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MASTER THESIS

Value-creating factors of a freemium media platform for willingness to upgrade and consumer retention	Vertę kuriančių faktorių įtaka vartotojų pasiryžimui mokėti papildomai ir testuoti produkto vartojimą iš dalies nemokamoje žiniasklaidos platformoje
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INTRODUCTION

Relevance of the topic. In the last two decades, freemium business model has gained popularity in various online business models, starting from cloud storage providers, music, video, online games, media and other services. As freemium business service gives a part of its offering for free, it serves well to attract initial customers. However, Holm and Günzel-Jensen (2017) observe, while some companies like LinkedIn or Spotify thrive operating in freemium business model, others, like Gasketball, Chargify or TravelCrony ultimately fail. Online media industry is facing the same challenges: even though more and more online media outlets are moving from free offer to premium offer (Simon and Graves, 2019), Holm (2016) highlights that freemium model has struggled to generate the anticipated revenues predicted by media industry stakeholders. Therefore, the question of specific factors which determine success for a freemium online media, remains crucial to answer.

Level of research of the topic. As freemium model has been widely adopted by an online business, the topic also received significant amount of researchers' attention. We can divide the existent research of freemium business model into 8 different groups: success factors for freemium companies, willingness to pay (WTP), willingness to upgrade (WTU), zero-price effect, free mentality, social influence on WTP, marketing strategies to increase the revenue, user retention.

Researchers, investigating freemium business model in online media, have been focusing mostly on these topics: success factors form freemium online media (Berger, Matt, Steininger and Hess, 2015; Holm 2016); marketing strategies to increase revenue (Daniel O'Brien, 2022; Fernandes, 2023; Holm, 2016; Jenkins, 2020; Lambrecht and Misra, 2017; Pattabhiramaiah, Overby and Xu, 2022); WTU (Berger, Matt, Steininger and Hess, 2015; Russell, 2020); freemium model challenges in online media (Antonopoulos et al., 2020); Myllylahti (2013); Simon and Graves, 2019).

Russel's (2020) research reveal that lowering the attractiveness of the free version and boosting the desirability of the premium version positively influence users willingness to switch to a premium version, which is in line with the finding of the authors who were scrutinizing freemium business model in other industries (Aronsson and Eden, 2020; Kim, Lee and Zo, 2018; Ku, 2017; Mäntymäki, Islam, and Benbasat, 2019). However, there is a scarcity of investigation

on what specific factors create value to influence online media users' willingness to upgrade to or continue using the premium services.

The novelty of Master thesis. The thesis compliments the existing research of freemium business model success factors in online media and provides deeper analysis of the specific value-creating factors for customer acquisition and retention. Scrutinizing the specific value-creating factors for freemium online media will benefit both media industry managers and scholars as they will receive additional insights on how to attract more customers to online media premium services and keep the existing ones.

The problem of the Master thesis. As Holmes (2016) has identified that online freemium media businesses have been struggling with adopting the model, this thesis seeks to answer, which value-creating factors of a freemium media platform influence willingness to upgrade and consumer retention.

The aim of the Master thesis is to identify value-creating factors of a Lithuanian business freemium platform vz.lt and their influence on willingness to upgrade and consumer retention.

The objectives of the Master thesis:

1. Evaluate the role and impact of freemium business model on customer acquisition and retention, with the focus on the media industry and an overview of value-creating factors identified in existing research.
2. Identify value-creating factors of a freemium media platform through a quantitative analysis.
3. Prepare managerial implications to improve customer acquisition and retention for online media businesses and recommendation for future research.

The object of the Master thesis is value-creating factors of a freemium media platform for willingness to upgrade and consumer retention.

The methods deployed by the Master thesis encompass a multifaced approach to data analysis. For the literature review, a systematic literature review method is utilized to synthesise relevant studies on the Master thesis topic. Conceptual analysis is used to define key concepts and theories extracted from the literature. Qualitative content analysis serves as a primary method for identifying themes and patterns within the literature. Comparative analysis is conducted to contrast different aspect of multiple studies, identifying both similarities and differences, as well as trends across literature. In addition, a quantitative analysis of value-creating constructs is carried out via online survey. The data collected from the survey is analysed using SPSS program. Specifically,

multiple regression analysis is utilized to examine the relationships between variables and identify predictors of certain outcomes.

The structure of the Master thesis. The master thesis consists of the analysis of scientific literature, where the topics of freemium model, value-creating factors, willingness to upgrade (WTU), customer retention, online media freemium business model and an overview of previous research concerning value-creating determinant and their relationship with consumers' continuous usage and upgrade intentions in online freemium business platform will be analysed. After, the empirical research methodology will be explained, along with the theoretical framework and hypothesis. After, a quantitative analysis will be performed with the online survey and a regression analysis. Finally, conclusions and recommendations will be drawn.

1. THE THEORY OF VALUE-CREATING FACTORS OF A FREEMIUM MEDIA PLATFORM FOR WILLINGNESS TO UPGRADE AND CONSUMER RETENTION

1.1. The concepts of freemium model, value creation and willingness to pay in freemium business models

1.1.1. The definition and foundation of a freemium business model

In the academic literature, there is no major disagreement on the term “freemium”, the context in which it was developed and the level of adoption in various online business models. Still, there are some fine distinctions of the term from different authors which we will outline.

Huang (2016) states that the term “freemium” was first presented by Fred Wilson in 2006. Freemium, describes Hayes, referred by Liu (2014), a combination of the words “free” and “premium”, is a business model where a product or a service is offered for free, but for advanced features, additional services, or functionalities a fee is applied. Holm and Günzel-Jensen (2017) in their explanation of freemium involves the objective of the business model: they propose that the model involves providing a basic version of a product or service free of charge, planning to convince a satisfactory number of users to pay for a premium version. Wagner, Benlian & Hess, cited by Lee, S., Kim & Lee, H. (2022), highlight the binary nature of the model: they describe freemium as a twofold strategic business model that offer basic functionalities without a cost and advanced functionalities with a premium charge. Mäntymäki, Islam & Benbasat (2019) supplement that consequently two groups with varying standards for user experience are established: basic or free users who use the free subscription and premium users who use the premium subscription. The two groups are also accentuated by Gassmann, Frankenberger & Csik, referenced by Holm and Günzel-Jensen (2017), as they indicate that the fundamental idea that defines freemium is that there are at least two groups of users who derive value from a proposition: non-paying or basic users, who receive a restricted value offering for free, and paying users or customers, who gain an augmented value offering for premium. Anderson, quoted by Hamari, Hanner & Koivisto (2019), highlight the importance of the extensive customer audience, proposing that the principle of freemium services has been to attract and involve a substantial

customer pool with free entry, which then leads to a smaller segment of users who opt for premium content. Various definitions of “freemium” by different authors is displayed in *Table 25*.

Table 25

Definitions of “freemium” by different authors

Author	Definition
Hayes, referred by Liu, 2014	A business model by which a service or a product is offered free of charge , but a premium is charged for advanced features, functionality, or related products and services
Huang, 2016	The freemium business model means a business model provides free products with basic functions and attracts users with free services.
Holm and Günzel-Jensen, 2017	The freemium business model involves providing a basic version of a product or service for free , with the intention of persuading enough customers to pay for a more advanced version .
Hamari et al., 2017	The freemium business model can be defined as a product/pricing structure where the core service is available free of charge , but revenue is generated through advertisement or increasingly through selling additional content such as game items, various upgrades, better functionality
Kim et al., 2018	Freemium, a combination of “free” and “premium,” is a business model that provides free basic features and charges for premium features .
Wagner, Benlian & Hess, cited by Lee et al., 2022	Freemium is a two-stage strategic business model that provides basic functionalities free and advanced functionalities at premium .
Lee et al., 2022	The freemium model, a business model that provides basic functions for free and makes a profit by providing advanced functions at a premium .

Source: Made by the author according to Hamari et al., 2017; Holm and Günzel-Jensen, 2017; Huang, 2016; Lee et al., 2022; Kim et al., 2018.

Kim, Lee & Zo (2018) observe that the foundation for freemium model was established as information technology (IT) business models evolved alongside the progress of IT, leading software application companies to offer free applications to attract users and generate revenue from advertisers. However, advertising revenues were low and it was difficult to sustain the users, therefore freemium model, conclude Anderson quoted by Kim et al. (2018), emerged as a solution. Huang (2016) extends that as freemium firstly emerged in the software industry, many distinguished software enterprises, like Kaspersky, still adopt the measure. Various authors (Huang, 2016; Liu et al., 2014; Mäntymäki et al., 2019; Panda, 2019) remark that freemium business model has been widely adopted in a variety of online business. Freemium model business generates value not solely from premium users, but also from free users as increased network effects when their participation in the platform enhances user experience for the premium customers (Hamari et al., 2019). The appeal of the freemium model for companies is that it can drive substantial traffic and enable direct reach to potential paying users without making major investments in marketing (Gu, Kannan & Ma, 2018). The freemium strategy also functions as a

marketing tool that can attract potential clients through channels such as word of mouth and organic searches, and for customers the strategy gives an opportunity to experiment a new product or service free of charge (Gu et al., 2018). Freemium model has gained a lot of popularity and success especially in the online games sector (Hamari et al., 2019). Indeed, there is a vast amount of scientific research related to online games in the freemium context, analyzed by Ku (2017), Liu et al. (2014), Guo, Chen, Goes & Zhang (2022).

There is a difference how various authors describe types of freemium, and it be covered to enhance comprehension of the model. We have found two ways of structuring freemium business models. Deubener, Velamuri & Schneckenberg (2016) structures it by limitations in the model mechanisms to Functionality/Featured limited; Free Trial/Time-limited; Usage; User Eperience and Combinations. Panda (2019) structures it into Free trial, Feature bound, Seat limited and Customer-type bound. Different types of the structure are explained in the *Table 26* and *Table 27*.

Table 26

Types of Freemium by Deubener et al.(2016)

Type of Freemium	Value Proposition
Functionality / Feature-limited	The premium package offers virtual currency and different virtual items, and upgrades
Free Trial / Time-limited	The free tier provides full functionality but is only accessible for a limited duration.
Usage	The free package imposes restrictions on usage, bandwidth, hours, or storage space.
User Experience	Free version is supported by advertisements, whereas the premium offers an ad-free experience.
Combination	Any combination of the four options above.

Source: based on Deubener et al. (2016)

Table 27

Types of Freemium by Panda (2019)

Type of Freemium	Value Proposition
Feature Bound	Basic version is offered for free and an advanced version is paid
Free Trial	Users can access the full platform for a specific number of days for free
Seat limited	Limited number of users can access the full platform for free, other need to pay
Customer-type bound	Small firms can use the platform free of charge, and larger companies need to pay.

Source: based on Panda (2019).

After analysing different definitions of freemium, the model's foundations and compositions, we can conclude that freemium model is a wide-spread business model used especially in online business, where a part of the product or its basic version is offered for free while for an upgraded version with more advanced features or functionalities users have to pay. The model is supposed to benefit both from paying users and non-paying as they can become paying, enhance the experience of the paying users, or attract more revenue from advertisers.

1.1.2. Value creation concept in a freemium business model and value-creating factors

Even though freemium model has been widely adopted by online business platforms, the model also encountered challenges (Holmes, 2016). Therefore, various researchers (Aronsson and Eden, 2020; Holm and Günzel-Jensen, 2017; Panda, 2019) have been investigating the success factors in the freemium business models and what elements construct the foundations of the value creation in freemium business models (Hamari et al., 2017; Mäntymäki et al., 2019; Sheth, Newman & Gross, 1991).

Holm and Günzel-Jensen (2017) and Panda (2019) highlight the importance of 4V model for a freemium model success. At the centre of this model is value as it is composed of value proposition, value delivery, value creation, and value capture (Panda, 2019). After analysing LinkedIn, Box, Spotify and Eventbrite in the 4V framework, Holm and Günzel-Jensen (2017) conclude that in order to be successful, freemium companies' managers should attract vast numbers of users and achieve a high company valuation, which was the case of the researched companies. The scholars develop that to achieve these goals, freemium businesses need to maintain the high value of freemium and premium offerings (Holm and Günzel-Jensen, 2017). The following important question emerged of what the greatest value-creating factors are, which was investigated by the wide scope of researchers (Hamari et al., 2017; Mäntymäki et al., 2019; Sheth et al., 1991).

Sheth et al. (1991) laid the strong foundation for the value creation research in freemium business models and different scholars (Hamari et al., 2017; Mäntymäki et al., 2019; Wang, Lowry, Luo & Li, 2023) based their further research in the field on their findings. In fact, Sheth et al. (1991) formed the groundwork for Total Customer Value (TCV) theoretical perspective which suggests that consumer decisions are influenced by several dimensions of value, each playing a

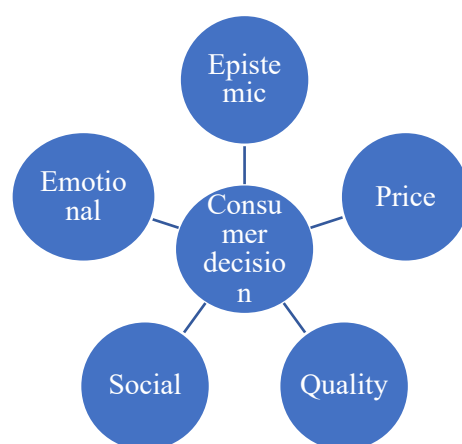
different role depending on the context (Sheth et al., 1991). The scholars distinguished utilitarian and hedonistic value-creating factors and outlined that consumer choice behaviour is influenced by 5 major factors:

- Functional value is perceived usefulness obtained from an alternative's ability to perform functional, utilitarian or physical tasks;
- Social value is perceived usefulness obtained from an alternative's connection with one or more particular social groups;
- Emotional value is perceived value gained from alternative's ability to evoke emotions;
- Epistemic value is perceived value obtained from an alternative's ability to evoke curiosity;
- Conditional value is perceived value gained from alternative due to circumstances (Sheth et al. (1991)).

Sweeney and Soutar (2001) deepened Sheth's research and adjusted it developing a 4 dimension, 19 items conceptual perceived value framework PERVAL. The main difference from 5 factors scale of Sheth et al. (1991) was that Sweeney and Soutar (2001) separated functional value into price and quality and did not consider epistemic and conditional values. Therefore, the four Sweeney and Soutar's (2001) dimensions were: emotional value, social value, price value and quality value. Hamari et al. (2017) state that these four dimensions are deemed as principal metrics of the concept.

Figure 9

Service values influencing customer decision



Source: Made by the author based on the models of Sheth et al. (1991) and Sweeney and Soutar (2001).

The second major theoretical perspective on consumer value is the Means-End Chain (MEC). The MEC perspective compliments the Total Customer Value (TCV) by offering a framework for conceptualizing the links between different value dimensions and suggests that customer organize product knowledge into three interconnected cognitive categories: attributes, benefits, and terminal values (Gutman, 1982). For example, in the context of freemium media platform, the author of the thesis consider that attributes could be unlimited content, ad-free experience, exclusive content. Benefits for the mentioned attributes would be enjoyment, sense of superiority, price value. Terminal values could encompass broader aspirations and desired end states, like self-fulfilment, social connection, and quality of life. Further research of Gutman, quoted by Mäntymäki et al. (2019) reveals, that in customer decision-making, benefits typically hold greater importance than attributes or terminal values.

The author of this thesis deems the combination of the models of Sheth et al. (1991) and Sweeney and Soutar (2001) is the most useful to identify how the consumers perceive the value and the combined model you can see in the *Figure 9*. Conditional value, to our view, is not necessary to measure for this work as we seek to identify the value of service per se not depending on temporary conditions. From the other side, epistemic value, which Sweeney and Soutar (2001) omitted, is a valid measure for our research question. Mäntymäki et al. (2019) also used this measure in terms of discovery of new content and find out that this factor encourages consumers to keep using the freemium platform.

To summarize, there were two major theoretical perspectives TCV and MCV analysed concerning the value creation. Sheth et al. (1991) and Sweeney and Soutar (2001) laid the foundations for TCV framework, and the MEC perspective analysed the links between the different value dimensions within the TCV. Both frameworks are useful for the development of this thesis.

1.1.3. The influence of zero-price effect on value perception for freemium business

Investigating consumers' perceptions of value of free offerings, researchers (Björn, 2018; Niemand, Tischer, Fritzsche & Kraus, 2015; Shampanier, Mazar & Arieli, 2007) have been analysing a significant phenomenon, contributing to the value perception of freemium business, which is zero-price effect.

To perceive better the zero-price effect it is important to look at quality and sacrifice role in value perception. Early literature in economics and marketing focused on the importance of value perception in product evaluation, highlighting the trade-off between perceived quality and perceived sacrifice (Niemand et al., 2015). Consumers assess the value of a product based on its perceived benefits and the sacrifices required, with the price as an indicator of quality, but also representing a monetary expense, leading to complex evaluations influence by various moderators such as product attributes and consumer characteristics (Niemand et al., 2015). Völckner and Hofmann (2007) in their research identify that even though price effect on perceived quality has decreased, it is still significant, and price remains a crucial factor for consumers in assessing product quality. Therefore, a significant reduction of commodity or service cost can decrease not only its price perception, but also its quality perception (Völckner and Hofmann, 2007).

However, when it comes to free offerings of products and services, consumers do not perceive it as poor-quality offering because of the zero-price effect, firstly discovered by Shampanier et al. (2007). The zero-price effect shows that facing a choice of selecting one of several available products (or services), contrary to standard theoretical perspective to choose the one of the highest cost-benefit difference, when free products are involved, consumers perceive the benefits associated with these products as much higher, which is a benefit-inflation effect (Shampanier et al., 2007). In addition, the zero-price effect is not only composed of the identified effect, but also of cost-deflation effect, when consumers perceive the non-monetary costs (NMCs) of free offerings as lower (Hüttel, Schumann, Mende, Scott & Wagner, 2018). The research of Hüttel et al. (2018) sheds light on the NMCs: according to it, consumers are aware of these costs, but are more willing to accept them and recognize them, as an example, in a form as advertisements, as less disturbing. Moreover, research by Hossain and Saini (2015) indicates that the zero-price effect is particularly pronounced for hedonic products or services. They found that hedonic stimuli which have enhanced emotional impact, leads to a more concave assessment as compared to utilitarian stimuli (Hossain and Saini, 2015). This highlights the importance of emotions in shaping consumers perceptions of free offerings. In general, the fact that the product or service is offered for free provokes happiness and positive attitudes towards it (Niemand et al., 2015). Therefore, highlighting services as free elevates consumers' perceptions of benefits, diminishes their assessment of corresponding non-monetary costs, thereby increasing consumer demand (Hüttel et al., 2018, Niemand et al., 2015). From the other side, zero-price effect can also bring the negative consequences for freemium business, as consumers perceive that free services

provide more value than premium services, not less, which encourages them to stay with free versions (Niemand et al., 2015). Therefore freemium business managers need to conduct a market research to clearly differentiate and highlight the value of the premium product and in this way increase their perceived value perception of the premium product (Niemand et al., 2019; Russel, 2020).

