1984) whereas play in gamification could be a potential design goal (Landers, Auer, Collmus, Armstrong 2018). Furthermore, games are a type of play that follows a group of defined rules that linked with the player (Makedon 1984). Whereas, gamification does not establish such connection. Besides, the participants in a gamified process most likely would not experience the opportunity to play while being part of the process (Landers, Auer, Collmus, Armstrong 2018). Hence, based on the goals and differences between two scientific fields, gamification and games, gamification seems a broader version than games.

The confusion caused about gamification by various definitions and claims root in research philosophical theory. Due to ambiguous specification and measurements of mediators in the majority of gamification research has confused the conclusion provided by such research (Landers, Auer, Collmus, Armstrong 2018). Such definition contradicts and provides misleading facts that damage gamification as a scientific field.

2.2.4 Game elements

Game elements usage and appliance differ based on the aim, objectives and purpose. Generally, not all game elements are suitable for all markets, cultures, consumers, end-users, students and patients and they do not provide the same results. Applying game elements in a non-game context is expected to evoke similar feelings and attachment evoked while playing games. Undoubtedly, the existence of various types of games leads to diverse results.

The game mechanics are defined as the tool, rules to enable the development of the communication process between the player and game elements. Game mechanics may be determined as a system or group of rules which can be used to

encourage the player reaction to the game (Zichermann, Cunningham 2011) and to enlighten and determine the level of hardness within the game (Kim, Lee 2015).

Numerous scholars (Zichermann, Cunningham 2011; Thiebes, Lins, Basten 2014) concluded that dynamics explain the interaction between the player and the game. Moreover, game dynamics are considered as a system which is established to induce an aesthetic experience (Hunicke, Leblanc, Zubek 2004) and acts as the needed gadget to regulate and dictate the timing frame regarding the award which should be received (Tu, Yen, Sujo-Montes, Roberts 2015).

In the game terminology aesthetics are considered as the emotional part of the game, namely aesthetics are the elements that evoke certain emotion within the player. Aesthetics refer to the aroused emotions that games can induce within the player. Emotions are an important part of the game and are defined as the elements which evoke a reaction of the player within the game (Robson, Plangger, Kietzmann, McCarthy, Pitt 2015). Significantly important to flag the differences between aesthetics design and game aesthetics. Although most of the research in the purchase context focus on aesthetics design there is a growing interest in game aesthetics as well. Aesthetic design refers to principles followed to create a pleasing, usable, and functional design.

Gamification user type HEXAD Scale has been designed by Tondello, Wehbe, Diamond, Busch, Marczewski and Nacke (2016). The scale contains six types of users such as philanthropists, socialisers, free spirit, achievers, players and disruptors. Considering the differences between the types, the most mentioned design elements for philanthropists are collection and trading, gifting, knowledge sharing, and administrative roles. Guilds or teams, social networks, social comparison, social competition, and social discovery are the common designed elements for socialisers. Free spirits are motivated by the following game elements exploratory tasks, nonlinear gameplay, Easter eggs, unlockable content, creativity tools, and customization. For achievers, the most common design elements are challenges, certificates, learning new skills, quests, levels or progression, and epic challenges (or “boss battles”). Players are motivated by extrinsic rewards such as points, rewards or prizes, leaderboards, badges or achievements, virtual economy, and lotteries or games of chance. The last user type is disruptors and the most common design elements for this type are innovation platforms, voting mechanisms, development tools, anonymity, anarchic gameplay.

2.2.5 The ethical implication in consumer behaviour and gamification

In business, the aspiration to conduct business honestly and boost consumer well-being by providing products and services that imply safety and effectivity causes conflicts between and within companies in designing and achieving goals and objectives (Solomon, Bamossy, Askegaard, Hogg 2006). Business ethic, by

incorporating normative and descriptive components defines the values, standards and principles which should be utilized within the business operation. Simultaneously, business ethic seeks to articulate and defend those that should operate in business. The importance of business ethical consist on the fact that unethical behaviour creates additional challenges for businesses such as legal, financial and marketing (DesJardins 2014). Although it is considered a beneficial approach, many companies violate consumer trust by providing labelled wrong products, selling inexpensive products for higher prices, and ambiguous selling strategies. A useful measuring instrument of company ethical behaviour is the action taken when the company is well informed regarding the problematic situation. The reasoning is that consumers value a company's ethical behaviour. Using long-term ethical behaviour by companies is a beneficial path to follow because the trust and satisfaction of consumers may translate into loyalty (Solomon, Bamossy, Askegaard, Hogg 2006).

Although little is empirically researched regarding gamification ethical implication, a few scholars by following different school of thoughts suggested paying close attention to certain rules when gamifying processes. According to Chou (2016) gamification, ethical concerns are valid but as long as the intention/expected outcome are transparent the ethical assumptions are not violated. Transparency might indicate a sense of safety for consumers because the study conducted by Ma and Lee (2014) suggested that promoting manipulating techniques considerably collides consumers trust in companies. Apart from the outcome, manipulation, harms, exploitation and character should be avoided while designing gamified processes due to ethical concerns (Kim, Werbach 2016). Furthermore, is considered unethical when gamification is part of false statements, untold stories, hidden agendas, lack of authentic transparency, and is not a mind-control technique (Chou 2016; Thorpe, Roper 2019). However, the study of Trang and Weiger (2021) emphasize the negative impact of gamification in personal information disclosure, information privacy and cognitive absorption. They consider gamification as a tool which induces a psychological state of cognitive absorption where participants are focused on the task which dwindle the availability to invest in privacy decision process.

Ethical violation damages company reputation. The common between gamification as a marketing tool and business ethic few similarities may be noticed. Consumer privacy, protection, fairness and providing correct information are essential to business ethics and ethical gamified processes. Equally important, effective communication between consumers, companies, governmental and non-governmental institutions is warranted.

2.3 Conceptual framework

The literature review has provided significant information concerning factors that impact consumer purchasing intention. Hence, Figure 2.1 presents the conceptual model of this study where the relationship among dependent, moderators, mediators and independent variables are visualised. The conceptual framework may be considered as the thesis map of the area being investigated.