In conclusion, the zero-price effect, as explored by researchers (Björn, 2018; Hossain and Saini, 2015; Hüttel et al., 2018; Niemand et al., 2015 and 2019; Shampanier et al., 2007), shed light on consumer perceptions withing freemium business models. This phenomenon, complexly linked to notions of perceived quality, sacrifice and emotional resonance, underscores the complexities of value perception. While the appeal of free offerings may enhance perceived benefits and diminish assessments of NMC, it also poses challenges for freemium business sustainability. Proactive measures, including strategic market research, are essential for business to highlight the distinct value propositions of premium offerings and mitigate the appeal of free alternatives (Niemand et al., 2019; Russel, 2020). Therefore, it is important for businesses to understand the zero-price effect to make the best use of the freemiums business model.

1.1.4. The concept of consumer willingness to upgrade in freemium business models

As freemium business model has been a key to success to some companies like LinkedIn and Spotify, but never worked out to others like Chargify or TravelCrony (Holm and Günzel-Jensen, 2017), various scholars (Hamari, Hanner & Koivisto; 2017 and 2020; Huang, 2016; Islam and Benbasat; 2019, Kim, Lee, Zo; 2018, Koch and Benlian; 2017, Ku; 2017, Li and Cheng; 2014, Russel; 2020, Mäntymäki, 2019) have been trying to determine the underlying reasons of consumers' willingness to upgrade to or willingness to pay for premium service, but there have been no consensus.

To begin with, in the existent literature delving into consumers motivation to pay for premium services, there is a lack of definition for the concepts of willingness to pay (WTP) or willingness to upgrade (WTU). We have also identified that WTU and WTP are very similar concepts as WTU encompass WTP. However, the slight difference, as per understanding of the author of this thesis, is that WTU refers to the readiness to pay for a premium service of the current customers of the freemium service and willingness to pay encompass both the readiness to pay for

premium of current freemium customers and of new customers, not using the platform yet. However, in freemium business services, the great part of the customers tends to firstly try the freemium service before converting to premium, therefore the WTU concept, to our understanding, is even more relevant to this thesis, but we will also look at the finding of the WTP research to have a broad understanding of the phenomena.

Delving into consumers' WTU, it is important to touch upon loss aversion theory, which illustrates a cognitive distortion whereby individuals tend to overvalue what they stand to lose compared to what they could gain (Koch and Benlian, 2016). According to Ariely, quoted by Koch and Benlian (2016), at the core of this phenomenon lies reference dependence, indicating that losses are perceived as more significant than gains in comparison to one's current endowment. In the freemium business model context, the effect of loss aversion can influence consumers' WTU in the opposite ways. From one side, it can contribute to WTU as freemium consumers can feel the fear of missing out of beneficial freemium features (Hamari et al., 2020). Also, customers tend to react more intensely to service quality that fails to meet their expectations (Hamari et al., 2020). In the freemium business model context, to avoid the perceived loss of receiving lower quality service, customers may be motivated to pay for the premium. From the other side, because of the loss aversion, consumers can be reluctant to pay for premium service while freemium service is available, perceiving the upgrade to premium as a loss of freemium (Paul Heidhues and Botond Köszegi, 2004). Therefore, it is believed that freemium businesses need to focus on optimal pricing to increase WTU and the revenue (Mishra, Najafi, Najafi-Asadolahi & Tsay, 2018). In addition, to increase WTU and having in mind the loss aversion phenomena, business can adopt specific strategies. Koch and Benlian (2016) outline that due to loss aversion business should apply Premiumfirst strategy, when new functions/upgrades of the service or product can firstly experiment the premium users instead of Freefirst strategy, when the product or service firstly is offered for free and later is charged for. The fundamental theoretical rationale is that consumers, influenced by loss aversion, will perceive a greater incremental value in the premium version compared to the free version in Premiumfirst model, thus boosting their likelihood of conversion (Koch and Benlian, 2016).

Touching upon perception of the value of a freemium platform, there is a disagreement between scholars how does it affect consumers WTP. We identified that the studies of Mäntymäki and Salo (2011) and Mäntymäki et al. (2019) found the opposite results than Hamari et al. (2020) in a few areas related to value creation. To start with, Mäntymäki et al. (2019) found positive

impact of hedonic value (enjoyment) on WTP, while Hamari et al. (2020) observed the negative impact. Secondly, Mäntymäki and Salo (2011) depicted noteworthy impact of functionality on WTP while in the study of Hamari et al. (2020) it was insignificant. Thirdly, Mäntymäki et al. (2019) identified that social value was not significant on WTP while the study of Hamari et al. (2020) showed the opposite results. In this field there are numerous researchers who is in line with Hamari et al. and found positive impact of social value on WTP (Bründl, 2018; Bapna and Umyarov, 2015; Guo, Chen, Goes & Zhang, 2022; Kim, Lee & Zo, 2018; Ross, 2018; Rietveld, 2018) and one (Hsu and Lin, 2015), supporting Mäntymäki's results. In addition, the findings of Hamari et al. (2020) on hedonic value has support of Kim et al. (2018), where the latter authors observed that user satisfaction did not impact their WTP. The comparison of findings of different studies on different aspects of perceived value and their effect on WTP is presented in the **Table 28**.

Table 28

Impact of different value dimensions on WTP

Influence of WTP	Impact of hedonic value	Impact of functionality	Impact of social value
Affects WTP positively	Mäntymäki et al. (2019)	Mäntymäki and Salo (2011)	Bründl, 2018; Bapna and Umyarov, 2015; Guo, Chen, Goes & Zhang, 2022; Hamari et al., 2020; Kim, Lee & Zo, 2018; Ross, 2018; Rietveld, 2018
Affects WTP negatively	Hamari et al. (2020); Kim et al. (2018)		
Not significant on WTP		Hamari et al. (2020)	Hsu and Lin (2015); Mäntymäki et al. (2019)

Source: Table made by the author of the thesis based on the authors discussed in the chapter.

In conclusion, scholars have extensively explored consumers WTU and WTP, yet without a unanimous consensus. Loss aversion theory was identified as a significant factor influencing consumer behaviour within the freemium context, presenting both challenges and opportunities for freemium business models. Strategies such as Premiumfirst have been offered to mitigate the impact of loss aversion and increase WTU, resulting in higher revenues. Moreover, there is an ongoing debate on the components of value for WTP. Therefore, this research aims to contribute

to identification of the elements of value which make the highest impact on WTP and WTU in the freemium online business platforms.

1.1.5. The effect of free mentality on WTU in freemium online platforms

Some scholars (Dou, 2015; Kim et al., 2018; Lin, Hsu & Chen, 2013; Niemand et al., 2019; Yan and Wakefield, 2018), analyzing consumers WTU in freemium business platforms, place significant emphasis on the phenomenon called free mentality, which could influence their WTU. As the researchers identified that free mentality indeed affected their WTU, we deem it necessary to discuss it.

Offering content for free has been a prevalent business approach ever since radio and television appeared (Lin et al., 2013). Within this model, customers needed to pay for the devices, but the content was free (Lin et al., 2013). The same approach was taken also by the software providers when the Internet emerged. For decades, software providers have offered their products and services at no cost, relying only on advertising revenue, and over time, users have become accustomed to accessing software for free and have adopted a mindset of expecting it to be free (Kim et al., 2018). In addition, not only software providers, but also other online business applied the same approach and offered different type of online content for free (Kim et al., 2018; Yan and Wakefield, 2018). This is how the free mentality mindset emerged as a phenomenon when Internet users were convinced that all online content should be provided at no cost (Yan and Wakefield, 2018). For freemium business the effect of free mentality has two sides. From one side, the users with high free mentality lean heavily towards the mindset of expecting free option in the digital realm, and they are likely to perceive greater value in free offerings, leading to stronger preferences for such products or services (Niemand et al., 2019). From the other side, customers with a strong free mentality find themselves unwilling to pay for premium services (Lin et al., 2013; Yan and Wakefield, 2018) and in this way influence the success of the freemium model.

All scholars (Dou, 2015; Kim et al., 2018; Lin et al., 2013; Niemand et al., 2019; Yan and Wakefield, 2018), researching free mentality phenomenon found that it negatively affected

consumers WTU for premium services. Yan and Wakefield (2018) in their study supported the hypothesis that free mentality acts as a moderator between perceived value and willingness to subscribe in a way that increased free mentality weakens the relationship. Therefore, the research supported the theory that consumers with stronger free mentality are less likely to pay for premium online services, and services providers should challenge this mindset to put more emphasis on value perception and gained benefits of the premium service (Yan and Wakefield, 2018). Lin et al. (2013) in their study identified the moderating effect of free mentality on the relationship between perceived sacrifice and attitude toward paying. The results showed that people with high free mentality were less willing to pay in the context of the online music when the perceived sacrifices were high, but more willing to pay, in comparison with the ones with low free mentality, when the perceived sacrifices were low (Lin et al., 2013). Niemand et al. (2019) advanced the research on free mentality effect even further, assessing the relationship between opposing to free mentality phenomenon of the price–quality inference, which is the tendency to expect a positive relationship between price and quality, free mentality and the zero-price effect (Niemand et al., 2019). According to them, when a user possesses both strong free mentality and high price–quality implications, the zero-price effect is considerably weakened (Niemand et al., 2019). The mitigation of free mentality involves value discrepancy, that users perceive the premium offer significantly higher than the freemium, emphasizing the benefits of the premium offer (Lin et al., 2013; Niemand et al., 2019) or the reduction of costs for premium services (Lin et al., 2013).

In conclusion, free mentality significantly forms consumers' WTU in online freemium platforms, as highlighted by scholars Dou (2015), Kim et al. (2018), Lin et al. (2013), Niemand, et al. (2019) and Yan and Wakefield (2018). This mindset, established in the historical practice of offering content for free, often leads to consumers choice of free offer an unwillingness to opt for a premium one. Nonetheless, scholars (Lin et al., 2013; Niemand et al.) also suggest strategies for mitigating the free mentality, such as emphasizing the benefits of premium services and reducing the perceived sacrifices.

1.2. The concept of consumer retention in freemium business models

1.2.1 The concept of customer retention as essential part of CRM

The discourse surround customer retention reflects a unanimous agreement that is an essential part of customer relationship management (CRM) (Alkitbi et. al., 2020, Ascarza et al., 2018) and that its essence is a steadfast commitment of customers to remain loyal to a brand (Ahmad and Buttle, 2002; Alkitbi et. al., 2020; Ascarza et. al., 2018). Ascarza et al. (2018) went even further emphasizing that consumer retention is the most important part of CRM. Let us delve further into the definition, importance, main perspectives, and best strategies for retention.

Authors, defining customer retention, agree that its meaning involves customer intention to stay with the brand. Danesh et al., quoted but Alkitbi et. al. (2020), states that customer retention is “the future propensity of a customer to stay with the service provider” (p. 1). Ascarza et. al. (2018) defines the phenomenon as “the customer continuing to transact with the firm” (p. 65). The key feature of the process of continuous transaction, which is retention, is that it facilitates the company to augment its profitability (Ahmad and Buttle, 2002; Alkitbi et. al., 2020; Ascarza et. al., 2018). Reichheld and Teal, whose work was quoted more than 7000 times in scientific literature, referred by Hosmer (1988), states that 5% increase of retention raises the value of the customer by 25-100%. Scholars (Ahmad and Buttle, 2002, Sabbeh, 2019) emphasize that retaining customers is more economical than acquiring new ones. According to Sabbeh (2019), customer retention, depending on business sector, is up to 20 times more cost-efficient than customer acquisition. Therefore, researchers (Ahmad and Buttle, 2002, Ascarza et al., 2018) agree that customer retention is the cornerstone of CRM.

Upon further exploration of the theory of customer retention, we identified three perspectives that gave rise to customer retention management: service marketing; industrial marketing and general management (Ahmad and Buttle, 2010). Scholars elaborate, that service marketing is about improving customer service quality and satisfaction, industrial marketing concentrates on keeping customers while creating strong financial, social, and structural bonds, and general management emphasizes measuring retention, preventing customer defection, and analyzing customer portfolio (Ahmad and Buttle, 2010). Rust, Lemon and Zeithaml (2004) define two assumptions, how was customer retention approached historically: “lost for good” and “always a share” (p. 4). The first one uses customer’s retention probability to anticipate if a

customer will remain with the firm in the following period while the second assumes that the customer will not give any company all their business (Rust et al., 2004).

Table 29

Components for successful customer retention

Component	Scholars endorsing
Commitment/Loyalty	Alkitbi et al., 2020; Sağlam and El Montaser, 2021; Verhoef, 2004
Trust	Alkitbi et al.; Verhoef, 2004
Customer satisfaction	Alkitbi et al., 2020; Rust and Zahorik, 1993
Communication	Verhoef, 2004
Conflict handling	Verhoef, 2004
Brand equity	Stahl et. al., 2012
Service quality	Reicheld and Earl Sasser, 1990

Source: made by the author according to Alkitbi et al., 2020, Reicheld and Earl Sasser, 1990, Rust and Zahorik, 1993, Sağlam and El Montaser, 2021, Stahl et al., 2012, and Verhoef, 2004.

Having reviewed the theoretical components of customer retention and its essential role in any company, it is necessary to touch upon the most important components (covered in **Table 29**) and successful strategies. Firstly, scholars consent that one of the components for successful customer retention is customers' commitment towards the brand (Alkitbi et al., 2020; Sağlam and El Montaser, 2021; Verhoef, 2004). Besides that, other components like trust (Alkitbi et al., 2020; Verhoef, 2004), communication, conflict handling (Verhoef, 2004), brand equity (Stahl et al., 2012), customer satisfaction (Alkitbi et al., 2020; Rust and Zahorik, 1993) and loyalty (Alkitbi et al., 2020) were also proven to have an important impact on customers retention. Taking a closer look to some specific measures, Verhoef (2003) demonstrated that financially driven relationship marketing programs like direct mailings and loyalty programs, improving customer satisfaction, use of appealing pricing approach contributes to customer retention. Taking proactive steps to customer retention, companies should also distinguish whom to target – customers highly connected with other customers are especially valuable – and when to target – neither too late, when there is no solution already, nor too early, to prevent clients of thinking of leaving (Ascarza

et al., 2018). In customer retention context, it is difficult not to mention Reichheld's and Earl Sasser's (1990) findings – even if they wrote it more than 3 decades ago, they were referred more than 12000 times in the scientific literature. They are advocating for zero defection to foster client retention: the rationale is that decreasing defections keeps customers with a company longer resulting in higher financial gains (Reichheld and Earl Sasser, 1990). Even if not to make defection for a company is impossible, scholars agree (Hamari et al., 2017; Kim et al., 2018) that service quality encourages customers to stay with the company longer.

In closing, we observed great number of scholars analyzing customer retention and advocating its importance as per ability to raise company's value in times. We have uncovered some most important components of customer retention, like customer commitment, satisfaction and service quality. Nonetheless, the latter is quite complex in freemium business as while contributing to retention, enhanced quality there does not encourage (Hamari et al., 2017; Kim et al., 2018) users to upgrade. The nuances of customer retention in freemium will be covered in the next section.

1.2.2. Customer retention in freemium business models

In freemium business models, customer retention proves to be quite complex, requiring managers to address not only customer acquisition and retention but also the conversion of customers from free to paying. The measures for conversion may sometimes contradict those employed for retention. Let us examine the unique characteristics and optimal strategies uncovered by scholars' research for freemium business.

Loyal users serve as a consistent source of profit (Kim et al, 2018), and for freemium business it is crucial to keep these users in their premium services. As most of the freemium business revenue is generated from the smallest portion of premium users, increased termination of premium users can endanger even firm's existence (Brüggemann and Lehmann-Zschunke, 2022). Therefore, customer retention is one of the key metrics for freemium business (Brüggemann and Lehmann-Zschunke, 2022). Various scholars have concluded that user satisfaction about the service increase retention (Hamari et al., 2017; Kim et al., 2018; Rahmansyah and Hati, 2020). From the other side, since significant perceived value difference between freemium and premium offerings is crucial to encourage user conversion, some researchers propose diminishing the value of the free version while enhancing the value of the

premium version to stimulate conversion (Russell, 2020). Managers face a dilemma, as the positive impact of users' satisfaction with service quality on their intention to continue and remain (Hamari et al., 2017; Kim et al., 2018; Rahmansyah and Hati, 2020) conflicts with the suggestion to decrease the quality of the freemium service for increased conversion (Russell, 2020). Managers need to balance in between providing a good quality service and still not meeting all the needs of the customers that they would still have the motivation to upgrade to premium. However, concerning user satisfaction and service quality, two components widely examined by scholars for their positive impact on retention, they are notably significant in the context of premium services. Unlike the dilemma posed by freemium models, managers here can be confident that increased quality and user satisfaction in premium services will undeniably improve retention.

Table 30

Components positively affecting customer retention in freemium business model

Service quality	User satisfaction	Ubiquity	Discovery of new content	Social connectivity	Increasing perceived value of freemium
Hamari et al., 2019	Kim et al., 2018	Mäntymäki et al., 2019	Mäntymäki et al., 2019	Brüggemanna and Lehmann-Zschunke, 2022	Hamari et al., 2020
	Rahmansyah and Hati, 2020		Kim et al., 2018	Rahmansyah and Hati, 2020	
				Hamari et al., 2019	
Enjoyment	Economic value	Shorter contract term	Highly up-to-date content	Bundling and versionin	Different levels of promotion
Hamari et al., 2019	Hamari et al., 2020	Brüggemanna and Lehmann-Zschunke, 2022	Brüggemanna and Lehmann-Zschunke, 2022	Sanitra and Jiang, 2019	Karmakar et al., 2021
Ascarza et. al., 2023					

Source: made by the author according to the scholars discussed in the chapter.

Moving forward to other components contributing to retention, let us examine users' enjoyment. Similarly to user satisfaction, it was observed that it affects positively the retention

(Ascarza et. al., 2023; Hamari et al., 2019), but negatively the conversion (Hamari et al., 2019). Another nuanced aspect involves an increased perceived value of freemium, which helps for retention but can also reduce monetization from conversions, thus can either increase or decrease future profitability (Hamari et al., 2019). Another extensively analyzed factor in freemium context is social connectivity. Scholars have found that social aspects of service, when users interact with each other, affects users' engagement and retention positively (Brüggemanna and Lehmann-Zschunke, 2022; Hamari et al., 2019; Rahmansyah and Hati 2020; Kim et al., 2018). However, one study has discovered a counterintuitive effect, where social connectivity exhibits a small negative effect on the intention to retain a premium subscription (Mäntymäki et al., 2019). Nevertheless, since the consensus among other researchers is that social connectivity has a positive impact on retention, we will adhere to this viewpoint. In terms of specific strategies to enhance retention in freemium models, researchers propose various approaches. These include adopting a shorter contract term to mitigate the risk of churn (Brüggemanna and Lehmann-Zschunke, 2022), ensuring highly updated content for content platforms (Brüggemanna and Lehmann-Zschunke, 2022); employing bundling (selling multiple products or services together as a package) and versioning (Sanitra and Jiang, 2019), as well as implementing different levels of promotion to encourage user collaboration (Karmakar et al., 2021). Full list is pictured in

Table 30.

In conclusion, customer retention is vital for the survival and success of freemium businesses. While scholars emphasize the positive influence of customer satisfaction on retention, navigating this aspect in freemium models is complex. Increased satisfaction in freemium services may adversely impact conversion rates for premium subscription. Managers face the challenge of finding equilibrium between maintaining a high-quality freemium services and creating a substantially higher perceived value for the premium services. Additionally, abundance of social connectivity, shorter contract terms, bundling and versioning strategies were found to be successful for customer retention in freemium business models.

1.3 The impact of freemium model in media for consumer WTU and retention

1.3.1 Literature analysis of freemium model's impact in media business

As our empirical research will be on the impact of freemium business model in media industry, it is important for us to analyze the existing research on the topic. We have discovered that media companies in the past years were moving from free to freemium or other business models to sustain the struggling business. Still, it has not always been a success.

Internet and digitization affected content consumptions patterns increasing the one in online formats and decreasing in offline (Berger, Matt, Steininger and Hess, 2015). As legacy news revenues kept declining, it was important for them to develop a pay model which would sustain the business (Simon and Graves, 2019). Therefore, online media is moving away from free content (Simon and Graves, 2019). One of the way to do it – putting a paywall, which can be hard, metered or freemium (Pattabhiramaiah, Overby and Xu, 2022). Hard paywalls do not allow users to reach any content (Pattabhiramaiah et al., 2022) and are used by some legacy American newspapers like “The New York Times” or “The Wall Street Journal”. Metered paywalls, limit the access to content by quantity, and freemium restrictions focuses on quality allowing users to access some basic content and more advanced one is kept for the premium users (Pattabhiramaiah et al., 2022). However, other authors (Russell, 2020), also include the metered paywalls to the freemium category, with the rationale behind that some of the product is free, but for the rest consumers need to pay. Therefore, another way of dividing freemium model for online content is of choice restriction, when the publisher selects the free articles for the users, or quantity restriction, when user can select the articles, but the quantity is limited (Russell, 2020). We have pictured the distribution of the pay models in 212 media companies worldwide, according to Simon and Graves (2019), in *Table 31*.

Table 31

Distribution of pay models in online media outlets

2019	Number of media outlets	%
Total	212	100
Free access	113	53,3
Freemium	49	23,1
Metered paywall	44	20,8
Hard paywall	6	2,8
Has a pay model	99	46,7
Has no pay model	113	53,3

Source: Simon and Graves, 2019.

Some researchers observe that digital paywalls, unfortunately for media business owners, can reduce online users, thereby diminishing advertising revenues (Lambrecht and Misra, 2017; Russell, 2020). These revenues, as indicated by Newman's survey and quoted by Simon and Graves (2019), remain the primary source of revenue for online content providers. From the other side, subscriptions, a practice within the freemium business model, are key priority for the industry to advance (Simon and Graves, 2019). Consequently, many online media businesses have adopted a hybrid model, aiming to generate revenue from both users and advertisers, thus freemium business model has gained popularity in the newspaper sector actively seeking viable business model (Holm, 2016).

However, scholars observe that freemium model has struggled to generate the anticipated revenues predicted by media industry stakeholders (Holm, 2016). One of the reasons is that successful freemium model companies were observed to have a successful growth strategy and continuous innovation imperative (Holm, 2016; Holm and Günzel-Jensen, 2017; Panda, 2019) and most of online content providers do not possess it (Holm, 2016). Another obstacle is the prevailing expectation of free content online, a free mentality mindset noted by researchers (Niemand et. al, 2019; Russel, 2020). Users, accustomed to free information, find the transition to paid model challenging (Lambrecht and Misra, 2017). Research by Myllylahti's (2013) indicated that paywalls, including those of The New York Times and Sunday Times, accounted for only 7.2% and 8.9% of all income, respectively. In contrast, Financial Times, with the added benefit of corporate clients, represented a higher portion of 13%.

In conclusion, we have witnessed a clear trend of content providers moving from free to fee models for sustainability, with the freemium model gaining popularity in the industry. Nonetheless, the unique challenges of the industry, such as achieving scalable growth and educating costumers about the value of paying for quality content, have posed significant difficulties for many media company. Strategies to overcome these challenges will be discussed in the next chapter.

1.3.2 The effect of freemium model in media for customer acquisition and retention

Finding a viable business model has been a challenging endeavor for the media industry, and freemium has not proven to be a universal solution for all legacy newspapers transitioning online. Nevertheless, scholars have identified successful strategies, and research by Jenkins (2020) indicates that at least a portion of the online media industry has effectively implemented them. Let us explore the impact of the freemium model on customer acquisition and retention in media, as well as the most successful strategies associated with it.

To begin, the implementation of digital paywalls in freemium models has been subject to debate. On one hand, it is evaluated to decrease customer attraction and retention (Lambrecht and Misra, 2017; Russell, 2020), as fewer customers may be willing to pay for a content than to get it for free. On the other hand, digital paywalls can have positive results in terms of income if newspaper owners extend free access to online content for the print version subscribers, leading to a spill-over effect (Myllylahti, 2013; Pattabhiramaiah et al., 2022; Russell, 2020). Pattabhiramaiah (2022) notes that digital paywalls may encourage visitors accustomed to accessing news content without a cost to subscribe, thereby enhancing user acquisition for premium services. In addition, implementing bundling strategies, such as providing print edition subscribers with free access to the online version, can aid in user retention and prevent loss of revenue (Myllylahti, 2013; Pattabhiramaiah et al., 2022; Russell, 2020).

Another important area for user acquisition and retention in freemium media business is the utilization of big data analysis. Big data presents various advantages for freemium media businesses, ranging from predicting customer behavior (O'Brien, 2022) to effectively segmenting the consumer market (Fernandes 2023, O'Brien, 2022). Fernandes (2023) observes that reader segmentation combined with user conversion data provide tangible results for user attraction and retention. Grinberg, referred by Fernandes (2023), identifies the depth of user engagement with an article as a significant factor influencing the likelihood of subscription, with volume and active days being subsequent factors. Consequently, employing data analysis to predict customer behavior enables online media to adopt to clients' needs, attracting them with tailored content, new features, or, as suggested by O'Brien (2022), additional free time or articles in the platform. However, media business should exercise caution to avoid offering excessive free content, as this can dilute the perceived value of premium content (Kim et al., 2018; Mäntymäki et. al, 2019 Russell, 2020).

Progressing forward, researchers suggest that online media companies could optimize their offerings of free content based on demand, specifically by increasing the provision of the free

content during periods of higher demand (Lambrecht and Misra, 2017). Russel's (2020) research points out that when media companies face the choice between restricting quantity or quality, quantity restriction is effective when more content is available, while quality restriction is more efficient when content is scarce. Fernandes (2023) proposes a multichannel strategy to encourage users to subscribe to newsletters and notification, fostering engagement and, consequently, retention. O'Brien (2022) explores the potential of niche journalism, emphasizing that providing deep, high-quality content in specific areas can attract a highly profitable and committed audience. Additionally, O'Brien (2022) underscores the importance of user engagement through social media, a sentiment supported by Jenkins (2020), who affirms that Facebook remains an important traffic driver for the online media sites.

Clearly, some online media outlets have adapted their strategies within the freemium model to ensure business sustainability. As observed by Jenkins (2020), these companies prioritize loyal readers by providing distinctive content, employing strategies for attractive scheduled content, introducing new products such as podcasts, collaborating with multiple publishers to share content, and leveraging social media for user engagement. Notable success stories, highlighted by Doctor and referenced by Holm (2016), include the achievements of The New York Times, acquiring over one million digital-only subscribers and generating around \$200 million in digital revenue. Evidently, certain media companies have successfully implemented suggested data analysis, market segmentation and bundling strategies.

In closing, the path for online media businesses adopting the freemium business model has been challenging. Convincing users accustomed to free online content to pay, determining the optimal form of premium and freemium content, and developing effective strategies for customer acquisition and retention are not without their difficulties. Nevertheless, as illustrated, there exist methods and strategies that can lead online newspapers towards prosperity or, at the very least, sustainability.

1.4 Overview of previous research on value creation determinants and their relationships with consumers' continuous usage and upgrade intentions in online freemium business platforms

1.4.1 The role of perceived value in the context of freemium platforms

As an introduction to analysis of value creation determinants, for an online freemium business platform, we firstly touch upon the concept and significance of perceived value, which was highlighted by various researchers (Hamari et al., 2020; Kim et al., 2018; Ku et al., 2017; Martins and Rodrigues, 2024; Mäntymäki et al., 2019; Niemand et al., 2015; Russell, 2020) as a major component for customers' upgrade intentions.

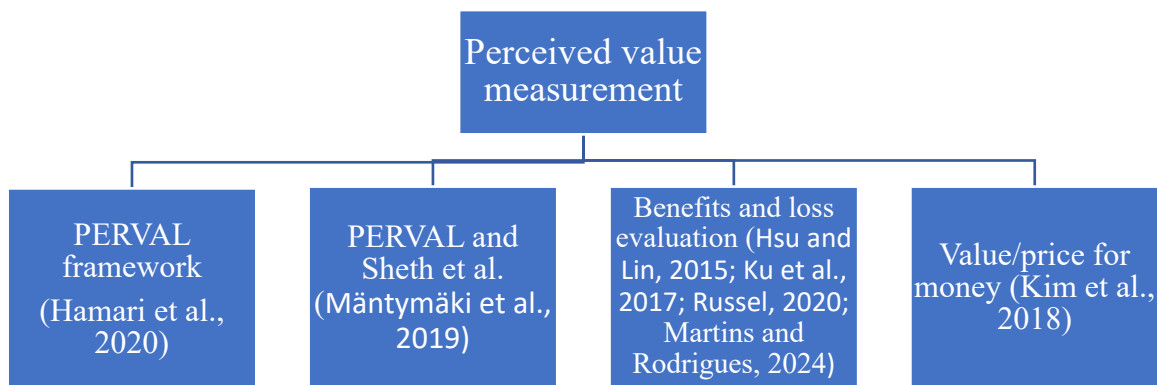
Research of different scholars has shown that high perceived value of premium services motivates users to upgrade (Hamari et al., 2020; Kim et al., 2018; Ku et al., 2017; Martins and Rodrigues, 2024; Russell, 2020). Nonetheless, there is no consensus how scholars measure the perceived value. Hamari et al. (2020) measures it as a sum of four factors – enjoyment, social value, perceived quality and economic value, which reflects previously discussed PERVAL framework, developed by Sweeney and Soutar (2001). Mäntymäki et al. (2019) base their research of perceived value on a mixture of PERVAL and Sheth's et al. (1991) established model, and identifies it as emotional, functional, social, epistemic, and economic values. Ku et al. (2017) sees it from, to our understanding, wider approach, which is in line with Zeithaml's (1998), and for the perceived value refers to the comprehensive evaluation of an app user of the usefulness of premium services within an app, considering what they receive in relation to what they give. Lovelock, quoted by Hsu and Lin (2015), has a third perspective on the perceived value stating that it is “a trade-off between the perceived benefits and perceived costs”¹. Hsu and Lin (2015) in their own study measured the perceived value as consumer's overarching evaluation of an app's four utility types, which they divided into problem solving, entertainment and leisure, social networking and information, considering perceived benefits and costs. Overall, we see that perceived value evaluation is measured differently by different scholars, but the trend is either to measure it using PERVAL or adapted framework or evaluating the overall differences between perceived benefits and perceived costs. Perceived value measurement is pictured in the

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1. Hsu, C. L., and Lin, J. C. C. (2015). *What drives purchase intention for paid mobile apps?—An expectation confirmation model with perceived value*. *Electronic commerce research and applications*, vol. 14, no. 1, p.48 Viewed on 2024-05-20. Internet access: <https://www.sciencedirect.com/science/article/pii/S1567422314000878>

Figure 10.

Figure 10

Perceived value measurement by different authors



Source: made by the author according to the scholars discussed in the chapter.

Even though researchers agree that perceived value influence significantly consumers WTU, a new question emerged regarding the perceived quality of the freemium tier and how high should it be. From one side, if the perceived value of the freemium tier is too low, consumer will not be willing to use the service or product in general (Koch and Benlian, 2016; Mishra et al., 2018; Mäntymäki et al., 2019; Hamari et al., 2020). From the other side, the perceived value is too high, they will not be willing to upgrade it to premium service as the users would already feel content with what they have and the perceived loss of paying for premium would seem to them considerably higher than perceived gains (Niemand et al., 2019; Russel, 2020; Yan and Wakefield, 2018). In addition to that, Niemand's et al. (2019) research state that free versions, because of a zero-price effect, provide more perceived value to the customers and only by augmenting value of the premium product or cultivating more favourable attitudes towards it this effect can be overcome. The importance of augmented value for the premium services was the emphasis of the

research of Russel (2020), who analysed freemium media platforms and highlighted the value discrepancy between the free and the premium versions as a key factor influencing user's WTU. Therefore, Russel's (2020) researched showed that reducing the value of freemium version and enhancing of the premium one positively impact users' WTU. However, we still need to have in mind the first part of the argument, that if perceived value of freemium is too low, business can simply lose the consumers. Therefore, some scholars (Martins and Rodrigues, 2024; Niemand et al., 2019) have come with a conclusion that freemium service needs to be appealing for new users while retaining aspects that prompt consumers to consider upgrading.

To conclude, we have underscored the importance of the perceived value on users' intention to upgrade and the dilemma it brings concerning the values of the free and premium services. Having identified value discrepancy between the two tiers as one of the key drivers for WTU, we aim to further investigate in this thesis what specific features of a freemium online media business has to be in both tiers to influence the greatest WTU.

1.4.2 Value-creating factors for an online freemium business

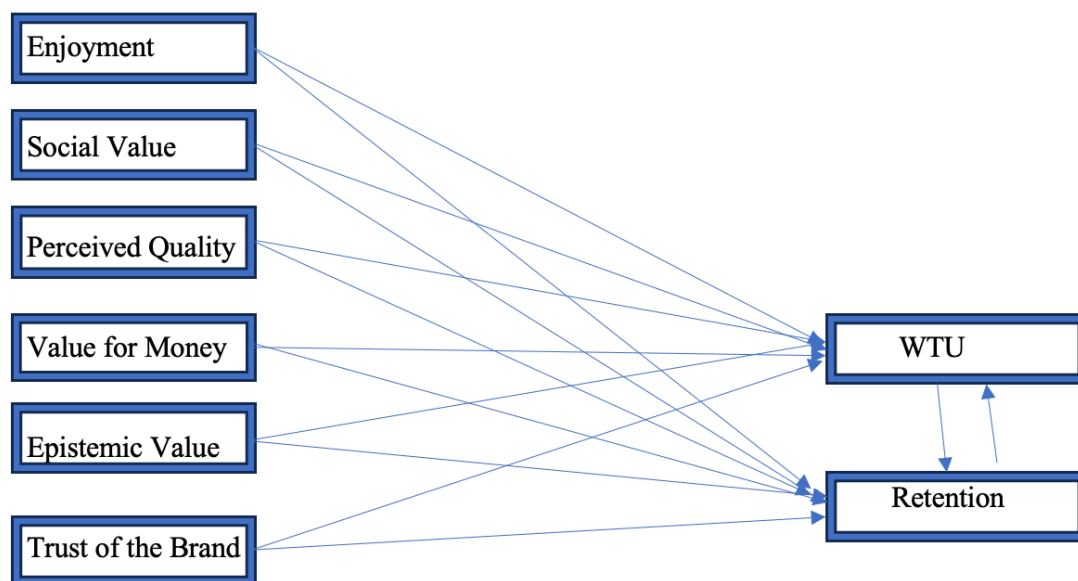
Based on the literature analysis, we have identified 6 factors which can create value for the freemium business either for customers WTU or increased retention (or both) and we will be using them in our research framework. These factors are: enjoyment, social value, perceived quality, economic value, epistemic value, and trust of the brand. These factors make a theoretical framework of this study, depicted in the *Figure 11*.

Enjoyment is a component of emotional value, both indicated in Sheth et al. (1991 m.) framework and in Sweeney and Soutar's (2001). Enjoyment was chosen as a construct in studies of Hamari et al. (2020) and Mäntymäki et al. (2019) and presented opposing outcome: Mäntymäki et al. (2019) found positive impact of enjoyment on WTU for premium service, while Hamari et al. (2020) observed the negative impact. Therefore, it is important to test the impact of enjoyment for different tiers of freemium business and for different purposes. As retention is concerned, Mäntymäki et al. (2019) found that enjoyment was not significant for retaining customers, but Hamari et al. (2020) and Ascarza et. al. (2023) observed its positive impact. Hence, in our empirical part we will investigate how the enjoyment of the freemium version impacts users WTU and continuous usage intentions and how the enjoyment of the premium version impacts continuous usage intentions.

The second value-creating factor is of social value, which is also both in the framework of Sheth et al. (1991 m.) and of Sweeney and Soutar's (2001). Even though the study of Mäntymäki et al. (2019) and Hsu and Lin (2015) showed that social value was not significant on WTP, other studies (Bapna and Umyarov, 2015, Bründl, 2018; Guo et al., 2022; Hamari et al., 2020; Kim et al. 2018) proved the opposite, showing that the more interactions between the users are or the higher the co-active behavior there is, the more they are willing to pay for premium. Kim et al. (2018) argues that interpersonal relationships among freemium users encourage them to upgrade to premium. Bründl (2018) specifies that co-active behavior (interacting with each other, co-creating content together) has a stronger effect on WTP than classic passive (reading, watching content) or active (liking, commenting) behavior. Therefore, Bründl (2018) advises social content providers to introduce such features that would increase users' direct interactions. Here we see that there are different aspects of social value.

Figure 11

Theoretical framework of the research



Source: Made by the author.