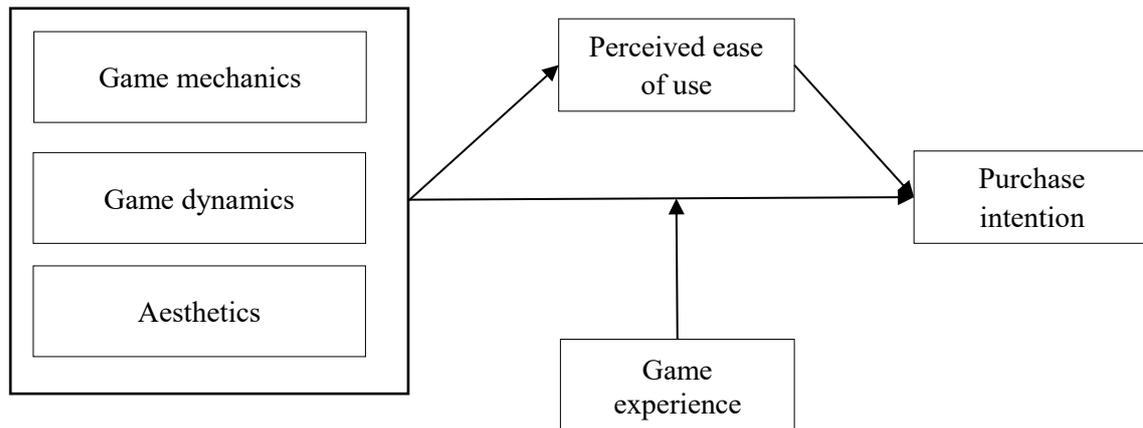


Figure 2.1: Conceptual framework. Source: Author

2.4 Definition of variables

The definitions of each construct followed by the number of indicators are presented in Table 2.2.

Table 2.1: Definition of constructs and indicators

| Construct | Indicators | Definition | Source | Items |
|-----------------------|--|---|--------------------------------|-------|
| Game mechanics | Points, badges, reward, level, avatar, benefits, financial rewards | The combination of action, behaviour and control mechanics designed for the player within the game context. | (Hunicke, Leblanc, Zubek 2004) | 5 |
| Game dynamics | Social status, habit, reward, competition, explore, creativity | Player and game interaction followed with the mechanics' reward system and time frame. | (Hunicke, Leblanc, Zubek 2004) | 5 |
| Aesthetics | emotions, satisfaction, | The emotional response evoked | (Hunicke, Leblanc, | 5 |

| | | | | |
|------------------------------|--|---|--------------------------------|--------|
| | delight, attractive, enjoyable, discovery, surprise | within the player while interacting with the game. | Zubek (2004) | |
| Perceived ease of use | Social support, Technical support, Internet access, Usage experience | The facilitating conditions provided to finalise a purchase transaction | (Rizzardini, Chan, Guetl 2016) | 5 |
| Purchase intention | Intention | The subjective probability that consumers will be engaged in a given behaviour. | (Baptista, Oliveira 2017) | 5 |
| Game experience | Experience | the game playing experience regardless of the game type | Author | Yes/No |

Source: Author

2.5 Research hypotheses

Based on Figure 2.1 where the conceptual model of the study has been presented the following hypotheses have been designed for research purpose. To achieve the research objectives the following sub-hypotheses will be empirically tested as well:

H1: Game mechanics (H1a), dynamics (H1b) and aesthetics (H1c), positively affect purchase intention.

H2: Perceived ease of use mediates the relationship between game mechanics (H2a), dynamics (H2b), aesthetics (H2c) and purchase intention.

H3: Game experience moderates the relationship between game mechanics (H3a), dynamics (H3b), aesthetics (H3c) and purchase intention.

H4: Consumers from the selected countries are indistinguishable regarding game mechanics (H4a), dynamics (H4b), aesthetics (H4c), perceived ease of use (H4d), game experience (H4e) and purchase intention (H4f).

H5: There are statistical differences between countries regarding gender (H5a), age (H5b), employment (H5c), education (H5d), and working sector (H5e).

3. METHODOLOGY

3.1 Research design and data collection

This study follows the post-positivism paradigm, where a few hypotheses and sub-hypotheses will be tested, but the power lies in the argumentative section. Furthermore, the study is based on the deductive method, initially starting with the theoretical knowledge to identify the problem and afterwards formulating.

The secondary data has been gathered from various sources such as reports from different organizations, institutions and businesses. The primary data were collected through a survey, which has been chosen as the research method for this study. And, as the data collection technique has been chosen questionnaire which will contain constructs from the conceptual framework (Figure 2.1).

3.2 Sample, sampling and data analysis

The unit of analysis for this research are individuals, namely, residents of Kosovo and Albania. Therefore, the selection of the sample is a simple random sampling. By using this sampling technique, each individual/member has an equal chance and probability, in this case from Kosovo and Albania regardless of age, gender, city and region, to be selected and participated in the research.

For research purposes, several statistical tests have been used. To analyse the data statistical software such as SPSS version 23.0 and SmartPLS version 3.0 have been utilized. EFA and CFA have been performed by using the mentioned statistical software. Initially the structure of variables is explored by performing EFA afterwards conducting CFA to examine the validity of those restrictions implied by the CFA which were not part of the EFA. EFA is performed to classify and group items concerning the creation of factors that explain the MDA framework applicability. All the suggested steps by Tabachnick and Fidell (2014) to conduct the EFA have been followed. Afterwards, PLS-SEM has been performed by following instructions regarding performance and reporting as designed by Hair et al. (2017). Considering that variables (age, gender, occupation, employment sector, game experience and education) are categorical and cannot be compared by mean the chi-square test for independence has been employed. Since chi-square does not provide information on whether the relationship between variables is strong or weak, the Cramer's V coefficient results have been included. Furthermore, the Mann-Whitney U test has been employed to examine the dissimilarities and similarities between two independent groups where the data distribution is insignificant and are on a continuous measure. The general assumption and the standard procedures suggested by Pallant (2016) to perform the tests have been followed.

4. RESULTS AND DISCUSSION

4.1 Descriptive analysis

The survey took place in Kosovo and Albania. 256 Kosovars and 276 Albanians respondents participated in this study. Regarding Kosovars and Albanians respondents' profile are presented in Table 4.1.

Table 4.1: Respondents profile (Kosovo N=256, Albania N=276)

| Category | Sub-category | Kosovo | | Albania | |
|------------|------------------|--------|------|---------|------|
| | | n | % | n | % |
| Age | Less than 24 | 75 | 29.3 | 199 | 72.1 |
| | 25–35 | 132 | 51.6 | 59 | 21.4 |
| | 35–50 | 36 | 14.1 | 16 | 5.8 |
| | More than 51 | 13 | 5.1 | 2 | 0.7 |
| Gender | Female | 129 | 50.4 | 186 | 67.4 |
| | Male | 127 | 49.6 | 90 | 32.6 |
| Occupation | Employed | 161 | 62.9 | 99 | 35.9 |
| | Unemployed | 95 | 37.1 | 177 | 64.1 |
| Education | No education | - | - | 1 | 0.4 |
| | Primary school | 1 | 0.4 | 6 | 2.2 |
| | High school | 41 | 16 | 53 | 19.2 |
| | Bachelor | 133 | 52 | 155 | 56.2 |
| | Master | 73 | 28.5 | 51 | 18.5 |
| | More than master | 8 | 3.1 | 10 | 3.6 |

Source: Author

Table 4.2: Frequency of employment sector and game experience

| Category | Sub-category | Kosovo | | Albania | |
|-------------------|--------------|--------|------|---------|------|
| | | n | % | n | % |
| Employment sector | Private | 112 | 69.6 | 87 | 87.9 |
| | Public | 49 | 30.4 | 12 | 12.1 |
| Game experience | Yes | 151 | 59 | 72 | 26.1 |
| | No | 105 | 41 | 204 | 73.9 |

Source: Author

The frequency of other questions from the questionnaire are presented in Table 4.2. In this Table are presented two close-ended questions regarding the employment sector and previous game experience. Of 161 respondents from Kosovo who were employed 69.6% worked in the private sector and 30.4% worked in the public sector. Similar results regarding the frequency distribution have been noted for Albanian respondents (private sector=87.9% and public sector=12.1%). The distribution is considered representative because the private sector is larger than the public sector and is the sector where the majority of

citizens work. Regarding game experience, the majority of Kosovar respondents played games (Yes=59% and No=41%) compared to Albanians (Yes=26.1% and No=73.9%). Demographic variables are considered for this study because according to Landers, Auer, Collmus, and Armstrong (2018) such variables contribute significantly in the game elements choice.

Before continuing the CFA and EFA certain non-parametric tests have been performed to identify the differences between respondents from Kosovo and Albania. Statistical tests were chosen based on the variable type. To examine the differences between countries for game mechanics, game dynamics, aesthetics, perceived ease of use and purchase intention has been employed Man-Whitney U test. The summary of the Mann-Whitney U test are presented in Table 4.3.

Table 4.3: Summary of Mann-Whitney test

| | Mean Rank | | Mann-Whitney | Z | p-value |
|----|-----------|--------|--------------|--------|---------|
| | XK | AL | U | | |
| AS | 247.06 | 284.53 | 30352 | -2.809 | .00 |
| GM | 287.03 | 247.46 | 30073 | -2.966 | .00 |
| DY | 278.07 | 255.77 | 32366 | -1.672 | .09 |
| EU | 285.46 | 248.91 | 30473 | -2.741 | .00 |
| PI | 260.89 | 271.71 | 33891 | -.811 | .42 |

Source: Author

Following the results depicted in Table 4.3 and comparing the mean rank respondents from Kosovo are highly concentrated on game mechanics, game dynamics and perceived ease of use whereas the respondents from Albania are highly concentrated on aesthetics and purchase intention. Considering the results of p-value where for aesthetics, game mechanics and perceived ease of use is 0.00, it implies that there statistically significant differences between Kosovars and Albanians for the mentioned variables. Regarding game dynamics and purchase intention no evidence has been found to identify the differences between Kosovars and Albanians. Since the differences were identified between countries the EFA and CFA have been carried out separately. Based on the results of the test it may be concluded that consumers from the selected countries are significantly different, therefore H4a, H4c and H4d are not supported. On the other hand, H4b and H4f are supported since no differences were identified.

To examine the differences between respondents from Kosovo and Albania regarding categorical variables the chi-square test of independence has been employed. The result of the test indicated that regarding age significant association between respondents was identified χ^2 (3, n=532), p=0.00. Cramer's V was 0.43, signifying that is a large association regarding age between Kosovars and Albanians. A significant association was noticed concerning education χ^2 (5,

n=532), p=0.00. Regarding the relationship association strength according to Cramer's V result (0.14) is small to medium. Furthermore, a significant association was identified between countries and occupation, employment sector, game experience and gender χ^2 (1, n=532), p=0.00. Concerning the strength of association Cramer's V results indicated that the strength is medium for game experience (0.33) and small to medium for occupation (0.27), employment sector (0.21) and gender (0.173). Detailed results are shown in Table 4.4. Overall, significant differences regarding age, gender, occupation, employment sector, education and game experience were identified between Kosovars and Albanians. Namely, H5a, H5b, H5c, H5d and H5e are supported due to statistical differences identified.

Table 4.4: Summary of the chi-square test

| Category | Sub-category | XK | AL | Chi-Square | | Cramer's V |
|-------------------|----------------|-----|-----|------------|---------|------------|
| | | n | n | χ^2 | P-value | Value |
| Age | ≤24 | 75 | 199 | 99.165 | 0.00 | 0.432 |
| | 25–35 | 132 | 59 | | | |
| | 35–50 | 36 | 16 | | | |
| | 51+ | 13 | 2 | | | |
| Gender | Female | 129 | 186 | 15.894 | 0.00 | 0.173 |
| | Male | 127 | 90 | | | |
| Occupation | Employed | 161 | 99 | 38.808 | 0.00 | 0.270 |
| | Unemployed | 95 | 177 | | | |
| Employment sector | Private | 112 | 87 | 11.450 | 0.00 | 0.210 |
| | Public | 49 | 12 | | | |
| Education | No education | - | 1 | 11.173 | 0.00 | 0.145 |
| | Primary school | 1 | 6 | | | |
| | High school | 41 | 53 | | | |
| | Bachelor | 133 | 155 | | | |
| | Master | 73 | 51 | | | |
| More than master | 8 | 10 | | | | |
| Game experience | Yes | 151 | 72 | 59.037 | 0.00 | 0.333 |
| | No | 105 | 204 | | | |

Source: Author

4.2 Exploratory factor analysis

The EFA results for gamification elements after rotation are summarised and presented in Table 4.5. The fifteen variables were loaded into three-factor loading groups. Furthermore, KMO was 0.823 (Kosovo) and 0.85 (Albania), which meet the benchmark of 0.6 and confirming that exploratory factor analysis

is appropriated, hence allowing to proceed further with the analyses. Bartlett's test was significant (p-value 0.00) implying that the correlation matrix is significantly different from an identity matrix within which correlations between variables are all zeros. The minimum communality value was 0.42 and the maximum was 0.77, one of the items GM3 has been removed due to low communality loading. The factor correlation matrix resulted higher than 0.32 and the variance among the factors is higher than 10% meaning that an orthogonal rotation should be performed. From the orthogonal rotation group, Varimax with Kaiser Normalization has been chosen.