The third factor is of perceived quality or functionality, which is found both in the framework of Sheth et al. (1991 m.) and of Sweeney and Soutar's (2001). Here we also find conflicting results from the scholars, where some (Mäntymäki et al., 2019; Zeithaml, 1988)

identify the positive influence of perceived quality on WTU, while others (Hamari et al., 2020; Hsu and Lin, 2015) do not identify any influence on WTU. We will be aiming to clarify it in our empirical part.

The fourth factor is of perceived value for money, which is described as economic value by Sheth et al. (1991 m.) and Sweeney and Soutar (2001). According to Kim et al. (2018), value for money is identified as a critical factor for purchase intention in the context of mobile environment, and the studies (Hsu and Lin, 2015; Kim et al., 2018; Mäntymäki et al., 2019) which used this construct found its significant positive influence on WTU. Regarding retention, it has conflicting results as Mäntymäki et al. (2019) found that perceived value for money was not significant for user retention while Hamari et al. (2019) found its positive impact on their continued use intention. Therefore, it is important to for this research to clarify the conflicting findings.

The fifth value-creating factor, identified also by by Sheth et al., is epistemic value. There were not many researchers that used this construct, but the author of this thesis deem it is important, especially in the context of online freemium media platform. Mäntymäki et al. (2019) was the one using the construct of ubiquity and discovery of new content, which both represent epistemic value, and concluded that they drive users' intention to retain in the premium tear.

The sixth value-creating factor for a freemium online business is of trust of the brand. Scholars (Aronsson and Eden, 2020; Ku et al., 2017) have recognized that trust of the brand significantly affects users' WTU.

To conclude, 6 value-creating factors for an online freemium business were identified: enjoyment, social value, perceived quality, value for money, epistemic value, and trust of the brand. These are the factors also recognized by other researchers, mentioned in this chapter, who were investigating value propositions of freemium businesses. Some of the factors, like trust of the brand, were reported only having a positive effect on the consumers' WTU (Aronsson and Eden, 2020; Ku et al., 2017). Others, like enjoyment, were reported to have different, even opposing effects (Hamari et al., 2020; Mäntymäki et al., 2019). For this specific reason, this thesis aims to contribute to the scientific discourse clarifying the value-creating factors for an online media platform.

2. RESEARCH METHODOLOGY OF VALUE-CREATING FACTORS OF A FREEMIUM MEDIA PLATFORM FOR WILLINGNESS TO UPGRADE AND CONSUMER RETENTION

2.1. Research process for examining value creation in a freemium media platform

2.1.1. Research hypotheses

This chapter introduces the theoretical research model and hypotheses developed to investigate the impact of selected value-creating factors on user behaviour within the freemium media platform *vz.lt*. In this section, the dependent variables are defined and justified, followed by the presentation of two separate research models tailored to freemium and premium user groups. These models allow for a more nuanced analysis of perceived value across user types. Hypotheses are developed based on a thorough review of academic literature and adapted for each user group, with the aim of clarifying theoretical inconsistencies and providing actionable insights for both scholars and practitioners.

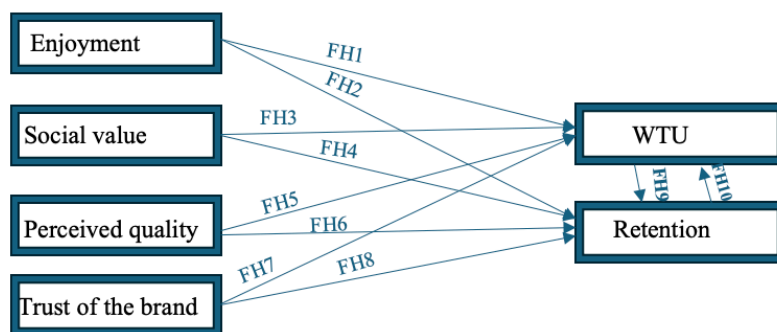
The purpose of this research is to analyse specific value-creating factors such as enjoyment, social value, perceived quality and others on a freemium business media platform *vz.lt* and their impact on consumer retention and upgrade intentions. For this assessment, the study will use online survey data from both premium and freemium media platform's *vz.lt* users. As there have been some contradicting findings on previous research on value-creating factors (Hamari et al., 2020; Mäntymäki et al., 2019), this study will add value to the scholar community with its findings. Also, as media business have been struggling to be profitable with freemium models (Holm, 2016), the findings of this research will serve for decision makers of freemium media platforms.

Further we will discuss a theoretical framework constructed for the research of this thesis. As dependent variables we will have willingness to upgrade (WTU) and retention. Regarding WTU, various scholars (Hamari, Hanner & Koivisto, 2017 and 2020; Huang, 2016; Islam and Benbasat; 2019, Kim, Lee, Zo, 2018; Koch and Benlian, 2017; Ku, 2017; Li and Cheng, 2014; Russel, 2020; Mäntymäki, 2019) have been trying to determine the underlying reasons of

consumers' willingness to upgrade (WTU). The importance of the topic can be clearly depicted by the number of scholars investigating the issue. Therefore, WTU is a dependant variable on this research. Regarding retention, as most of the freemium business revenue is generated from the smallest portion of premium users, increased termination of premium users can endanger even firm's existence (Brüggemanna and Lehmann-Zschunke, 2022). Therefore, customer retention is one of the key metrics for freemium business (Brüggemanna and Lehmann-Zschunke, 2022).

Figure 12

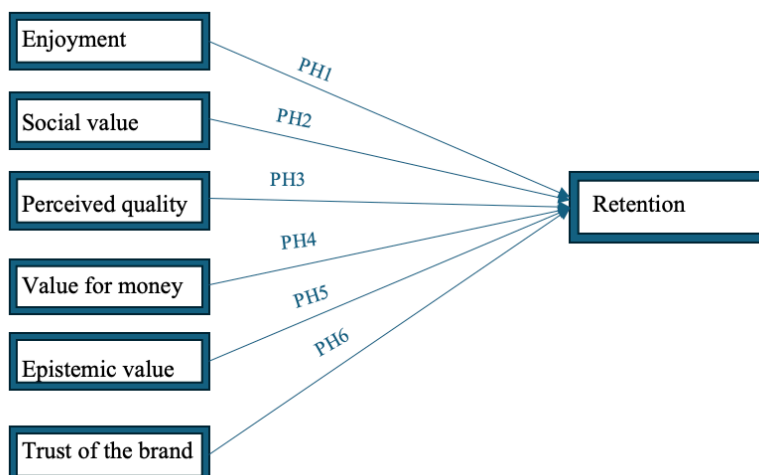
Freemium research model of the master thesis



Source: made by the author

Figure 13

Premium research model of the master thesis



Source: made by the author

The 6 value-creating factors, described in the previous chapter, is our independent variables: enjoyment, social value, perceived quality, value for money, epistemic value, and trust of the brand. Description of each variable you can see in the *Annex 1* and the research model is depicted in the **Figure 12** and **Figure 13**. It was decided to two research model, as each one would represent a different group, either freemium or premium users. In the freemium research model, there are 4 predictors: enjoyment, social value, perceived quality and trust for the brand and the relationship between WTU and retention will also be assessed. Value for money and epistemic value was not included in this model with the basis that freemium users could not objectively evaluate these characteristics of the premium platform as they are not using them. As for premium research model is concerned, it has all 6 previously mentioned constructs as predictors and retention as a dependent variable.

To start with, Freemium research model and its hypothesis will be covered, and all the hypotheses will start with F for the identification purposes. Our first and second hypotheses will be reflecting the variable of enjoyment. In our empirical part we will investigate how the enjoyment of the freemium version impacts users WTU and retention. Having in mind the role of value discrepancy and the findings of Russel (2020), our first hypothesis is that high enjoyment of freemium version affects users' WTU negatively, and the second hypothesis states that high enjoyment of freemium version affects users' retention positively.

FH1: High enjoyment of the free tier platform affects users WTU negatively.

FH2: High enjoyment of the free tier platform affects users' retention positively.

Our following hypotheses is concerning the social value. Different authors were investigating its effect on WTU (Bapna and Umyarov, 2015, Bründl, 2018; Guo et al., 2022; Hamari et al., 2020; Hsu and Lin 2015; Kim et al. 2018; Mäntymäki et al., 2019). The results were not unanimous. However, more authors have identified its positive effect on WTU (Bapna and Umyarov, 2015, Bründl, 2018; Guo et al., 2022; Hamari et al., 2020; Kim et al. 2018). Also, it was found that social value affects users' retention positively (Brüggemanna and Lehmann-Zschunke, 2022, Hamari et al., 2020, Rahmansyah and Hati, 2020). Therefore, our hypotheses are formulated as follows:

FH3: Social value affects users WTU positively in the context of freemium business platform.

FH4: Social value affects users' retention positively in the context of freemium business platform.

The following hypotheses are in regards of perceived quality. Willing to clarify the conflicting results from the previous research (Hamari et al., 2020; Hsu and Lin, 2015, Mäntymäki et al., 2019; Zeithaml, 1988), we have stated the following:

FH5: Perceived quality of free tier has a negative effect on WTU.

FH6: Perceived quality of free tier has a positive effect on retention.

The subsequent hypotheses covers the trust of the brand. Our hypotheses are based on the literature discussed (Aronsson and Eden, 2020; Ku et al., 2017), supporting the positive impact of brand trust on users WTU and retention:

FH7: Trust of the brand affects freemium users WTU positively.

FH8: Trust of the brand affects freemium users' retention positively.

Finally, even though scholars, to the knowledge of the author of this thesis, have not investigated this before, it is important for this thesis to also investigate the relationship between two dependent variables: WTU and retention. Exploring their interaction helps clarify whether WTU is an antecedent to long-term loyalty, which is retention, or whether retainer users develop greater willingness to upgrade over time. Understanding how these variables influence each other can offer insights into how to increase both revenue and customer lifetime value.

FH9: Users WTU affects users' retention positively.

FH10: Users' retention affects users' WTU positively.

As for premium model is concerned, the hypotheses for clarity reasons will start with P. For the premium version, as it was observed that enjoyment affects retention positively (Ascarza et. al., 2023; Hamari et al., 2019), the following hypothesis is raised:

PH1: High enjoyment of the premium tier platform affects users' retention positively.

Following hypothesis is of social value, to validate its positive impact on customers' retention. Even though the scholars (Bapna and Umyarov, 2015, Bründl, 2018; Guo et al., 2022; Hamari et al., 2020; Kim et al. 2018) we have analyzed were focusing more on this constructs' impact on WTU, it is deemed that positive effect should be also observed on users' retention:

PH2: Social value affects users' retention positively in the context of premium business platform.

The following hypothesis is in regards of perceived quality, which after the literature analysis is formulated as follows:

PH3: Perceived quality of premium services has a positive effect on user retention.

The fourth hypothesis of premium users is in regards of value for money. As all the studies analysed by the author found its positive effect on consumers retention (Hsu and Lin, 2015; Kim et al., 2018; Mäntymäki et al., 2019), we formulate the hypothesis in this manner:

PH4: Perceived value for money of premium version affects users' retention on the premium tier positively.

The following hypothesis reflects the epistemic value. The research of Mäntymäki et al. (2019) showed its positive impact on the analyzed phenomena. Therefore, the hypotheses are articulated as follows:

PH5: Discovery of new content (Epistemic value) affects users' retention on the premium tier positively.

The subsequent hypothesis covers the trust of the brand. Our hypotheses are based on the literature discussed (Aronsson and Eden, 2020; Ku et al., 2017), supporting the positive impact of brand trust on users WTU and retention:

PH6: Trust of the brand affects premium users' retention positively.

In this section, 10 hypotheses were formulated for the freemium dataset, and 6 for the premium dataset, focusing on the purpose of identifying value-creating factors on a freemium media platform and their influence on users' WTU and retention. Hypotheses were based on the theory, also aiming to clarify some conflicting findings in existing literature.

2.1.2. Research scheme, data collection and statistical methods

To plan appropriately the research, a research scheme was made, including research design, data collection, data analysis and reporting results. The research scheme is depicted in

Figure 14.

Firstly, developing research design part, research objectives and research hypotheses were developed (in the previous section). To test the hypotheses, a quantitative analysis of value-creating factors will be carried out via online survey. The quantitative method was selected as it is the method allowing to statistically test the impact of different factors on user WTU and retention. Online questionnaire, based on the Likert scale, was formulated. 7 points Likert scale was chosen, as it is one of the most essential and commonly utilized measurement tools in educational and social science, often applied to assess attitudes, beliefs and perceptions (Batterton & Hale, 2017; Joshi et al., 2015). The respondents were selected to be the users, both free and paid

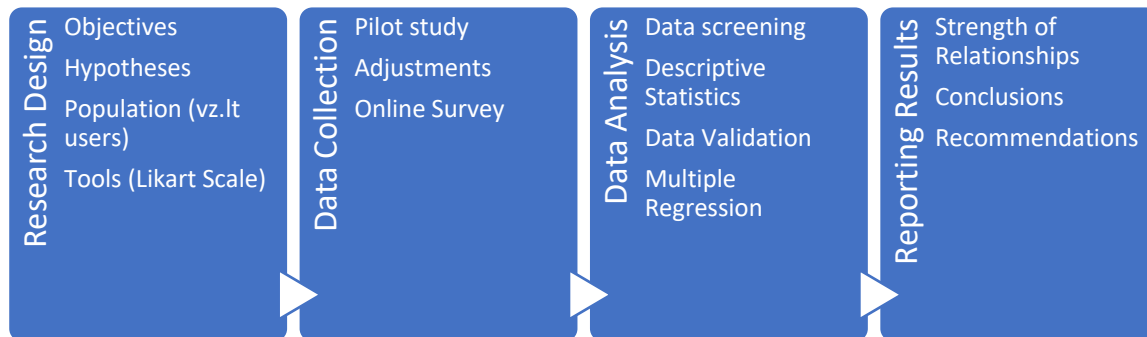
users, of online freemium media business platform vz.lt. The platform was selected as it reflects the personal interest of the author of this thesis and aligns well with the Master program of the author of this thesis.

The second phase of the research scheme is of data collection. Before distributing the survey to the broader audience, a pilot study to test survey's clarity and reliability was conducted. Necessary adjustments for the survey were adapted based on the feedback collected after the pilot study. Then, the questionnaire was disseminated online through social groups and contacting vz.lt with the request to reach their audience. Unfortunately, vz.lt did not agree to disseminate the questionnaire. However, a necessary number of answers was gathered through the social media.

The online survey was disseminated, and data collected during February-March of 2025. Multiple individuals were surveyed at a specific time; therefore, a cross-sectional econometric model was used. Multiple studies analysing the impact of different factors on WTU, or retention used this method (Hamari et. al., 2020; Mäntymäki et al., 2019; Rahmansyah and Hati, 2020; Sciglimpaglia and Raafat, 2020). Due to resource constraints, the study employed non-probability convenience sampling, as the survey was distributed via social media and vz.lt channels. The respondents were only Lithuanian speakers, living both in Lithuania and abroad, as the vz.lt online platform is dedicated of Lithuanian speakers. As the results were taken from an online survey, primary descriptive data was used for further analysis. The hypotheses were based on the existent literature; therefore, deductive reasoning was used to test existing theories.

Figure 14

Research scheme



Source: Made by the author.

The third phase of the research scheme is of data analysis. While analysing previous research methods to choose the methods for data analysis for this thesis, it was identified that most observed authors used Partial least square structural equation modelling (PLS-SEM) (Hamari et al., 2017; Hsu et al., 2015; Koch & Benlian, 2017; Mäntymäki et al., 2019), which serves well to identify complex relationships between independent and dependent variables (Hair et al., 2021). However, to perform PLS-SEM analysis a specific software is required (Smart PLS). Because of this technical limitation and because the author of the research received theoretical and practical knowledge of another method in the Global Business and Economics program, multiple regression method was implemented to analyse the data. This method is also suitable to understand specific relationships among dependent and independent variables and evaluate multiple factors simultaneously (Hair et al., 2021). Cohen & Cohen, quoted by Piedmont (2023), says that “multiple regression is a natural extension of simple linear regression that involves the use of multiple independent variables that are combined to predict a single criterion variable.”² According to Piedmont (2023), the advantage of multiple regression is that it can capture the

²Piedmont, R.L. (2023). Multiple Regression. In: Maggino, F. (Ed), *Encyclopedia of Quality of Life and Well-Being Research* (p.1). Springer. Viewed on 2025-02-01. Internet access: https://doi.org/10.1007/978-3-031-17299-1_1884

relationships between the independent variables, evaluating how each predictor uniquely contributes to the outcome, both on its own and collectively with other predictors. Piedmont (2023) explains that multiple regression can count partial coefficients which determines the specific relationship between a predictor and the outcome variable. Considering that this research aims to evaluate specific impact of each factor (like enjoyment, social value, etc.) to the dependent variables (WTU and retention), multiple regression method serves well because of its ability to determine specific relationship (and weight) between dependent and independent variable. It is also worth mention that specifically multiple regression method was used by Kim & Benbasat (2006), who were evaluating user acceptance of information technology and services, which can include freemium models. Therefore, for data analysis, the data was first screened for incomplete, inconsistent, or outlier responses and prepared for analysis. Then, descriptive statistics were conducted to summarize key demographic characteristics, variables, and compute means, standard deviations, frequencies for WTU, retention and influencing factors. To ensure the quality and consistency of the collected data, several validation procedures were applied. Descriptive statistics were used to evaluate the distribution of responses. The Little's MCAR test was conducted to validate whether the missing values were randomly distributed. Additionally, internal reliability was verified using Cronbach's alpha. Afterwards, assumptions required for this method were tested: identification of outliers, the presence of linearity and homoscedasticity, non-presence of nor multicollinearity, neither autocorrelation. Finally, multiple regression analysis was performed to examine the influence of factors on WTU and retention using SPSS programme.

The final phase of the research scheme is reporting the results. Regression results will be presented to show the strength of the relationships, conclusions will be drawn on the hypotheses and the most significant factors influencing WTU and retention. Finally, recommendations will be offered for the managers and future researchers.

This sub-chapter covered the research scheme, which contains research design, data collection, data analysis and reporting results. A quantitative analysis method was chosen, an online survey will be conducted – firstly pilot, then to collect the full sample – and the multiple regression method via SPSS program will be chosen to analyse the data. Finally, the conclusion will be drawn and the most significant value-creating factors of a freemium media platform for willingness to upgrade and consumer retention will be evaluated.

2.1.3. Research questionnaire and pilot study

Delving deeper into the data collection part, it is important to describe the process and the methodology of the research questionnaire creation and the pilot study of the research.