Table 4.5: Summary of mean and factor analysis output

| Factor | Item | Mean | | XK-FL | | | AL-FL | | | CO | |
|-------------------------|------|------|------|-------|------|------|-------|------|------|------|------|
| | | XK | AL | 1 | 2 | 3 | 1 | 2 | 3 | XK | AL |
| Game mechanics Benefits | GM1 | 3.15 | 2.97 | 0.81 | | | | 0.85 | | 0.70 | 0.75 |
| | GM2 | 3.31 | 3.30 | 0.83 | | | | 0.85 | | 0.76 | 0.77 |
| | GM3 | 2.70 | 2.60 | - | | | | - | | - | - |
| | GM4 | 3.12 | 3.01 | 0.84 | | | | 0.83 | | 0.73 | 0.72 |
| | GM5 | 3.07 | 2.76 | 0.82 | | | | 0.63 | | 0.67 | 0.50 |
| CA | | | | | 0.89 | | | 0.85 | | | |
| Aesthetics Emotion | AS1 | 2.74 | 2.84 | | 0.76 | | 0.76 | | | 0.60 | 0.60 |
| | AS2 | 2.92 | 3.06 | | 0.83 | | 0.81 | | | 0.72 | 0.70 |
| | AS3 | 2.97 | 3.14 | | 0.81 | | 0.81 | | | 0.69 | 0.66 |
| | AS4 | 2.65 | 2.91 | | 0.83 | | 0.79 | | | 0.69 | 0.66 |
| | AS5 | 3.61 | 3.58 | | 0.50 | | 0.80 | | | 0.66 | 0.68 |
| CA | | | | | 0.71 | | | 0.76 | | | |
| Dynamics Progress | DY1 | 2.73 | 2.42 | | | 0.77 | | | 0.66 | 0.69 | 0.65 |
| | DY2 | 2.20 | 2.05 | | | 0.54 | | | 0.87 | 0.64 | 0.76 |
| | DY3 | 2.61 | 2.41 | | | 0.62 | | | 0.77 | 0.58 | 0.66 |
| | DY4 | 3.59 | 3.57 | | | 0.60 | | | 0.65 | 0.42 | 0.46 |
| | DY5 | 4.12 | 3.96 | | | 0.77 | | | 0.66 | 0.66 | 0.57 |
| CA | | | | | 0.85 | | | 0.88 | | | |

Note: XK=Kosovo, AL=Albania, FL=factor loading, CO=Communality; Source: Author

For the first factor, loading the total variance explained by those factors after the rotation procedure was 29.07%. The factor loaded as the first for Kosovo was loaded as the second for Albania and the total variance was 21.45%. The variance is composed of four items. The items are loaded from game mechanics construct related to 'rewards, points, benefits, fun and enjoy'. The items are labelled as 'benefits'. Its internal consistency was higher than the benchmark

(Kosovo CA=0.89 and Albania CA=0.85), indicating that the construct reliability was really good.

The second factor for Kosovo explained 22.64% of the variance. The same factor was loaded as the first for Albania and explained 29.72% of the variance and contains five items of aesthetics. After the rotation method, Varimax with Kaiser Normalization, the items loaded in this construct were related to ‘emotions, discovering, satisfaction, delight and fantasy’. The items are labelled as ‘emotion’. Its internal consistency was higher than the minimum criteria (Kosovo CA=0.71 and Albania CA=0.76), indicating that the construct reliability was satisfactory.

The third loaded factor for Kosovo and Albania is game dynamics. For Kosovo, the factor explained 13.40% and for Albania explaining 14.10% of the variance and contains five items related to game dynamics. The items of dynamics related to ‘progress and creativity’ are loaded on this factor. The third factor is labelled as ‘progress’. Its internal consistency was higher than the benchmark (Kosovo CA=0.85 and Albania CA=0.88), indicating that the construct reliability was satisfactory.

4.3 Confirmatory factor analysis

4.3.1 Direct, moderation and mediation effect

Model measurement

The direct, moderation and mediation were examined by employing PLS-SEM. The summary of model measurement results for Albanian and Kosovar respondents are presented in Table 4.6 and 4.7. Table 4.6 presents the results of Cronbach’s alpha (CA), composite reliability (CR) and average variance extracted (AVE). Due to low loading eight items for Kosovo and six for Albania has been removed. Three of the removed items are labelled in the construct of perceived ease of use in the group of Kosovo and for Albania, two of the removed items were labelled in the construct of perceived ease of use. Two of the removed items was labelled in the construct of game dynamics, one was labelled in the construct of game mechanics and one in purchase intention. The additional removed item for Kosovo was labelled in the construct of aesthetics. To measure the multicollinearity among indicator variance inflation factors (VIF) has been performed and the value indicators are below the threshold of 3.3, signifying that multicollinearity is not an issue. The CA are above the minimum requirements of 0.70. Hence, the results of CA have exceeded the benchmark and may be considered satisfactory. Based on the results, the CR of constructs is between 0.92 and 0.86, which are above the minimum criteria of 0.60. Regarding AVE for constructs the results were higher than the minimum criteria of 0.50. The results indicate that the AVE value explains more than half of the variance of its indicators which demonstrates sufficient convergent validity. Therefore, it may

be concluded that the convergent validity requirements are fulfilled. The detailed information regarding indicator loading, variance inflation factors, reliability and validity for constructs and indicators for both countries, Albania and Kosovo, may be found in Table 4.6.

Table 4.6: Summary of constructs multicollinearity, reliability and validity results

| Constructs | Loading | | VIF | | CA | | CR | | AVE | |
|----------------------------|---------|------|------|------|------|------|------|------|------|------|
| | XK | AL | XK | AL | XK | AL | XK | AL | XK | AL |
| Game mechanics (GM) | 0.86 | 0.86 | 2.56 | 2.40 | | | | | | |
| | 0.90 | 0.86 | 3.06 | 2.57 | | | | | | |
| | - | - | | - | 0.89 | 0.85 | 0.92 | 0.90 | 0.75 | 0.69 |
| | 0.88 | 0.85 | 2.74 | 2.24 | | | | | | |
| | 0.83 | 0.75 | 1.93 | 1.54 | | | | | | |
| Game dynamics (DY) | 0.84 | 0.82 | 1.70 | 1.45 | | | | | | |
| | 0.87 | 0.79 | 2.12 | 1.51 | | | | | | |
| | 0.87 | 0.84 | 1.99 | 1.55 | 0.83 | 0.75 | 0.90 | 0.86 | 0.74 | 0.66 |
| | - | - | - | - | | | | | | |
| | - | - | - | - | | | | | | |
| Aesthetics (AS) | 0.79 | 0.79 | 1.91 | 2.26 | | | | | | |
| | 0.87 | 0.86 | 2.55 | 2.71 | | | | | | |
| | 0.86 | 0.83 | 2.25 | 2.08 | 0.86 | 0.88 | 0.91 | 0.91 | 0.71 | 0.68 |
| | 0.85 | 0.82 | 1.91 | 2.18 | | | | | | |
| | - | 0.82 | - | 1.95 | | | | | | |
| Purchase intention (PI) | - | - | | - | | | | | | |
| | 0.82 | 0.75 | 1.93 | 1.55 | | | | | | |
| | 0.80 | 0.84 | 1.68 | 1.85 | 0.87 | 0.85 | 0.91 | 0.90 | 0.72 | 0.70 |
| | 0.90 | 0.86 | 3.37 | 2.69 | | | | | | |
| | 0.89 | 0.89 | 3.22 | 2.95 | | | | | | |
| Game experience (GE) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Perceived ease of use (EU) | - | - | - | - | | | | | | |
| | - | 0.74 | - | 1.09 | | | | | | |
| | - | - | - | - | 0.88 | 0.70 | 0.94 | 0.82 | 0.89 | 0.60 |
| | 0.94 | 0.77 | 2.65 | 2.01 | | | | | | |
| | 0.95 | 0.81 | 2.65 | 2.04 | | | | | | |

Notes: AL=Albania, XK=Kosovo; Source: Author

Table 4.7 are summarized the results of Heterotrait-Monotrait (HTMT) which measure the discriminant validity. HTMT has been suggested by Hair et al. (2017) as the most accurate to measure discriminant validity. As presented the HTMT coefficients are below the benchmark of 0.85 which fulfils the criteria and satisfy the assumption of discriminant validity.

Model measurement

The results of model measurements confirmed the data validity and reliability which allows continuing further with the structural model evaluation. The 5,000 subsamples and 0.05 two-tailed significance level have been applied to evaluate the structural model. The results show that game dynamics (Kosovo: $\beta=0.12$, Albania: $\beta=0.15$), game mechanics (Kosovo: $\beta = 0.43$, Albania: $\beta = 0.36$) and aesthetics (Kosovo: $\beta = 0.23$, Albania: $\beta = 0.22$) directly and positively affect purchase intention. The relationship between game elements and purchase intention is statistically significant due to a p-value below 0.05. Therefore, H1a, H1b and H1c are supported. Additional information regarding the impact of game elements on purchase intention are depicted in Table 4.8. Regarding previous research, Cyr, Head and Ivanov (2006) have achieved the same results by confirming the positive impact of aesthetics. Whereas, Hamari and Lehdonvirta (2010) concluded that game mechanics influence purchasing frequency. Lastly, Thiebes et al. (2014) and González et al. (2015) research emphasize the positive impact of game dynamics and game dynamics are designed to motivate, entertain and evoke emotion when purchasing via social commerce.

The results of the structural model evaluation for moderating effect are presented in Table 4.8. Although the majority of respondents from Kosovo (59%) have played games in the last 12 months in Albania the majority (73.9%) of respondents have not played games. The results show that game experience as a moderator of the relationship between game elements and purchase intention resulted statistically insignificant due to p-value above 0.05. Concerning the path sign, the moderated relationship of game dynamics with behaviour intention resulted to be positive for Kosovars ($\beta = 0.05$) but negative for Albanians ($\beta = -0.12$). Furthermore, game mechanics, the moderated relationship resulted positive for Kosovars ($\beta=-0.0$) but negative for Albanians ($\beta=-0.06$). Lastly, the moderated relationship between game aesthetics and purchase intention for Kosovars ($\beta =-0.01$) and Albanians ($\beta =-0.03$) resulted in negative. Hence, based on the results H3a, H3b and H3c are not supported due to lack of evidence. Similar results have been confirmed by Dardis et al. (2015) where game experience did not predict the behavioural changes towards purchase intention. Furthermore, Mulcahy et al. (2018) study confirm that the game experience impacts the relationship between game elements, knowledge and satisfaction, low-skilled consumers are significantly different in the relationship between the challenge to knowledge. Whereas, Belgians and Dutch game experienced consumers showed higher purchase intention for gamified products (Bittner, Schipper 2014).