One of the most prevalent tools to measure attitude in a questionnaire is the Likert scale, which is widely used in different fields such as psychology, sociology, economics, and other areas (Taherdoost, 2019). The seven-point scale was chosen to this questionnaire, as, according to Diefenbach, Weinstein and O'Reily, quoted by Taherdoost (2019), determined that 7-point Likert scale is regarded as the most precise and user-friendly option among respondents.

To evaluate what impact have 6 previously mentioned dependent variables to 2 independent variables, and to answer 16 hypotheses, a questionnaire of 43 questions was made. In this way, at least 3 questions were dedicated to test the impact of an independent variable to dependent variables. The questionnaire was made using the questionnaire of Hamari et al. (2020) where Cronbach's alpha is greater than 0.7, indicating a high level of internal consistency and reliability. This questionnaire was adapted to align with the specific objectives of this thesis. Additionally, the questionnaire of Mäntymäki et al., (2019) was also utilized and customized to suit the research context of this thesis. These authors were chosen because their research evaluated constructs closely related to those examined in this thesis. However, since their studies focused on freemium platforms in different business sectors, certain questions required adaptation to ensure their relevance to this research.

The Cronbach's alpha value of > 0.7 in the study of Hamari et al. (2020) is particularly significant, as it reflects the reliability of the scales used to measure the constructs. A high Cronbach's alpha suggests that the items within the scales are measuring the same underlying concept consistently, which is crucial for drawing valid and generalizable conclusions. For the study of Mäntymäki et al., (2019), the Cronbach's alpha value was not indicated. However, the author is using established constructs and theories in the field. In addition, his recent research was already cited more than 100 times by other scholars, which also confirms the validation of the questionnaire.

To test the clarity and consistency of the newly made questionnaire, a pilot study was conducted with a small sample of participants, allowing for the identification and resolution of any ambiguities or inconsistencies in the questionnaire items. Valuable feedback was received: the participants advised to group the questions that premium and free version users would know in advance which questions they need to answer and avoid reading the questions dedicated not to them. Also, there was a remark regarding question to assess enjoyment: a participant of a pilot

study indicated that the question did not fit the media platform. Therefore, the question was modified to reflect the feelings of the platform's users' better. There were a few remarks regarding the introduction text for the questionnaire which were also taken into consideration. Overall, after reviewing the feedback and implementing the changes, the questions were grouped to make the questionnaire more user-friendly, a few questions were added, a few questions were slightly changed, as well as the introduction to the questionnaire part.

To conclude, research questionnaire was done based on a 7-point Likert scale. Based on previous authors' questionnaires, 43 questions were introduced to answer 16 hypotheses. A pilot study was conducted to test the comprehensibility and consistency of the questionnaire. After that, the feedback was gathered, and necessary changes were implemented to improve the clarity and ease of use of the questionnaire.

2.1.4 Summary of methodological validity and research limitations

This sub-chapter provides an overview of the methodological rigour employed in the study and discusses its main limitations. Following the development of a theoretically grounded research model and pilot testing of the questionnaire, the data collection process was carried out with consideration of statistical and practical requirements. The steps undertaken ensured the reliability and credibility of the findings presented in subsequent chapters.

Responses were collected through an online survey distributed to user of the Lithuanian freemium media platform vz.lt. From the responses, 216 were from freemium users and 60 from premium users. The sample size was determined based on established academic recommendations. According to Hair et al., quoted by Memon et al. (2020), the minimum recommended observation-to-variable ratio for multiple regression analysis is 5:1, with 15:1 or 20:1 being preferable for improved statistical power. In this study, the freemium user sample exceeded the preferred threshold with over 20 responses per predictor variable, which were six in total. The premium user sample met the 10:1 requirement for its regression model. This provides a sound statistical foundation for the regression analysis used to test the study hypotheses.

To ensure the quality and consistency of the collected data, several validation procedures were applied. Descriptive statistics were used to evaluate the distribution of responses, revealing a high degree of internal consistency, particularly for constructs such as enjoyment and trust of the brand. Standard deviations and mean values were analysed for each construct, confirming generally favourable evaluation of the platform. The Little's MCAR test confirmed that missing

data was completely random, and Cronbach's alpha values for the scales used ranged between 0.70 and 0.95, indicating strong internal reliability.

Regression assumptions were also tested to confirm the methodological soundness. No influential outliers were found, linearity and homoscedasticity were upheld, multicollinearity was not present, and the Durbin-Watson statistic showed no problematic autocorrelation. Together, these measures confirmed that the data were suitable for multiple regression analysis.

However, the study has several limitations that must be acknowledged:

- Due to resource constraints, a non-probability convenience sampling method was employed. The survey was disseminated primarily through social media channels and personal networks, introducing potential sampling bias. As a result, the sample may not be fully representative of the broader user base of the media platform. While such sampling can still yield valuable insights, it limits the generalisability of the findings.
- The survey results may be affected by self-selection bias. Individuals who chose to respond to the questionnaire may have stronger opinions or more engagement with the platform than average users, potentially overrepresenting users with more extreme experiences. This could influence the way constructs like enjoyment, trust, or social value are evaluated.
- Although the sample size for freemium users was robust (216), the number of premium respondents (60) was relatively small. While this met the minimum requirements for multiple regression, a larger sample would have provided greater statistical power and a more nuanced understanding of premium user behaviour.
- The study relied on a cross-sectional design, collecting data at a single point in time. This approach does not allow for assessment of how user attitudes or behaviours might evolve over time. For instance, enjoyment or trust might increase as users become more familiar with the platform, or conversely, degrade if content quality is not maintained.
- Finally, the study was conducted within the specific context of a Lithuanian online business news platform, which limits the generalisability of findings to other markets industries, or platform types. User behaviour in freemium models is highly context-dependent and may be influenced by national digital habits, cultural expectations of media content, or economic conditions. While the study contributes valuable insights to the relatively underexplored Lithuanian market, its findings should be interpreted with caution when applied to other regions or sectors.

In conclusion, this sub-chapter has outlined the systematic and evidence-based approach undertaken to ensure methodological integrity throughout the research process. From the application of rigorous statistical validation techniques to the alignment of sample size with established scholarly standards, the study has demonstrated a high degree of methodological robustness. At the same time, the identified limitations provide a realistic assessment of the study's scope and constraints, helping to frame the interpretation of the results in a transparent and academically sound manner. Acknowledging these boundaries strengthens the credibility of the research and offers direction for future studies aiming to build on these findings within broader or more diverse freemium platform contexts.

3. RESULTS OF THE RESEARCH AND INTERPRETATION

3.1. Preliminary data analysis and assumption validation

3.1.1. Sample overview, descriptive statistics and construct reliability

This sub-chapter presents the data preparation and descriptive analysis of the survey sample, focusing on the characteristics of freemium and premium users of the platform vz.lt. It outlines the sampling method, participant demographics, and provides an overview of the constructs' mean values, variability, and internal reliability. These insights establish the robustness of the data and its suitability for hypothesis testing.

To test the hypothesis described in the previous chapter, an online questionnaire of 43 questions was created and distributed online. The questionnaire was made of 3 parts, where the first part was answered by freemium users, the second by premium and the third one was dedicated for the users of both tiers. The link of the 7-point Likert-scale based questionnaire was shared on the social media (LinkedIn, Facebook), and private LinkedIn and Facebook messages were sent to collect more answers. To determine the sample size, the rule of thumb, suggested by Hair et al., quoted by Memon et al. (2020), was applied, which is observation to variable ratio should be 5:1, but 15:1 or 20:1 is preferred. For the freemium sample, 20:1 ratio was applied, having in mind 6 variables, and the sample even exceeded it - 216 responses were collected. For the premium users and 6 variables, the ratio 10:1 was applied, and 60 responses were collected.

Some respondents, before answering the questions, would enquire if they can answer the questionnaire as they were not using vz.lt. In that case the response for the respondents was that they should not do it. After that, analysis was conducted to identify outliers and respondents, who gave the same score for all the questions, were eliminated. In addition, most of the freemium section questions had 16 missing values and 1 missing value was depicted for premium questions. As the questionnaire had intentionally separated sections for freemium and premium users, two separate analyses were conducted for freemium and premium users. This way aims to capture the specificity of each group. Analysis was conducted with SPSS programme.

Touching upon descriptive statistics in the freemium group, women answered more frequently than men (54,2 and 38 % accordingly). Most of the people were from the cities (91%) and the dominant age group was of 35-44 years (50%). The dominant education was Masters and Bachelor's (44,9 and 40,3 % accordingly). The dominant employment status was full time employees (70,4 %) and the dominant salary range was 2000-3000 EUR (27,8%).

Regarding the premium users, the results were similar to the freemium ones. The only greater difference, which is also predictable, is that among the premium users the dominant salary range is the highest option – more than 3000 EUR/month with 36, 7% accordingly. The results in detail can be seen in the **Table 32**.

Table 32

Demographics of the respondents

Freemium						Premium					
Gender	N	%	Place	N	%	Gender	N	%	Place	N	%
Female	117	54,2	City	182	91	Female	32	53,3	City	52	86,7
Male	82	38,0	Village	3	1,5	Male	27	45,8	Village	3	5,0
Missing	17	7,9	Suburb	15	7,5	Missing	1		Suburb	4	6,7
Total	216		Missing	16	8	Total	60		Missing	1	1,7
			Total	216					Total	60	
Age	N	%	Education	N	%	Age	N	%	Education	N	%
<25 years	4	1,9	Hihg School	8	3,7	<25 years	1	1,7	Hihg School	1	1,7
25-34 years	55	25,5	Vocational	2	0,9	25-34 years	16	26,7	Vocational	1	1,7
35-44 years	108	50,0	Bachelor's	87	40,3	35-44 years	35	58,3	Bachelor's	27	45,0
45-54 years	28	13,0	Master's	97	44,9	45-54 years	7	11,7	Master's	28	46,7
55-64 years	4	1,9	Doctor	6	2,8	55-64 years	0	0,0	Doctor	2	3,3
65+	0	0,0	Missing	16	7,4	65+	0	0	Missing	1	1,7
Missing	17	7,9	Total	216		Missing	1		Total	60	
Total	216					Total	60				
Employment Status	N	%	Monthly net salary	N	%	Employment Status	N	%	Monthly net salary	N	%
Unemployed	6	2,8	<1000 EUR	12	5,6	Unemployed	2	3,3	<1000 EUR	3	5,0
Student	3	1,4	1000-1500 EUR	32	14,8	Student	1	1,7	1000-1500 EUR	8	13,3
Part-time	13	6,0	1500-2000 EUR	45	20,8	Part-time	1	1,7	1500>2000 EUR	13	21,7
Full time	152	70,4	2000-3000 EUR	60	27,8	Full time	51	85,0	2000>3000 EUR	12	20,0
Other	25	11,6	>3000 EUR	50	23,1	Other	4	6,7	>3000 EUR	22	36,7
Missing	17	7,9	Missing	17	7,9	Missing	1	1,7	Missing	2	3,3
Total	216		Total	216		Total	60		Total	60	

Source: Made by the author.

Descriptive statistics were run for both groups to provide an overview of sample characteristics. Mean values were assessed for each construct, and it is shown in the **Table 33** . Mean values showed that overall, the participants evaluated almost all of the statements positively, as the mean values for both groups are higher than average 3,5. The only construct which was evaluated more negatively is willingness to upgrade, as consumers were less positive towards upgrading to premium than just enjoying the platform for free. The results showed that overall, the respondents have more positive than negative evaluation on the constructs, which shows also more positive opinion on the platform vz.It in general. Also, it is observed that the mean value of all the constructs of premium users (5,19) is higher than the one of freemium (4,45), which is also logical as premium users are already paying for the service, therefore, it is likely they would evaluate different aspects of the platform higher.

As a step further, the Little 's' MCAR test was conducted and it was calculated that the p value of the test is 0.615 which is more than 0,5, which means that the data is MCAR. This shows that the data is missing at random, which indicates that the data is not biased.

Table 33

Mean values of freemium and premium constructs

	Freemium	Premium
Construct	Mean	Mean
Enjoyment	4,94	5,24
Social Value	4,00	4,11
Perceived Quality	4,89	6,62
Value for Money	NA	4,37
Epistemic Value	NA	5,08
Trust of the Brand	5,33	5,55
WTU	2,34	NA
Retention	5,19	5,34
Mean all	4,45	5,19

Source: Made by the author.

Table 34

Standard deviation by construct of freemium and premium data

Standard deviation by construct	Freemium value	Premium value
Enjoyment	0,08	0,08
Quality	0,11	0,03
Retention	0,19	0,22
Social Value	0,23	0,23
Trust of the Brand	0,05	0,09
WTU	0,17	NA
Epistemic value	NA	0,05
Value for Money	NA	0,04

Source: Made by the author.

Within the descriptive statistics, the Standard deviation by construct was also measured, which shows the dispersion and variability of respondents' answers around the mean, indicating how consistent or diverse the responses were within each construct. The descriptive statistics showed that standard deviations were generally low across most constructs, suggesting relatively consistent responses. Particularly, the constructs of trust of the brand and enjoyment showed especially low variability in the freemium group, and the constructs of quality, value for money and epistemic value had the lowest standard deviation. The least consistent responses in both

groups were within the social value, retention and WTU constructs. In general, premium users showed a little more consistency in their responses compared to freemium users. The results are reflected in the **Table 34**.

Research show, that to check the reliability of the data and internal consistency of each construct, Cronbach's alpha needs to be calculated (Tavakol & Dennick, 2011). Therefore, for each construct Cronbach's alpha was measured with SPSS tool. According to Tavakol and Dennick (2011), research show that acceptable Cronbach's alpha is between 0,70 and 0,95, and all the measured values among the constructs for both freemium and premium groups fell in this category. For the freemium users, reliability was estimated assessed across 6 constructs, and all of which yielded Cronbach's alpha values above 0,70, indicating good internal consistency and supporting the reliability of the scales used to measure the constructs. For the premium group, all the values were above 0,87, which again shows good internal consistency. The full list of values can be seen in the **Table 35**.

Table 35

Cronbach's alpha values across premium and freemium constructs

Fremium		Premium	
Construct	The value of Cronbach's alpha	Construct	The value of Cronbach's alpha
Enjoyment	0.909	Enjoyment	0.946
Social Value	0.772	Social Value	0.875
Perceived Quality	0.778	Perceived Quality	0.843
Value for Money	NA	Value for Money	0.925
Epistemic Value	NA	Epistemic Value	0.871
Trust of the Brand	0.928	Trust of the Brand	0.906
Willingness to Upgrade	0.909	Willingness to Upgrade	NA
Retention	0.836	Retention	0.919

Source: Made by the author.

This sub-chapter described the demographics and descriptive characteristics of the sample and assessed the quality and reliability of the gathered data. The descriptive statistics demonstrated that most constructs received mean scores above the scale. However, the willingness to upgrade to a premium subscription was significantly lower than other constructs, suggesting that users were more reluctant to move to a paid tier. Examination of standard deviations indicated a generally high level of consistency in responses. The Little's MCAR test confirmed that missing

data occurred completely at random, strengthening credibility of the findings. Furthermore, reliability analysis using Cronbach's alpha fell within the acceptable range of 0.70 to 0.95, confirming the internal consistency and reliability of the scales used. Overall, these results validate the quality of the data and provide a strong foundation for further hypothesis testing.

3.1.2. Validating assumptions for regression analysis

In this section, the assumptions required for valid regression analysis will be tested to ensure reliable and accurate results. The presence of influential outliers, linearity and homoscedasticity, multicollinearity, Pearson correlation and autocorrelation analysis will be described to provide a clear understanding of the data and prepare it for the actual hypothesis testing.

First, to examine the presence of influential outliers, cook's distance was assessed. According to Viechtbauer and Cheung (2010), an observation with a value greater than 1 may indicate an influential outlier, potentially compromising the validity of the regression analysis. The cook's distance was estimated via SPSS both for freemium and premium users and the values of cook's distance for all cases were below the threshold of 1. The maximum value of the freemium data was 0.226 and of the premium data was 0.421. These results, presented in the

Table 36 and **Table 37**, indicate that no single observation had an undue influence on the regression model.

Table 36

Cook's distance among freemium respondents

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.25	4.04	2.26	.656	172
Std. Predicted Value	-3.062	2.728	.000	1.000	172
Standard Error of Predicted Value	.137	.822	.334	.121	172
Adjusted Predicted Value	.07	4.13	2.26	.673	172
Residual	-2.102	4.857	.000	1.198	172
Std. Residual	-1.687	3.899	.000	.961	172
Stud. Residual	-1.782	4.230	.000	1.008	172
Deleted Residual	-2.345	5.717	-.001	1.320	172
Stud. Deleted Residual	-1.795	4.477	.004	1.023	172
Mahal. Distance	1.079	73.464	12.924	10.892	172
Cook's Distance	.000	.226	.008	.022	172
Centered Leverage Value	.006	.430	.076	.064	172

a. Dependent Variable: 5 Per artimiausius 3 mėnesius pereisiu nuo nemokamos vzt versijos prie premium versijos

Source: Made by the author using SPSS.

Table 37

Cook's Distance among premiums respondents

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.17	7.06	5.47	1.263	53
Std. Predicted Value	-3.408	1.254	.000	1.000	53
Standard Error of Predicted Value	.387	.870	.608	.089	53
Adjusted Predicted Value	1.41	7.43	5.49	1.351	53
Residual	-1.969	2.092	.000	.736	53
Std. Residual	-2.064	2.193	.000	.772	53
Stud. Residual	-2.742	3.046	-.003	1.016	53
Deleted Residual	-3.475	4.035	-.022	1.330	53
Stud. Deleted Residual	-3.100	3.579	-.003	1.083	53
Mahal. Distance	7.592	42.327	20.604	6.336	53
Cook's Distance	.000	.421	.041	.085	53
Centered Leverage Value	.146	.814	.396	.122	53

a. Dependent Variable: 37 Per artimiausią mėnesį planuoju naudotis vzlz platforma bent jau tiek pat dažnai kaip dabar

Charts

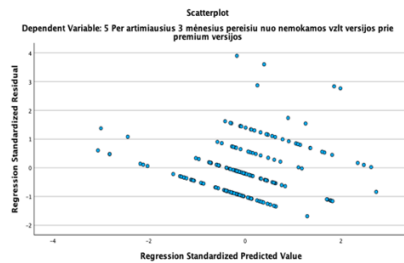
Source: Made by the author using SPSS.