Table 4.7: Summary of discriminant validity

| Heterotrait-Monotrait (HTMT) | | | | | | | | | | | | | | | | |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|-----------|-----------|
| Constructs | AS | | PI | | DY | | GE | | GE*AS | | GE*DY | | GE*GM | | EU | |
| | XK | AL | XK | AL | XK | AL | XK | AL | XK | AL | XK | AL | XK | AL | XK | AL |
| PI | 0.30 | 0.33 | | | | | | | | | | | | | | |
| DY | 0.25 | 0.23 | 0.69 | 0.61 | | | | | | | | | | | | |
| EU | 0.28 | 0.40 | 0.64 | 0.56 | 0.61 | 0.68 | | | | | | | | | | |
| GE | 0.13 | 0.13 | 0.08 | 0.08 | 0.06 | 0.06 | | | | | | | | | | |
| GE*AS | 0.05 | 0.05 | 0.05 | 0.05 | 0.08 | 0.08 | 0.13 | 0.13 | | | | | | | | |
| GE*DY | 0.03 | 0.03 | 0.09 | 0.09 | 0.06 | 0.06 | 0.06 | 0.06 | 0.20 | 0.20 | | | | | | |
| GE*GM | 0.02 | 0.02 | 0.05 | 0.05 | 0.08 | 0.08 | 0.09 | 0.09 | 0.28 | 0.28 | 0.52 | 0.52 | | | | |
| GM | 0.24 | 0.38 | 0.56 | 0.50 | 0.63 | 0.57 | 0.10 | 0.10 | 0.08 | 0.08 | 0.08 | 0.08 | 0.07 | 0.07 | 0.32 | 0.51 |

Note: XK=Kosovo, AL=Albania; Source: Author

Table 4.8: Structural model evaluation

| Constructs | Path | SE | | t-value | | p-value | |
|-------------------|-------------|-----------|-----------|----------------|-----------|----------------|-----------|
| | | XK | AL | XK | AL | XK | AL |
| DY | DY→PI | 0.12 | 0.15 | 2.23 | 2.44 | 0.02 | 0.01 |
| | GE*DY →PI | 0.05 | -0.12 | 0.70 | 1.57 | 0.48 | 0.12 |
| GM | GM→PI | 0.43 | 0.36 | 6.27 | 5.15 | 0.00 | 0.00 |
| | GE*GM→PI | -0.01 | 0.06 | 0.20 | 0.86 | 0.84 | 0.40 |
| AS | AS→PI | 0.23 | 0.22 | 3.74 | 3.20 | 0.00 | 0.00 |
| | GE*AS→PI | -0.01 | -0.03 | 0.25 | 0.51 | 0.80 | 0.61 |

Note: XK=Kosovo, AL=Albania; Source: Author

The results of the structural model for mediation are presented in Table 4.9 which provide detailed information regarding the game elements direct and indirect effect on purchase intention. Regarding the direct effect, aesthetics positively affect (Kosovo: $\beta=0.16$; Albania: $\beta=0.21$) on perceived ease of use and the relationship is statistically significant ($p=0.00$). Also, game dynamics positively affect (Kosovo: $\beta=0.49$; Albania: $\beta=0.40$) on perceived ease of use and the relationship is statistically significant ($p=0.00$). Game mechanics, for Kosovar respondents negatively affect ($\beta=-0.49$) on perceived ease of use and the relationship is statistically insignificant ($p=0.90$). On the other hand, for Albanian respondents' game mechanics positively affect ($\beta=0.18$) on perceived ease of use and the relationship is statistically significant ($p=0.00$). Furthermore, perceived ease of use directly and positively affect (Kosovo: $\beta=0.59$; Albania: $\beta=0.46$) purchase intention and the relationship is statistically significant ($p=0.00$). Concerning the indirect effect of game elements, aesthetics (Kosovo and Albania: $\beta=0.09$) and game dynamics (Kosovo: $\beta=0.28$; Albania $\beta=0.18$) positively affect purchase intention and the relationship is statistically significant ($p=0.00$). For Kosovar respondents' game mechanics ($\beta=-0.49$) negatively impact purchase intention and the relationship is statistically insignificant ($p=0.90$). Different results have been noticed for Albanian respondents where game mechanics positively affected ($\beta=0.08$) purchase intention and the relationship is statistically significant ($p=0.01$). Based on the results it may be concluded that perceived ease of use is a complementary mediator because it mediates the relationship between game dynamics, aesthetics and purchase intention. Therefore, H2b and H2c are supported but H2a is not supported due to lack of evidence. Similar results have been presented by Bittner and Schipper (2014) where the attitude and perceived usefulness positively impact on intention to purchase gamified products. Also, Ashraf, Thongpapanl and Spyropoulou (2016) study confirm that perceived ease of use mediate the relationship between the visitors' attitudes and purchase intention.

Table 4.9: Structural model evaluation

| Construct and path | SE | | t-value | | p-value | |
|--------------------|-------|------|---------|------|---------|------|
| | XK | AL | XK | AL | XK | AL |
| Direct effect | | | | | | |
| AS→EU | 0.16 | 0.21 | 2.89 | 3.86 | 0.00 | 0.00 |
| DY→EU | 0.49 | 0.40 | 8.03 | 6.94 | 0.00 | 0.00 |
| GM→EU | -0.08 | 0.18 | 0.12 | 2.71 | 0.90 | 0.00 |
| EU→PI | 0.58 | 0.46 | 13.60 | 6.84 | 0.00 | 0.00 |
| Indirect effect | | | | | | |
| AS→PI | 0.09 | 0.09 | 2.82 | 3.61 | 0.00 | 0.00 |
| DY→PI | 0.28 | 0.18 | 6.28 | 5.14 | 0.00 | 0.00 |
| GM→PI | -0.05 | 0.08 | 0.12 | 2.20 | 0.90 | 0.01 |

Note: XK=Kosovo, AL=Albania; Source: Author

4.4 Additional findings

Chi-square test resulted positive for most of associations and the summary of Cramer's V test are presented in Table 4.10 and 4.11. The results for questions where chi-square was insignificant were not proceed for Cramer's V test. Considering that the questions have five categories the relationship strength is strong when Cramer's V is equal to 0.29 and is medium when Cramer's V is equal to 0.17. For Kosovar respondents, A strong association has been identified between the assumption of reaching higher social status, the opportunity for consumers to deplete their creativity by knowing how to use social commerce and access to the internet. Although is assumed that the internet facilitates the purchasing process but the lack of access to the internet and unfamiliarity with social commerce is strongly associated with the safe feeling to physically purchase in stores. Furthermore, easy access to the internet allowed consumers to assume that they would feel better when shopping via social commerce. A strong association has been identified between social media usage and feeling better as reaching higher social status. Regarding the benefits of purchasing via social media, a strong relationship has been noted between receiving rewards and the idea of considering shopping via social commerce as a fun and enjoyable process. Depleting creativity, feeling better and considering shopping via social commerce as a fun and enjoyable process is largely associated with access to social commerce which would stimulate purchase. The association between access to social commerce and feeling better while purchasing, achieving higher social status, creativity deplete is significantly large. Regarding the relationship strength for other items, the Cramer's V results indicate a medium association.