To test the assumptions necessary for linear regression analysis, linearity and homoscedasticity were examined, as both are important conditions for the regression analysis to be valid. Therefore, the scatterplot of standardised predicted values (ZPRED) against standardised residuals (ZRESID) and the Normal P-P plot of regression standardised residuals were examined. The scatterplot, both for freemium and premium data, revealed a random dispersion of points without any notable curve or funnel shape. However, it was observed that some data points appeared to form several diagonal lines. This pattern can be attributed to the nature of the data collection, having the responses measured using a 7-point Likert scale. As this data is discrete data, when plotted, discrete predictors can create visible clustering. Nonetheless, more important is that the data plotted does not show any noticeable curve or funnel shape, as this, according to Yang et al. (2012), would be the major indication of non-linearity and heteroscedasticity. As a result, the conclusion can be drawn, that assumptions of linearity and homoscedasticity were not violated, which means that there is a linear relationship between independent and dependent variables and that prediction errors are evenly spread, which is in fact necessary for further regression analysis. The scatterplots are depicted in the **Figure 15** and **Figure 16**.

As for P-P plot is concerned, the Normal P-P plot showed that the residuals in both groups closely followed the diagonal line, which indicates that the residuals were approximately normally distributed. As a result, this ensures that the significance tests are valid, and that confidence intervals and significance levels are accurate.

Figure 15

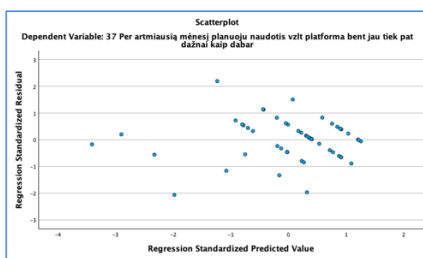
Scatterplot of Freemium responses



Source: Made by the author using SPSS.

Figure 16

Scatterplot of Premium responses



Source: Made by the author using SPSS.

As part of the assumption testing, multicollinearity was assessed by examining the Variance Inflation Factor (VIF) values for each independent variable. VIF measures how much the variance of a regression coefficient is inflated due to multicollinearity with other predictors and, as Vatcheva et al. (2016) suggests, a VIF value below 5 is generally considered acceptable, showing that multicollinearity is not a significant concern. To measure VIF, factor analysis was performed to group Likert scale responses in the groups of constructs. Then, regression was run and VIF values were identified. For the freemium users, all the VIF values were below 5, indicating that independent variables were not highly correlated and that the regression coefficients are reliable. The statistics can be observed in the **Table 38**.

For the premium user group, as it can be observed in the all the independent variables, except quality, had VIF values below the value of 5. The independent variable of quality had a slightly higher value – 5, 8. However, this still does not show strong multicollinearity – as Daoud (2017) highlights, VIF values above 5 can be concerning, but only the values of above 10 shows

strong multicollinearity. Therefore, it can be stressed that the quality value is lower than the threshold of 10, and this construct comes from the previous research, as it was identified as one of value creating factors of a freemium platform by Hamari et al. (2017), Sheth et al., Sweeney and Soutar's (2001). All the values can be observed in the **Table 39**.

Table 38

VIF values of freemium users

		Coefficients ^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.042	.073		.579	.563					
	Enjoyment	.026	.090	.025	.290	.772	.108	.022	.021	.699	1.431
	Social value	.381	.087	.366	4.388	<.001	.381	.322	.312	.724	1.381
	Quality	-.146	.113	-.144	-1.291	.198	.149	-.099	-.092	.408	2.451
	Trust of the brand	.155	.105	.152	1.468	.144	.243	.113	.104	.469	2.131

a. Dependent Variable: WTU

Source: Made by the author using SPSS.

Table 39

VIF values for premium users

		Coefficients ^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.020	.103		.198	.844					
	Enjoyment	.118	.131	.125	.899	.374	.513	.133	.095	.579	1.728
	Social value	-.189	.156	-.195	-1.216	.230	.385	-.178	-.129	.435	2.301
	Quality	-.085	.242	-.089	-.351	.727	.539	-.052	-.037	.173	5.776
	Epistemic value	.385	.217	.414	1.772	.083	.615	.255	.188	.206	4.851
	Value for money	.279	.131	.296	2.123	.039	.572	.302	.225	.579	1.729
	Trust of the brand	.214	.222	.225	.965	.339	.578	.142	.102	.207	4.829

a. Dependent Variable: Retention

Source: Made by the author using SPSS.

To gain a broader understanding of the interrelationships between constructs, a Pearson correlation analysis was conducted. According to Schober et al. (2018), correlations with values greater than 0,7 are considered strong. As it is shown in the **Table 40**, there is a strong correlation (0,706) between social and epistemic values, and this correlation is also significant, with p value below 0,001. The construct of quality has strong correlation with epistemic value (0,812) and trust of the brand (0,877). Epistemic value has also a strong correlation with trust of the brand (0,757). All the relationships are also significant. However, the strong correlations between the mentioned constructs aligns with the conceptual framework of value creation. These correlations highlight

the interrelated nature of the constructs but do not suggest redundancy. From a theoretical perspective, these variables were kept in the further analysis and previous research identified them as key factors of value creation in a freemium platform (Hamari et al., 2017; Sweeney & Soutar, 2001). As removing or combining them without a solid theoretical backing could undermine the explanatory power of the model, all variables were retained in the model, ensuring it properly captures the richness of the user experience and the mechanisms of value creation.

Table 40

Pearson correlations between variables

		Correlations					
		Enjoyment	Social value	Quality	Epistemic value	Value for money	Trust of the brand
Enjoyment	Pearson Correlation	1	.380**	.476**	.608**	.465**	.494**
	Sig. (2-tailed)		.005	<.001	<.001	<.001	<.001
	N	57	54	53	57	57	53
Social value	Pearson Correlation	.380**	1	.625**	.706**	.543**	.571**
	Sig. (2-tailed)	.005		<.001	<.001	<.001	<.001
	N	54	56	55	56	55	54
Quality	Pearson Correlation	.476**	.625**	1	.812**	.530**	.877**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	53	55	55	55	54	53
Epistemic value	Pearson Correlation	.608**	.706**	.812**	1	.544**	.757**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	57	56	55	59	58	54
Value for money	Pearson Correlation	.465**	.543**	.530**	.544**	1	.567**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	57	55	54	58	58	54
Trust of the brand	Pearson Correlation	.494**	.571**	.877**	.757**	.567**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	53	54	53	54	54	55

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Made by the author using SPSS.

Finally, the Durbin-Watson statistic was used to assess autocorrelation in the residuals of the regression model. As standard regression assumes errors are independent, it is important to evaluate whether they are not correlating with each other and in this way violating the assumptions of the model. Autocorrelation is considered problematic when the Durbin-Watson value is below 1,5 or above 2,5 As shown in **Table 41**, the freemium regression models for WTU and retention yielded Durbin-Watson values of 2,165 and 2,277 respectively, while the premium regression model for retention showed a value of 2,024. Therefore, it can be inferred that autocorrelation is not present in these models, which strengthens the reliability of the results.

Table 41

Durbin Watson statistics: freemium WTU, freemium retention, premium retention

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics				Durbin-Watson
						F Change	df1	df2	Sig. F Change	
1	.397 ^a	.158	.138	.95809696	.158	7.821	4	167	<.001	2.165
a. Predictors: (Constant), Enjoyment, Social value, Quality, Trust of the brand										
b. Dependent Variable: WTU										

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics				Durbin-Watson
						F Change	df1	df2	Sig. F Change	
1	.677 ^a	.459	.446	.75707046	.459	35.356	4	167	<.001	2.277
a. Predictors: (Constant), Enjoyment, Social value, Quality, Trust of the brand										
b. Dependent Variable: Retention										

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics				Durbin-Watson
						F Change	df1	df2	Sig. F Change	
1	.703 ^a	.495	.427	.73833125	.495	7.339	6	45	<.001	2.024
a. Predictors: (Constant), Enjoyment, Social value, Quality, Epistemic value, Value for money, Trust of the brand										
b. Dependent Variable: Retention										

Source: Made by the author using SPSS.

To conclude, key assumptions for conducting regression analysis were tested and met. The results confirmed that no influential outliers were present, linearity and homoscedasticity were upheld, and the residuals followed and approximately normal distribution. Multicollinearity was not a concern either with all VIF values falling within acceptable threshold. Pearson correlation analysis showed theoretically consistent interrelationships between constructs, further justifying their inclusion in the model despite high correlations. Finally, the Durbin-Watson statistics indicated no problematic autocorrelation in the regression residuals. Altogether, this thorough assumption testing solidifies the methodological integrity and solidifies the validity of the following hypotheses test.

3.2. Hypotheses testing and regression analysis

3.2.1. Regression results and hypotheses testing for freemium users

In this subchapter the main hypotheses testing part will be covered for freemium users. The main questions of the thesis and the relationships between dependent and independent variables will be tested and will be compared with the prior research and literature analysis.

To begin with, freemium dataset was tested and the hypothesis related to these users. Therefore, several regressions were run via SPSS. Firstly, it was measured the impact of independent variables to customers willingness to upgrade (WTU). The regression showed Adjusted R^2 value of 0,138, which indicates that 13,8 % of the variation in WTU can be explained by the variables included in the model. Despite the value being relatively low, it is not uncommon in consumer or behavioural research, where individual decisions are often influenced by a wide range of psychological, situational and external factors (Peterson, Albaum & Beltramini, 1985). Therefore, despite the modest R^2 , the regression model remains useful for identifying statistically significant predictors and understanding general trends.

Table 42

Regression results for freemium users: impact on WTU

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.397 ^a	.158	.138	.95809696	.158	7.821	4	167	<.001

a. Predictors: (Constant), Enjoyment, Social value, Quality, Trust of the brand

b. Dependent Variable: Willingness to upgrade

Coefficients ^a											
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Zero-order	Partial	Part	Collinearity Statistics Tolerance	VIF
1	(Constant)	.042	.073		.579	.563					
	Enjoyment	.026	.090	.025	.290	.772	.108	.022	.021	.699	1.431
	Social value	.381	.087	.366	4.388	<.001	.381	.322	.312	.724	1.381
	Quality	-.146	.113	-.144	-1.291	.198	.149	-.099	-.092	.408	2.451
	Trust of the brand	.155	.105	.152	1.468	.144	.243	.113	.104	.469	2.131

a. Dependent Variable: Willingness to upgrade

Source: Made by the author using SPSS.

In continuation of the results of the first regression, which can be seen in the **Table 42**, only one significant predictor with p value < 0,001 was identified, which is social value. The Standardized Beta coefficient of this predictor is 0,366, which indicates that social value has a moderate positive effect on WTU. This means that, assuming all other factors remains unchanged, a one standard deviation increase in social value is associated with a 0,366 standard deviation increase in users' WTU to the premium version. These results supported the findings of the large group of researchers (Bründl, 2018; Bapna and Umyarov, 2015; Guo, Chen, Goes & Zhang, 2022; Hamari et al., 2020; Kim, Lee & Zo, 2018; Ross, 2018; Rietveld, 2018) and does not support the results of the other, smaller group (Hsu and Lin, 2015; Mäntymäki et al., 2019). Other predictors, which are Enjoyment, Quality, and Trust of the brand, were not significant. Therefore, it can be

highlighted that the hypothesis FH3, which states that social value affects users WTU positively in the context of freemium business platform, was supported. However, the hypotheses FH1 (High enjoyment of the free tier platform affects users WTU negatively), FH5 (Perceived quality of free tier has a negative effect on WTU), and FH7 (Trust of the brand affects freemium users WTU positively) were not supported.

The second regression with freemium users were run to observe the impact of the predictors on retention. This regression model was stronger as the previous one, as Adjusted R² value was 0,446, which is 3 times greater than the previous model. The value shows that 44,6% of retention can be explained by the variables included in the model. This model has two significant predictors, enjoyment and trust of the brand, with a positive moderate influence on the dependent variable. The Standardized Beta coefficient of enjoyment and trust of the brand were 0,328 and 0,326 respectively. This means that, assuming all other factors remains unchanged, a one standard deviation increase in enjoyment and one standard deviation increase in trust of the brand are associated with 0,328 and 0,326 standard deviation increase in users' retention, respectively. Social value, unlike in the previous regression, did not have a significant effect on users' retention. The predictor of quality for both regressions was insignificant. The results of the regression is shown in the **Table 43**.

Table 43

Regression results for freemium users: impact on Retention

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.677 ^a	.459	.446	.75707046	.459	35.356	4	167	<.001
a. Predictors: (Constant), Enjoyment, Social value, Quality, Trust of the brand									
b. Dependent Variable: Retention									

Coefficients ^a										
Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Correlations			Collinearity Statistics
		B	Std. Error				Zero-order	Partial	Part	
1	(Constant)	-.006	.058		-.105	.916				
	Enjoyment	.342	.071	.328	4.810	<.001	.541	.349	.274	.699
	Social value	.087	.069	.084	1.262	.209	.388	.097	.072	.724
	Quality	.108	.089	.108	1.214	.226	.557	.094	.069	.408
	Trust of the brand	.327	.083	.326	3.926	<.001	.576	.291	.224	.469
a. Dependent Variable: Retention										

Source: Made by the author using SPSS.

The effect of enjoyment, confirmed in the regression, is in line with the findings of Ascarza et. al. (2023) and Hamari et al. (2019), who observed that enjoyment affects retention positively.

The effect of trust of the brand, interestingly, was not observed on users' WTU, as on the research of Aronsson and Eden (2020) and Ku et al. (2017), but on users' retention. Therefore, we can note that hypothesis FH2 (High enjoyment of the free tier platform affects users' retention intention positively) and hypothesis FH8 (Trust of the brand affects freemium users' retention positively) were supported, whereas hypotheses FH4 (Social value affects users' retention positively in the context of freemium business platform), and FH5 (Perceived quality of free tier has a positive effect on retention) were not supported.

To continue further, the relationship between retention and WTU was tested. To start with, the impact of retention on WTU was assessed. For retention's impact on WTU, Adjusted R² was barely, 0,042, which indicates that only 4,2% of WTU can be explained by Retention. Nonetheless, the relationship was found to be significant, as p value was below 0,05 threshold. The value of Standardized Beta coefficient for Retention was 0,217. This shows that assuming all other factors remains unchanged, a one standard deviation increase in Retention is associated with a 0,217 increase in WTU. Therefore, it can be evaluated that there is a statistically significant relationship between Retention and WTU, but the explanatory power of Retention why users choose to upgrade is very weak, showing that other factors influence consumers more. Nonetheless, the hypothesis FH10, stating that users' retention affects users' WTU positively, was supported.

Almost identical results were observed evaluating the effect of WTU on Retention. Adjusted R² was 0,042 showing the weak explanatory power for Retention. However, the effect was statistically significant and the Standardized Beta coefficient for WTU was 0,217. Therefore, the hypothesis FH9, stating that users WTU affects users' retention positively, was also supported. The mutual impact of retention and WTU is displayed in the **Table 44** and **Table 45**.

Table 44

Regression results for freemium users: impact of Retention on WTU

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.217 ^a	.047	.042	.99845530	.047	8.854	1	180	.003
a. Predictors: (Constant), Retention									

Coefficients ^a					
Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.035	.074	.470	.639
	Retention	.221	.074	.217	.003
a. Dependent Variable: WTU					

Source: Made by the author using SPSS.

Table 45

Regression results for freemium users: impact of WTU on Retention

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.217 ^a	.047	.042	.97899062	.047	8.854	1	180	.003

a. Predictors: WTU

Coefficients ^a					
Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1					
(Constant)	-.002	.073		-.030	.976
WTU	.212	.071	.217	2.976	.003

a. Dependent Variable: Retention

Source: Made by the author using SPSS.

Finally, regression analysis was controlled for demographic variables to account for potential influence of individual characteristics (such as age, gender, income, education) on the dependent variables – WTU or retention. Starting with the effect on WTU, the new regression was slightly weaker than the previous ones without demographic controls, as the Adjusted R² decreased from 0,138 to 0,122. In addition, none of the demographic variables had a statistically significant impact on WTU (results are presented in the **Table 46**). The only significant predictor remained social value, with a Standardized Beta coefficient of 0,379, compared to 0,366 in the previous model. This shows that demographic characteristics do not meaningfully influence WTU in this context, while social value remains a consistent and solid predictor, even after accounting for individual differences.

Table 46

Regression results for freemium users: impact on WTU including demographic controls

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.417 ^a	.174	.122	.97201999	.174	3.328	10	158	<.001

a. Predictors: (Constant), 43 Koks yra Jūsų pajamų dydis (į rankas)?, 41 Gyvenamoji vieta:, Enjoyment, 42 Darbinė padėtis:, 40 Mano lytis: , 38 Mano amžius:, 39 Mano išsilavinimas:, Social value, Quality, Trust of the brand.
b. Dependent Variable: WTU

Coefficients ^a										
Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Zero-order	Partial	Part	Collinearity Statistics Tolerance	VIF
1										
(Constant)	.487	.838		.581	.562					
Enjoyment	.023	.093	.021	.243	.808	.108	.019	.018	.675	1.482
Social value	.395	.090	.379	4.380	<.001	.385	.329	.317	.698	1.434
Quality	-.134	.117	-.131	-1.144	.254	.162	-.091	-.083	.402	2.489
Trust of the brand	.167	.109	.163	1.536	.126	.258	.121	.111	.465	2.148
38 Mano amžius:	-.040	.113	-.028	-.354	.724	.021	-.028	-.026	.826	1.210
39 Mano išsilavinimas:	.084	.108	.063	.780	.437	.028	.062	.056	.811	1.232
40 Mano lytis:	.063	.162	.030	.388	.699	-.012	.031	.028	.876	1.142
41 Gyvenamoji vieta:	-.264	.212	-.092	-1.243	.216	-.049	-.098	-.090	.950	1.053
42 Darbinė padėtis:	-.007	.106	-.005	-.070	.944	-.008	-.006	-.005	.940	1.064
43 Koks yra Jūsų pajamų dydis (į rankas)?	.026	.071	.030	.365	.716	-.016	.029	.026	.794	1.259

a. Dependent Variable: WTU

Source: Made by the author using SPSS.

Table 47

Regression results for freemium users: impact on retention including demographic controls

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.685 ^a	.469	.436	.76684601	.469	13.962	10	158	<.001

a. Predictors: (Constant), 43 Koks yra Jūsų pajamų dydis (į rankas)?, 41 Gyvenamoji vieta:, Enjoyment, 42 Darbinė padėtis:, 40 Mano lytis: , 38 Mano amžius:, 39 Mano išsilavinimas:, Social value, Quality, Trust of the brand
b. Dependent Variable: Retention

Coefficients ^a										
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Zero-order	Partial	Part	Collinearity Statistics Tolerance VIF
1	(Constant)	-.1293	.661		-1.956	.052				
	Enjoyment	.342	.074	.327	4.639	<.001	.543	.346	.269	.675 1.482
	Social value	.100	.071	.097	1.402	.163	.389	.111	.081	.698 1.434
	Quality	.127	.092	.126	1.380	.170	.553	.109	.080	.402 2.489
	Trust of the brand	.300	.086	.297	3.498	<.001	.572	.268	.203	.465 2.148
	38 Mano amžius:	.026	.089	.019	.295	.768	.101	.023	.017	.826 1.210
	39 Mano išsilavinimas:	.094	.085	.071	1.107	.270	.080	.088	.064	.811 1.232
	40 Mano lytis:	.086	.127	.042	.677	.499	-.029	.054	.039	.876 1.142
	41 Gyvenamoji vieta:	.192	.167	.068	1.146	.253	.117	.091	.066	.950 1.053
	42 Darbinė padėtis:	.037	.084	.026	.441	.660	.045	.035	.026	.940 1.064
	43 Koks yra Jūsų pajamų dydis (į rankas)?	.017	.056	.020	.306	.760	-.079	.024	.018	.794 1.259

a. Dependent Variable: Retention

Source: Made by the author using SPSS.

The same exercise was conducted to evaluate the potential influence of demographics on retention. Similar results were observed as with WTU. Adjusted R^2 dropped from 0,446 to 0,436, none of the demographic characteristics had a statistical significance and the two predictors – enjoyment and trust of the brand – remained significant with a little lower value of Standardized Beta coefficient (from 0,328 to 0,327 and from 0,326 to 0,297). The results shows that demographic characteristics do not meaningfully influence WTU in this context, while social value remains a consistent and solid predictor, even after accounting for individual differences. All the values are displayed in the **Table 47**.

In summary, the regression analyses conducted on the freemium user dataset revealed that social value is the most significant and consistent predictor of WTU to upgrade, whereas enjoyment and trust of the brand were the main factors influencing retention. Despite the relatively low explanatory power in the WTU model, the findings remain valuable given the behavioural complexity of consumer decisions. The mutual relationship between WTU and retention was statistically significant but weak, showing limited direct influence. Demographic variables had no significant effect on either dependent variable, indicating that behavioural and experiential factors play a far more critical role than individual characteristics.

3.2.2 Regression results and hypothesis testing for premium users

In this subchapter the main hypothesis testing part will be covered for freemium users. The main questions of the thesis and the relationships between dependent and independent variables will be tested and will be compared with the prior research and literature analysis.

First, the effect of the predictors – enjoyment, social value, quality, epistemic value and value for money – was evaluated with the regression. The Adjusted R^2 value was 0,427, indicating that 42,7% of the variation in Retention among premium users can be explained by the variables included in the model. This suggests that the model has a relatively strong explanatory power. However, despite overall R^2 value being quite high, only one predictor was found to have a statistically significant effect on retention: value for money, with a p-value below the 0,05 threshold. The value of Standardized Beta coefficient of this predictor was 0,296, suggesting a moderate positive effect. This means that, assuming all other factors remains unchanged, a one standard deviation increase in value for money is associated with a 0,296 standard deviation increase in users' retention. Therefore, the hypothesis PH4, stating that perceived value for money of premium version affects users' retention on the premium tier positively, was supported. Whereas the hypotheses PH1 (High enjoyment of the premium tier platform affects users' continuous usage intention positively), PH2 (Social value affects users' retention positively in the context of premium business platform), PH3 (Perceived quality of premium services has a positive effect on user retention), PH5 (Discovery of new content (Epistemic value) affects users' retention on the premium tier positively) and PH6 (Trust of the brand affects premium users' retention positively) were not supported. The results are presented in the **Table 48**.

To continue further, regression analysis was controlled for demographic variables to account for potential influence of individual characteristics (such as age, gender, income, education) on the Retention. The Adjusted R^2 value dropped from 0,427 to 0,392, indicating that the inclusion of demographic controls slightly reduced model's explanatory power, but the value is still quite high. Nonetheless, none of the demographic predictors were found to be statistically significant. Importantly, the predictor value for money, which was previously significant with a moderate positive effect on retention, also lost its statistical significance in this extended model. To investigate the influence of demographic variables on the regression model further, multicollinearity diagnostics were conducted. In the initial analysis, only quality showed a VIF above the recommended threshold, with a value of 5, 7. However, after introducing demographic

controls, the VIF values increased substantially for several variables: quality rose to 7,5, while epistemic value and trust of the brand also surpassed the critical level of 5 with values of 5,9 and 5,8, respectively – results are presented in the **Table 49**. Nonetheless, the values still have not reached the critical threshold of 10, showing serious multicollinearity.

Table 48

Regression results for premium users: impact on retention

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	
1	.703 ^a	.495	.427	.73833125	.495	7.339	6	45	<.001	
a. Predictors: (Constant), Enjoyment, Social value, Quality, Epistemic value, Value for money, Trust of the brand.										
b. Dependent Variable: Retention										

Coefficients ^a										
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Zero-order	Partial	Part	Collinearity Statistics Tolerance VIF
1	(Constant)	.020	.103		.198	.844				
	Enjoyment	.118	.131	.125	.899	.374	.513	.133	.095	.579 1.728
	Social value	-.189	.156	-.195	-1.216	.230	.385	-.178	-.129	.435 2.301
	Quality	-.085	.242	-.089	-.351	.727	.539	-.052	-.037	.173 5.776
	Epistemic value	.385	.217	.414	1.772	.083	.615	.255	.188	.206 4.851
	Value for money	.279	.131	.296	2.123	.039	.572	.302	.225	.579 1.729
	Trust of the brand	.214	.222	.225	.965	.339	.578	.142	.102	.207 4.829

a. Dependent Variable: Retention

Source: Made by the author using SPSS.

Table 49

Regression on premium data including demographic variables

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	
1	.734 ^a	.538	.392	.76742732	.538	3.691	12	38	.001	
a. Predictors: (Constant), 43 Koks yra Jūsų pajamų dydis (į rankas)?, REGR factor score 1 for analysis 1, 38 Mano amžius:, 41 Gyvenamoji vieta:, REGR factor score 1 for analysis 1, 42 Darbinė padėtis:, 40 Mano lytis:, 39 Mano išsilavinimas:, REGR factor score 1 for analysis 1, REGR factor score 1 for analysis 1, REGR factor score 1 for analysis 1, REGR factor score 1 for analysis 1										

Coefficients ^a										
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF		
1	(Constant)	-.018	1.028		-.018	.986				
	Enjoyment	.172	.142	.182	1.211	.233	.539		1.857	
	Social value	-.173	.170	-.178	-1.018	.315	.396		2.523	
	Quality	-.086	.286	-.091	-.301	.765	.134		7.467	
	Epistemic value	.265	.250	.284	1.060	.296	.169		5.923	
	Value for money	.287	.139	.304	2.064	.046	.561		1.783	
	Trust of the brand	.250	.253	.263	.990	.329	.173		5.794	
	38 Mano amžius:	-.237	.204	-.157	-1.161	.253	.662		1.510	
	39 Mano išsilavinimas:	.206	.188	.147	1.096	.280	.672		1.489	
	40 Mano lytis:	.094	.265	.048	.355	.724	.666		1.502	
	41 Gyvenamoji vieta:	-.176	.233	-.093	-.755	.455	.808		1.238	
	42 Darbinė padėtis:	.049	.162	.040	.300	.766	.699		1.431	
	43 Koks yra Jūsų pajamų dydis (į rankas)?	.044	.119	.057	.371	.713	.509		1.963	

a. Dependent variable: Retention

Source: Made by the author using SPSS.

Meanwhile, Pearson correlation results indicated that the strongest relationships were found between the initial independent variables themselves, not between these and the demographic factors. This indicates that the inclusion of demographic controls may have intensified the shared variance among existing predictors, thereby inflating multicollinearity and reducing the precision of the regression estimates. Given the elevated VIF values and the loss of statistical significance in previously significant predictors, the second model appears less stable and less interpretable. Therefore, it may not be suitable for drawing meaningful conclusions, and the original model without demographics is retained for further analysis and discussions.

In summary, the regression analysis for premium users identified value for money as the only significant predictor of retention, confirming its positive influence and supporting the hypothesis PH4, stating that perceived value for money of premium version affects users' retention on the premium tier positively, whereas the constructs of enjoyment, social value, quality, epistemic value and trust of the brand were not statistically significant and the related hypothesis were not supported.

3.2.2. Scientific discussion of the research

This chapter will compare the findings of the present study to the findings of previous research on value creating factors of a freemium platform for customer willingness to upgrade (WTU) and retention. Particular attention is given to how the results align or diverge from the previous empirical studies. This comparison enables a deeper understanding of the unique dynamics within the freemium business industry context with the highlight to media business.

The results of the empirical part of this research are shown in the **Table 50**. Six hypotheses out of sixteen were supported, and all of them will be discussed and compared to the findings of the previous research. It is seen that for the enjoyment construct, this research did not confirm neither the outcomes of Mäntymäki et al. (2019), who found its positive impact on WTU, neither of Hamari et al. (2020), who observed the negative impact, as the FH1 hypothesis, stating that high enjoyment of the free tier platform affects users WTU negatively, was not supported. However, the results from freemium dataset confirms the findings of Hamari et al. (2020) and Ascarza et. al. (2023), who observed the positive impact of enjoyment for customer retention, as our FH2 hypothesis was supported. The results from premium data set, though, did not support the mentioned findings of Hamari et al. (2020) and Ascarza et. al. (2023), as the hypothesis PH1 was

not supported, but was in line with the findings of Mäntymäki et al. (2019), who found that enjoyment was not significant for retaining premium customers.

Table 50

Outcome of the research hypotheses

Hypothesis	Outcome
FH1: High enjoyment of the free tier platform affects users WTU negatively.	Not supported
FH2: High enjoyment of the free tier platform affects users' retention positively.	Supported
FH3: Social value affects users WTU positively in the context of freemium business platform.	Supported
FH4: Social value affects users' retention positively in the context of freemium business platform.	Not supported
FH5: Perceived quality of free tier has a negative effect on WTU.	Not supported
FH6: Perceived quality of free tier has a positive effect on retention.	Not supported
FH7: Trust of the brand affects freemium users WTU positively.	Not supported
FH8: Trust of the brand affects freemium users' retention positively.	Supported
FH9: Users WTU affects users' retention positively.	Supported
FH10: Users' retention affects users' WTU positively.	Supported
PH1: High enjoyment of the premium tier platform affects users' retention positively.	Not supported
PH2: Social value affects users' retention positively in the context of premium business platform.	Not supported
PH3: Perceived quality of premium services has a positive effect on user retention.	Not supported
PH4: Perceived value for money of premium version affects users' retention on the premium tier positively.	Supported
PH5: Discovery of new content (Epistemic value) affects users' retention on the premium tier positively.	Not supported
PH6: Trust of the brand affects premium users' retention positively.	Not supported

Source: Made by the author.

These partially differing results may be attributed to several contextual and methodological factors. First, the role of enjoyment might vary significantly depending on the maturity of the freemium offering and the users' stage in the customer journey. For freemium users, enjoyment may act as an initial engagement mechanism, encouraging continued use and eventual retention. However, for premium users, who are already committed, other factors such as content quality, utility, or perceived value for money may be more significant than emotional gratification. Second, cultural, market specific, and industry specific differences could have influenced the results. This study focused on a Lithuanian media platform and local user digital behaviours, while the studies of Mäntymäki et al. (2019) and Hamari et al. (2020) focused on Finnish market's music and game industry. Nevertheless, as the results of this study regarding the construct of enjoyment was still partially in line with some of the findings of Hamari et al. (2020) and Ascarza et. al. (2023) and,

for the other part, to Mäntymäki et al. (2019), they provide further nuance to the complex role that enjoyment plays in freemium user behaviour. This suggests that while enjoyment may not be a consistent predictor across all user segments and outcome variables, it remains an important component in understanding user engagement and retention dynamics.

With respect to the social value construct, the findings of this research confirmed the results of multiple scholars (Bapna and Umyarov, 2015, Bründl, 2018; Guo et al., 2022; Hamari et al., 2020; Kim et al. 2018) which showed the positive impact of social value to customers willingness to upgrade, as FH3 was confirmed. In addition, the results of Mäntymäki et al. (2019) and Hsu and Lin (2015) were not supported, as their findings showed that social value was not significant on WTU. However, neither for freemium users (FH4), nor for premium (PH2) the impact of social value on retention was significant, therefore it differed from the results of Brüggemann and Lehmann-Zschunke (2022), Hamari et al. (2020), Rahmansyah and Hati (2020). This suggests that while social value can act as a motivating factor in encouraging users to upgrade, potentially for the desire to belong, it may not be a strong enough driver to sustain continued usage over time. Therefore, social value may have a more immediate, short-term impact on behavioural intentions rather than a lasting effect on long-term engagement.

Concerning the perceived quality construct, the results of this research did not find that it would be significant for WTU (FH5), therefore it is in alignment with the studies of Hamari et al. (2020) and Hsu and Lin (2015) and have different findings from Mäntymäki et al. (2019) and Zeithaml (1988). In addition, quality did not prove to be significant for retention for neither freemium (FH6) nor premium (PH3) groups. One possible explanation for this outcome is that users of online media platforms may take a certain level of quality for granted. As a result, quality may be perceived as a baseline requirement rather than a distinguishing that drives upgrading or continued engagement.

With respect to the trust of the brand construct, the findings of this research, unlike the one of Aronsson and Eden (2020) and Ku et al. (2017), did not find it to be significant for WTU amongst freemium respondents (FH7). Nonetheless, it proved to be significant for the retention of freemium users and affecting it positively (FH8). Among the premium respondents, though, its impact to retention was again insignificant (PH6). These findings may suggest that trust of the brand may serve as a reassurance about content credibility and platform integrity, which helps to retain users in the absence of other strong commitments. On the other hand, the continuous usage intention for premium users may be driven more by other factors (like perceived value for money).

Therefore, trust appears to me more influential in sustaining engagement at the freemium level in an online media platform than in shaping either upgrade behaviour or retention among paying customers.

As the construct of perceived value for money is concerned, it was found to be the only significant factor for the retention of premium users (PH4), which affected it positively. This finding aligns with the results of Hamari et al. (2020) who emphasized the importance of users perceiving sufficient value in return for their financial investment. However, it contrasts with the findings of Mäntymäki et al. (2019) who did not find value for money to significantly affect retention. This outcome suggests that for premium users, who are already financially committed to the platform, continuous intention to use the platform hinges strongly on their assessment of whether the benefits they receive justify the cost of the subscription.

For the epistemic value construct, it was not found to be significant for the retention among the premium users (PH5), thus it did not confirm the findings of Mäntymäki et al. (2019) who found that epistemic value drive users' intention to retain in the premium tier. The findings of this research may imply that once the initial curiosity for the premium media platform is satisfied, epistemic value may diminish in relevance.

In summary, the comparison between the current study and prior research highlights the nuanced and context-dependent nature of value-creating factors within the freemium model, particularly in the media industry. Several hypotheses were confirmed in alignment with prior empirical research, such as the positive influence of enjoyment and trust of the brand on retention among freemium users, the impact of social value on WTU, and the central role of value for money in retaining premium users. At the same time, several hypotheses did not confirm previous studies, indicating that the influence of certain constructs – such as enjoyment, perceived quality, trust of the brand, or epistemic value – may vary across users' tiers, and industry contexts. These discrepancies suggest that value perception in freemium setting is highly context-dependent and influenced by factors such as market maturity, user expectations, and cultural or sector-specific dynamics. Overall, the present study contributes to a deeper understanding of how value is constructed and perceived in freemium media platforms, offering insights that both reinforce and challenge existing theoretical frameworks.

CONCLUSIONS

This research aimed to investigate the value-creating factors of a freemium media platform that influence users' willingness to upgrade (WTU) and retention. The study focused on the Lithuanian media platform vz.lt and employed a structured quantitative methodology including a 7-point Likert scale survey and multiple regression analysis using SPSS. The findings provide empirical insights into which factors most significantly influence user behavior, thereby offering valuable implications for both practitioners in the media industry and academic research.

First, to accomplish the first objective of the master thesis, the role and impact of freemium business model on customer acquisition and retention, with the focus on the media industry was evaluated and an overview of value-creating factors identified in existing research. It was observed that freemium business model in general plays an important role in customer acquisition by lowering entry barriers, allowing users to access basic content for free while attracting them to upgrade to premium service. This is particularly effective in the media industry, where competition is high, and consumers expect free access to information. The model has a perspective to attract a large user base, with the potential to convert free users into paying customers over time. However, while customer acquisition through the freemium model has been successful, converting these users into paying subscribers and retaining them faces greater challenges. The literature reviewed underlined that users' aversion to payment, which is captured by the zero-price effect and the free mentality, and the difficulty of balancing valuable free and premium content are core barriers.

To address the second objective, a structural framework for empirical testing was developed, and six value-creating constructs were identified from previous studies: enjoyment, social value, perceived quality, perceived value for money, epistemic value, and trust of the brand. These were considered critical influencing factors with WTU or retention, forming theoretical base for the research hypotheses. The review of empirical studies also revealed some inconsistencies in the significance of these constructs across industries, countries, and business models, further supporting the relevance of reassessing these factors in the context of a Lithuanian online media platform.

A total of 16 hypotheses were formulated – ten for freemium users and six for premium users. An online survey with a 7-point Likert scale was administered to the users of a Lithuanian business freemium media platform over a one-month period, collecting 216 responses from

freemium users and 60 from premium users. The questionnaire included tailored sections for both user types and covered 43 questions.

Before proceeding to regression analysis, the data were validated through descriptive statistics, Little's MCAR test, and reliability testing using Cronbach's alpha. Examination of standard deviations indicated a generally high level of consistency in responses, particularly for constructs like enjoyment and trust, while greater variability appeared in the constructs such as social value and retention. The Little's MCAR test confirmed that missing data occurred completely at random, strengthening credibility of the findings. Furthermore, reliability analysis using Cronbach's alpha fell within the acceptable range of 0.70 to 0.95, confirming the internal consistency and reliability of the scales used. Overall, these results validated the quality of the data for hypotheses testing.

Descriptive statistics further provided several key insights. Firstly, most constructs received above-midpoint mean scores from both user groups, indicating generally favourable perceptions of the platform. Trust of the brand was rated highly across both segments. However, WTU among freemium users had a low mean score (2.34), suggesting that positive evaluations do not directly translate into an intention to upgrade – highlighting a key challenge for freemium platforms. Additionally, premium users consistently rated all constructs higher than freemium users (overall means of 5.19 and 4.45 respectively), supporting the notion that paid users either have more favourable experiences or enter the premium tier with more positive expectations.