Table 4.10: Summary of SD and Cramer's V test for Kosovar respondents

| | SD | EU1 | EU2 | EU3 | EU4 | EU5 | PI1 | PI2 | PI3 | PI4 | PI5 |
|-----|------|------|------|------|-------------|-------------|------|-------------|-------------|-------------|-------------|
| AS1 | 1.10 | 0.23 | 0.18 | - | 0.20 | 0.18 | 0.18 | 0.17 | 0.19 | 0.18 | 0.17 |
| AS2 | 1.13 | 0.21 | 0.17 | 0.19 | 0.26 | 0.23 | 0.17 | 0.18 | 0.20 | 0.17 | 0.18 |
| AS3 | 1.19 | 0.19 | - | 0.20 | 0.22 | 0.23 | 0.18 | 0.16 | 0.23 | 0.18 | - |
| AS4 | 1.18 | 0.25 | 0.17 | 0.22 | 0.29 | 0.30 | 0.18 | 0.22 | 0.25 | 0.22 | 0.24 |
| AS5 | 1.21 | - | 0.22 | 0.20 | 0.17 | 0.17 | 0.23 | - | 0.17 | 0.19 | 0.17 |
| DY1 | 1.10 | 0.20 | 0.22 | 0.24 | 0.28 | 0.30 | 0.21 | 0.29 | 0.35 | 0.32 | 0.32 |
| DY2 | 1.09 | - | - | 0.20 | 0.29 | 0.32 | 0.18 | 0.31 | 0.22 | 0.26 | 0.30 |
| DY3 | 1.19 | 0.23 | 0.22 | 0.23 | 0.31 | 0.32 | 0.21 | 0.27 | 0.24 | 0.32 | 0.30 |
| DY4 | 1.17 | - | 0.16 | 0.17 | - | - | 0.22 | - | - | - | 0.18 |
| DY5 | 1.12 | - | - | 0.20 | - | - | 0.27 | - | - | - | - |
| GM1 | 1.27 | - | 0.25 | 0.21 | 0.19 | 0.21 | 0.23 | 0.20 | 0.25 | 0.22 | 0.24 |
| GM2 | 1.33 | - | 0.26 | 0.17 | - | 0.17 | 0.22 | 0.20 | 0.30 | 0.21 | 0.23 |
| GM3 | 1.28 | 0.18 | - | 0.23 | 0.18 | - | 0.17 | - | 0.17 | - | - |
| GM4 | 1.28 | - | 0.25 | 0.17 | 0.18 | 0.18 | 0.20 | 0.21 | 0.27 | 0.24 | 0.24 |
| GM5 | 1.19 | - | 0.22 | 0.16 | 0.18 | 0.19 | 0.19 | 0.25 | 0.30 | 0.29 | 0.28 |

Source: Author

Table 4.11 shows the results of Cramer’s V test for Albanian respondents. The association between the bank fee per transaction and purchasing offline is emotional, satisfactory and delightful, stimulate fantasy, able to touch and see products is significantly large. Also, according to Cramer’s V results, the association is stronger between the bank fee per transaction and reward as a stimulus to purchase via social commerce. Furthermore, a strong association has been noted between lack of support from social commerce and considering offline purchasing as satisfactory and delightful. Similar linkage has been distinguished between knowledge regarding social commerce usage and reaching higher social status when purchasing via social commerce. The association between easy access to the internet and the probability of purchasing via social commerce with feeling better is large. Furthermore, a powerful association has been identified between high-security measures when purchasing and the opportunity to touch and see the product followed with the feeling of discovery while purchasing offline. Feeling better, depleting creativity, the opportunity to touch and see the product while purchasing offline is largely associated with access to social commerce. A similar association has been identified between feeling better while purchasing and benefits of adopting to purchasing via social commerce whilst considering the access to social commerce as a stimulus to purchase frequently. The chance of accessing social commerce to purchase is largely associated with creativity deplete and feeling better while purchasing via social commerce, satisfaction and delight while purchasing offline. Lastly, Cramer’s V results for other items indicate that the relationship strength is medium.

Table 4.11: Summary of SD and Cramer’ V test for Albanian respondents

| | SD | EU1 | EU2 | EU3 | EU4 | EU5 | PI1 | PI2 | PI3 | PI4 | PI5 |
|-----|-----------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AS1 | 1.17 | 0.21 | 0.30 | 0.26 | 0.19 | 0.22 | 0.23 | 0.23 | 0.23 | 0.23 | 0.25 |
| AS2 | 1.12 | 0.24 | 0.35 | 0.30 | 0.22 | 0.23 | 0.27 | 0.26 | 0.24 | 0.27 | 0.29 |
| AS3 | 1.20 | 0.24 | 0.29 | 0.26 | 0.21 | 0.21 | 0.28 | 0.27 | 0.24 | 0.25 | 0.25 |
| AS4 | 1.13 | 0.21 | 0.33 | 0.26 | 0.25 | 0.20 | 0.29 | 0.28 | 0.23 | 0.23 | 0.26 |
| AS5 | 1.20 | 0.19 | 0.28 | 0.22 | 0.18 | 0.18 | 0.28 | 0.25 | 0.24 | 0.23 | 0.22 |
| DY1 | 0.98 | 0.23 | 0.34 | 0.21 | 0.25 | 0.33 | 0.23 | 0.30 | 0.32 | 0.32 | 0.36 |
| DY2 | 1.05 | 0.22 | 0.26 | 0.25 | 0.30 | 0.25 | 0.16 | 0.26 | 0.25 | 0.26 | 0.25 |
| DY3 | 1.09 | 0.24 | 0.28 | 0.22 | 0.21 | 0.24 | 0.25 | 0.30 | 0.28 | 0.28 | 0.29 |
| DY4 | 1.27 | 0.18 | 0.25 | 0.21 | 0.17 | 0.17 | 0.27 | 0.26 | 0.24 | 0.22 | 0.21 |
| DY5 | 1.29 | 0.19 | 0.29 | 0.22 | 0.17 | 0.18 | 0.36 | 0.31 | 0.28 | 0.25 | 0.21 |
| GM1 | 1.13 | 0.17 | 0.25 | 0.23 | 0.17 | 0.19 | 0.20 | 0.18 | 0.26 | 0.26 | 0.26 |
| GM2 | 1.21 | 0.18 | 0.28 | 0.23 | 0.24 | 0.23 | 0.22 | 0.19 | 0.27 | 0.23 | 0.25 |
| GM3 | 1.13 | 0.23 | 0.23 | 0.27 | - | 0.17 | 0.18 | 0.22 | 0.21 | 0.19 | 0.18 |
| GM4 | 1.20 | 0.21 | 0.31 | 0.23 | 0.22 | 0.20 | 0.25 | 0.19 | 0.24 | 0.25 | 0.27 |
| GM5 | 1.15 | 0.18 | 0.27 | 0.23 | 0.21 | 0.28 | 0.25 | 0.25 | 0.24 | 0.23 | 0.28 |

Source: Author

To investigate the gamification user type has been used HEXAD scale designed by Tondello et al. (2016). Based on the results of mean and standard deviation (SD), Kosovars and Albanians may be labelled in the group of players, achievers, socializers and free spirits. The respondents are labelled into the players' gamification user type due to the mean above 2.60 for game mechanics items. Free spirits and socializers are the groups where Kosovars and Albanians are categorized due to high mean for the aesthetics indicators. Lastly, the achievers are considered as the gamification user type that are motivated by challenges, certificates, learning new skills, quests, levels or progression, and epic challenges which are measured by the indicator of game dynamics and the majority of the indicators are above 2.60. Hence, it may be concluded that the gamification users' types based on the HEXAD scale where Albanians and Kosovars may be categorized are achievers, free spirits, players and socializers.

5. CONCLUSIONS

The study follows the post-positivism paradigm and has used primary and secondary data to investigate the impact of game elements in purchase intention. For the primary data, the unit of analysis have been individuals, residents of Kosovo and Albania, whereas to gather secondary data are used reports of social platforms, organization, governmental institutions and scientific databases. The differences between two countries that share the same language, history and cultural background are significant because according to Landers et al. (2018) gamification impact is highly influenced by demographic variables. The results of PLS-SEM analysis confirm that game elements affect positively on purchase intention and the relationship is statistically significant. Concerning the mediating effect, perceived ease of use is a complementary mediator because it mediates the relationship between game dynamics, aesthetics and purchase intention. Despite the mediator, game experience as a moderator resulted statistically insignificant. Regarding gamification users' types, based on the HEXAD scale Albanians and Kosovars may be categorized are achievers, free spirits, players and socializers gamification users' types. The constructs from MDA and TAM frameworks yield appealing results concerning game elements and perceived ease of use impact in purchase intention. The novel game elements empirically tested in the current study contribute to theory and practice by adding elements that enhance the purchase process and assist companies in improving and strengthen the relationship with consumers.

5.1 Theoretical contribution

This research explores the impact of game elements on purchase intention. By fulfilling the research aim, this study provides a comprehensive overview of gamification usage in consumer behaviour and shed novel insights into the nature

of gamification as a set of activities that impact purchase intention. Firstly, the study shed light on the game elements which impact consumer purchase intention via social commerce. The study draws attention to the necessity to employ game elements in the purchasing process. Although a few game elements have been examined in various disciplines, this study employs additional game elements and confirming the statistically significant impact to establish a fun and enjoyable process. Secondly, this study investigates the game elements which impact the change from purchasing in shops to purchasing through social media platforms. Hence, by investigating game experience and perceived ease of use it provides information regarding the factor which strengthen the relationship between game elements and purchase intention. Thirdly, combining two frameworks, MDA and TAM, provides important insight regarding the importance of perceived ease of use in the process of creating a fun and enjoyable purchasing experience for consumers. Also, adding variables such as game experience in the research framework yield additional information in favour of the description that gamification is broader than games and unnecessary are correlated with the favourable gamified outcome. Fourthly, this study proposes additional game elements besides the classics such as points, badges, leaderboards and rewards. The added elements confirm the positive influence of game elements on consumer purchase intention. Also, the game elements are empirically tested.

Finally, to the author knowledge, this study is among pioneer study carried out with unique constructs and indicators supported by data from two Western Balkan countries, Albania and Kosovo. Thus, the theoretical contribution may be summarised as follows. Firstly, by designing a unique framework with unexplored statements. Secondly, by testing the framework in an explored industry, social commerce retail. Thirdly, the country context, this study is supported by data from developing countries.

5.2 Practical contribution

The importance of this study lies in the significant rapid increase of internet users in most developing countries. The findings provide important information for practitioners which can be applied in marketing strategy. The information might be useful due to adjustment for the promotional campaign, consumer engagement and motivation. Due to constant changes and advancements in general, is essential to design an attractive gamified system and balance the usage of game elements within, product or service which strengthen customer engagement, motivate customers to purchase and induce an enjoyable and entertaining purchasing experience.

The findings of the study allow drawing several practical contributions. Firstly, the results suggest that social commerce might facilitate the purchasing process for Albanians and Kosovars. Due to the positive and significant impact of game

elements on purchase intention is advisable to take into consideration adding game elements in the purchase process by practitioners. Secondly, the perceived ease of use as a complementary mediator implies that the game dynamics and aesthetics significantly affect purchase intention. These results indicate that firms need to pay close attention to the establishment of user-friendly, fun and enjoyable page. Thirdly, although the results may be generalised regarding the impact of game elements on purchase intention social commerce firms have the opportunity to create a personalised promotional plan for each consumer.

5.3 Limitations and suggestions

After interpreting the findings of this study several limitations may be drawn. Although the collected data has been gathered in two Western Balkan countries is inadvisable to generalise with all countries within the region. Considering that Albanian and Kosovo share similarities with other emerging markets no comparison has been conducted with other markets in terms of technology usage. Besides, the study investigates purchase intention which explains 36% of actual behaviour future research should investigate the game elements impact on actual purchasing and post-purchasing. Considering that the study focuses on the factor which impacts purchase intention but does not contain information regarding the game elements impact on offline, m-commerce or e-commerce. Therefore, further study may be conducted by comparing purchasing means when game elements are considered. Replicating the study in other markets with different cultural background and adding more variables such as city, region and shop distance. Considering that this study has employed only a few game elements provide an opportunity for researchers to explore additional game elements and combine them with the cultural background and different moderator/mediators.

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