Furthermore, key assumptions for conducting regression analysis were tested and met. The results confirmed that no influential outliers were present, linearity and homoscedasticity were upheld, and the residuals followed an approximately normal distribution. Multicollinearity was not a concern either with all VIF values falling within acceptable threshold. Finally, the Durbin-Watson statistics indicated no problematic autocorrelation in the regression residuals. Altogether, assumption testing solidified the methodological integrity and the validity of the hypothesis testing.

The regression results revealed that six out of sixteen hypotheses were supported. Among freemium users, social value significantly influenced WTU, indicating that peer influence or community engagement may play a key role in encouraging users to convert. Enjoyment and trust of the brand emerged as the main predictors of freemium user retention, pointing to the importance of positive emotional experiences and brand credibility. In contrast, for premium users, only perceived value for money significantly influenced retention – reinforcing the notion that paying

users evaluate their experience through a rational, value-based lens. Furthermore, the relationship between retention and WTU was found to be mutually significant, as confirmed by multiple regression analysis. This bidirectional association suggests that users' willingness to upgrade may both influence and be influenced by their level of ongoing engagement, supporting the interconnected nature of behavioral intentions in freemium environments.

These findings both align with and challenge previous research. For instance, the significance of social value in driving WTU confirms the conclusions of Bapna and Umyarov, (2015), Bründl (2018), Guo et al. (2022), Hamari et al. (2020) and Kim et al. (2018), while the non-significance of enjoyment for WTU contrasts with the work of Mäntymäki et al. (2019). Similarly, the importance of value for money to premium user retention confirms Hamari et al.'s (2020) findings but diverges from Mäntymäki et al. (2019). Such inconsistencies further highlight the contextual nature of value perception and the importance of sector-specific and culturally relevant studies.

Recommendation for managers. Based on the results of this research, several practical insights can be drawn for companies operating freemium media platforms. First, social value should be leveraged more actively in user engagement strategies. As this research showed that social value is the factor that encourage freemium users to upgrade most, community-driven campaigns, peer sharing incentives, and social proof mechanisms may encourage conversions. For instance, vz.lt could organize in-person events exclusively for premium users or even could have a matchmaking tool which would help businesspeople to find the right profiles of other premium members that they could partner in business.

Second, for retaining freemium users, platforms should invest in enhancing the user experience and reinforcing brand trust. This can be achieved through clear communication, consistent delivery, and aesthetically pleasing and reliable digital environments. Since these users are not financially committed, emotional and cognitive trust factors become more central to their ongoing engagement.

Third, for premium user retention the emphasis should be placed on delivering clear, measurable value. Users who pay for access require consistent evidence that their investment is worthwhile. Exclusive content, personalized services, or even loyalty-based discounts could strengthen their perception of value.

Recommendation for future research. Given the scope and limitations of the present study, several avenues for future research can be identified to strengthen and broaden the academic

understanding of value-creating factors within freemium media platforms. First, future studies are encouraged to employ probability-based sampling techniques to increase the representativeness of the findings. Research with access to a broader user base or institutional support may seek to gather a more demographically and behaviorally diverse sample. Such improvements would allow for more generalizable insights into user behavior and preferences across the full spectrum of a platform's audience.

Second, researchers should consider using longitudinal research designs to observe how user perceptions and behaviors evolve over time. A longitudinal approach could provide a more dynamic view of how value-creating factors influence willingness to upgrade or retention across different stages of customer journey.

Third, expanding the sample size – particularly among premium users – should be a priority for future investigations. While the premium user sample in this study met the minimum requirements for multiple regression analysis, a larger dataset would strengthen the statistical power and allow for additional segmentations, such as distinguishing between different motivations for upgrading or retention based on user demographics, usage intensity, or type of content consumed.

Fourth, further research could explore comparative studies across industries or countries, particularly given that value perceptions in freemium platforms are likely influenced by sector-specific features and cultural differences. For example, what drives value in freemium news media platforms may differ significantly from gaming, music, or educational freemium services. Cross-sectoral or cross-country comparisons could help to isolate universal versus context-dependent value-creating factors.

Lastly, it would be beneficial for future studies to investigate additional moderating or mediating variables that may affect the relationship between value-creating constructs and behavioral outcomes. Constructs such as price sensitivity, usage intensity, previous experience with premium models, or platform content type may offer explanatory power beyond the primary variables studied here. Including such variables could provide a more holistic understanding of the complex decision-making processes behind upgrading and retention in freemium ecosystems.

To conclude, this master thesis makes a meaningful contribution to the underexplored area of value creation in freemium media platforms by empirically identifying and evaluating the specific factors that influence users' willingness to upgrade and their retention. The findings not only confirm certain elements of previous studies but also provide new insights into how

constructs like social value, brand trust, enjoyment, and perceived value for money operate in a media-specific premium context. As such, the study strengthens theoretical understanding and equips both academics and practitioners with a more granular view of what drives premium conversions and continued engagement in the digital business news environment. This contribution is particular timely as media organizations continue to navigate the challenges of monetizing content in an era of ubiquitous free access and evolving user expectations.

LITERATURE AND SOURCES

1. Alkitbi, S., Alshurideh, M., Al Kurdi, B. and Salloum, S. (2020). *Factors Affect Customer Retention: A Systematic Review*. Advances in Intelligent Systems and Computing. Viewed on 2024-01-18. Internet access: https://www.researchgate.net/profile/Muhammad-Alshurideh/publication/344365612_Factors_Affect_Customer_Retention_A_Systematic_Review/links/5fa41f36458515157bec375e/Factors-Affect-Customer-Retention-A-Systematic-Review.pdf
2. Aronsson, J., and Edén, F. (2020). *Making the Freemium Business Model Successful*. Department of technology management and economics. Division of entrepreneurship and strategy. Viewed on 2024-01-06. Internet access: <https://odr.chalmers.se/server/api/core/bitstreams/9cb5cab7-dbb5-432e-9ff0-f065026dafa6/content>
3. Ascarza, E., Neslin, S.A., Netzer, O. et al. (2017) *In Pursuit of Enhanced Customer Retention Management: Review, Key Issues, and Future Directions*. *Customer Needs and Solutions*, vol. 5, no. 1-2. Viewed on 2024-01-08. Internet access: <https://link.springer.com/article/10.1007/s40547-017-0080-0#citeas>
4. Bapna, R., and Umyarov, A. (2015). *Do Your Online Friends Make You Pay? A Randomized Field Experiment on Peer Influence in Online Social Networks*. *Management Science*, vol. 61, no. 8. Viewed on 2024-01-08. Internet access: https://www.jstor.org/stable/pdf/24551513.pdf?casa_token=-Jtr6LxKLGcAAAAA:WI7pgHFDZb59gx_0IOZ325MswfBCH25C6n2wIgf9xtFuE8IArQ5go2S8rywm-6tWnY0mvE2QXBrxhKavl_d8j_qWAAj2q4kt3XzDawdg-JZSc9zRNRM
5. Batterton, K. A., and Hale, K. N. *The Likert Scale. What It Is and How To Use It*. *Phanlax*, vol. 50, no. 2. Viewed on: 2025-01-10. Internet access: <https://www.jstor.org/stable/26296382?seq=1>
6. Berger, B., Matt, C., Steininger, D. et al. (2015). *It Is Not Just about Competition with “Free”: Differences between Content Formats in Consumer Preferences and*

- Willingness to Pay*. Journal of Management Information Systems, vol. 32, no. 3. Viewed on 2024-01-11. Internet access: <https://doi.org/10.1080/07421222.2015.1095038>
7. Bründl, S. (2018). *Passive, Active, or Co-Active? The Link between Synchronous User Participation and Willingness to Pay for Premium Options*. Proceedings of the 51st Hawaii International Conference on System Sciences. Viewed on 2024-01-14. Internet access: https://www.researchgate.net/publication/323378384_Passive_Active_or_Co-Active_The_Link_Between_Synchronous_User_Participation_and_Willingness_to_Pay_for_Premium_Options
 8. Chaudhuri, A., and Holbrook, M. B. (2001). *The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty*. Journal of marketing, vol. 65, no. 2, 81-93. Viewed on 2024-05-20. Internet access: <https://journals.sagepub.com/doi/full/10.1509/jmkg.65.2.81.18255>
 9. Daoud, J. I. (2017, December). *Multicollinearity and regression analysis*. Journal of physics: Conference series, vol. 949, no. 1, 012009. Viewed on 2024-03-20. Internet access: <https://iopscience.iop.org/article/10.1088/1742-6596/949/1/012009/meta>
 10. Deubener, J., Velamuri, V., Schneckenberg, D. (2016). *A typology of freemium business models for mobile applications*. Association for Information Systems AIS Electronic Library. Viewed on 2024-01-14. Internet access: https://web.archive.org/web/20200323035912id_/https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1044&context=ecis2016_rp
 11. Dou, W. (2004). *Will internet users pay for online content?* Journal of Advertising Research, vol. 44, no. 4, 349-359. Viewed on 2024-05-14. Internet access: <https://www.cambridge.org/core/journals/journal-of-advertising-research/article/will-internet-users-pay-for-online-content/0E65819084561AC2E3DE5135EA475504>
 12. Fernandes, E. (2023). *A data science based framework to enhance user engagement, acquisition and retention in news*. Instituto Universitario de Lisboa. Viewed on 2024-01-23. Internet access: https://repositorio.iscte-iul.pt/bitstream/10071/29368/1/phd_elizabeth_silva_fernandes.pdf
 13. Gu, X., Kannan, P.K., and Ma, L. (2018). *Selling the Premium in Freemium*. Journal of Marketing, vol. 82, no. 6. Viewed on 2024-01-21. Internet access: https://journals.sagepub.com/doi/abs/10.1177/0022242918807170?casa_token=nQTe

[a_zuOTUAAAAA:3oSTQ_U9iq9_5QFl0MJ8fUt6lElJSaI_EIQ2zJM975N_0gt5ikvJrsII_OvqgIIMYcqnusNlFvCWS](#)

14. Gu, X., Kannan, P.K., and Ma, L. (2019). How Companies Can Get the Most out of a Freemium Business Model. *Harvard Business Review*. Viewed on 2024-01-21. Internet access: <https://hbr.org/2019/03/how-companies-can-get-the-most-out-of-a-freemium-business-model>
15. Guo, C., Chen, X., Goes, P., Zhang, C. (2022). *Multiplex Social Influence in a Freemium Context: Evidence from Online Social Games*. *Decision Support Systems*, vol. 155, no. 155. Viewed on 2024-01-10. Internet access: https://www.sciencedirect.com/science/article/pii/S0167923621002219?casa_token=e_k4tRqLZIUcAAAAA:iivj8Jq4aAuuPnf7cH5NEAgTZfTJyX5DcJHx4QNJ3IY32uR5LhKDGx4b54dr0w-KFzNlvkRCQ
16. Hair et al. (2021). An introduction to structural equation modeling. In: *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. Classroom Companion: Business. Springer, Cham. Viewed on 2025-02-01. Internet access: https://doi.org/10.1007/978-3-030-80519-7_1
17. Hamari, J., Hanner N. and Koivisto, J. (2020). “Why Pay Premium in Freemium Services?” *A Study on Perceived Value, Continued Use and Purchase Intentions in Free-To-Play Games*. *International Journal of Information Management*, vol. 51. Viewed on 2024-01-07. Internet access: <https://www.sciencedirect.com/science/article/pii/S0268401218311812?via%3Dihub>
18. Hamari, J., Hanner N. and Koivisto, J. (2017). *Service Quality Explains Why People Use Freemium Services but Not If They Go Premium: An Empirical Study in Free-To-Play Games*. *International Journal of Information Management*, vol. 37, no. 1. Viewed on 2024-01-07. Internet access: https://www.sciencedirect.com/science/article/pii/S0268401216305059?casa_token=qc_AKrL163csAAAAA:fkoJ11fs-VmQIbbz_PSKjdlGqL2RZr-CKFqgEJO6t7BUvTnbS2d9IsW6-uUNzZvmT7SHcDZuBQ
19. Heidhues, P., & Koszegi, B. (2004). *The impact of consumer loss aversion on pricing*. WZB, Markets and Political Economy Working Paper No. SP II, 17. Viewed on 2024-05-020. Internet access: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=658002

20. Holm, A. (2016). Could Freemium Models Work for Legacy Newspapers? Nordicom-Information. Viewed on 2024-01-09. Internet access: <https://www.diva-portal.org/smash/get/diva2:937457/FULLTEXT01.pdf>
21. Holm, Anna B., and Franziska Günzel-Jensen. (2023). *Succeeding with Freemium: Strategies for Implementation*. Journal of Business Strategy, vol. 38, no. 2. Viewed on 2024-01-10. Internet access: https://www.emerald.com/insight/content/doi/10.1108/JBS-09-2016-0096/full/html?casa_token=n1Rqqc5cVYUAAAAA:-wgEzTFjN5rKZw5fjaR0UD8MHxOeC1yrR98DGVl7BwrIq0fsNLLCZyr6L2BAS8E57QAYjbD9bvdOHslCRfJTV5PuGvFKJ4RitkrHxI9epdP-dBI9Cog
22. Hossain, M. T., and Saini, R. (2015). *Free indulgences: Enhanced zero-price effect for hedonic options*. International Journal of Research in Marketing, vol. 32, no. 4, 457-460. Viewed on 2024-05-20. Internet access: <https://www.sciencedirect.com/science/article/pii/S0167811615001172>
23. Hsu, C. L., and Lin, J. C. C. (2015). *What drives purchase intention for paid mobile apps?—An expectation confirmation model with perceived value*. Electronic commerce research and applications, vol. 14, no. 1, 46-57. Viewed on 2024-05-20. Internet access: <https://www.sciencedirect.com/science/article/pii/S1567422314000878>
24. Huang, H. (2016). *Freemium Business Model: Construct Development and Measurement Validation*. Internet Research, vol. 26, no. 3. Viewed on 2024-01-20. Internet access: <https://www.emerald.com/insight/content/doi/10.1108/IntR-03-2014-0064/full/html>
25. Hüttel, B. A., Schumann, J. H., Mende, M., Scott, M. L., and Wagner, C. J. *How Consumers Assess Free E-Services*. Journal of Service Research, vol. 21, no. 3. Viewed on 2024-01-14. Internet access: https://journals.sagepub.com/doi/full/10.1177/1094670517746779?casa_token=qNKwRHD-NIEAAAAA%3AO5XjJd1aFSYpuUIJaNGyc2Wy_xZr90x_KL3m804cXee5cJqXLZkfxPpk02so37lJdaueao5fNG7M
26. Jenkins, Joy. (2020). *Publish Less, but Publish Better: Pivoting to Paid in Local News*. Reuters Institute for the Study of Journalism with the support of the Google News Initiative. Viewed on 2024-01-14. Internet access: https://ora.ox.ac.uk/objects/uuid:feb803df-29a9-4464-a270-4dee57565332/download_file?safe_filename=Jenkins%2520-

[%2520Pivoting%2520to%2520Paid%2520in%2520Local%2520News%2520FINAL.pdf&file_format=pdf&type_of_work=Report](#)

27. Joshi, Ankur & Kale, Saket & Chandel, Satish & Pal, Dinesh. (2015). *Likert Scale: Explored and Explained*. British Journal of Applied Science & Technology. Viewed on 2025-02-03. Internet access:
https://www.researchgate.net/publication/276394797_Likert_Scale_Explored_and_Explained
28. Karmakar, B., Liu, P., Mukherjee, G., Hai, C., Dutta, S. (2021). *Improved Retention Analysis in Freemium Role-Playing Games by Jointly Modelling Players' Motivation, Progression and Churn*. Journal of the Royal Statistical Society Series A: Statistics in Society, vol. 185, no. 1. Viewed on 2024-01-18. Internet access:
<https://academic.oup.com/jrsssa/article/185/1/102/7068450>
29. Kim, J., Lee, J. and Zo, H. (2018). *Toward Sustainable Freemium Software: the Roles of User Satisfaction and Use Context*. Journal of Electronic Commerce Research, vol. 19, no. 3. Viewed on 2024-01-12. Internet access:
http://www.jecr.org/sites/default/files/2018vol19no3_paper1.pdf
30. Koch, O. and Benlian, A. *The Effect of Free Sampling Strategies on Freemium Conversion Rates*. Electronic Markets, vol. 27, no. 1. Viewed on 2024-01-15. Internet access:
<https://link.springer.com/article/10.1007/s12525-016-0236-z>
31. Ku, Y., Lin, Y. and Yan, Z. (2017). *Factors Driving Mobile App Users to Pay for Freemium Services*. PACIS 2017 Proceedings. Viewed on 2024-01-10. Internet access:
<https://core.ac.uk/download/pdf/301373018.pdf>
32. Lambrecht, A., and Misra, K. (2017). *Fee or Free: When Should Firms Charge for Online Content?*. LBS Research Online. Viewed on 2024-01-09. Internet access:
https://lbsresearch.london.edu/id/eprint/495/1/LambrechtA_Fee_or_Free_2016.pdf
33. Lee, C., Kumar, V., Gupta, V. (2013). *Designing Freemium: A Model of Consumer Usage, Upgrade, and Referral Dynamics*. Viewed on 2024-01-08. Internet access:
<https://docplayer.net/13664626-Designing-freemium-a-model-of-consumer-usage-upgrade-and-referral-dynamics.html>
34. Lee, S., Kim, C. and Lee, H. (2022). *What Should Be Offered for Free and What for Premium in a Freemium Service? A Two-Stage Approach of Kano & Path Analysis to the Design of Freemium Services*. Technology Analysis & Strategic Management. Viewed on

- 2024-01-10. Internet access:
https://www.tandfonline.com/doi/full/10.1080/09537325.2022.2099265?casa_token=HC_KBA_VIZS0AAAAA%3AFdxIRbiHBWQFr0d_U8pfjsdV0IZTyhvDZoxAwFjId9CHV_OkQym0Na9CB6bbd1LIK-j5Thekei5Ud
35. Lin, T., Hsu, J., Chen, H. (2013). *Customer Willingness to Pay for Online Music: The Role of Free Mentality*. Journal of Electronic Commerce Research, vol. 14, no. 4. Viewed on 2024-01-13. Internet access:
https://tclin.mis.nsysu.edu.tw/paper/tclin/CUSTOMER%20WILLINGNESS%20TO%20PAY%20FOR%20ONLINE%20MUSIC_THE%20ROLE%20OF%20FREE%20MENTALITY.pdf
 36. Liu, C., Au, J. and Choi H. (2014). *Effects of Freemium Strategy in the Mobile App Market: An Empirical Study of Google Play*. Journal of Management Information Systems, vol. 31, no. 3. Viewed on 2024-01-14. Internet access:
www.tandfonline.com/doi/full/10.1080/07421222.2014.995564
 37. Memon, M. A., Ting, H., Cheah, J. H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). *Sample size for survey research: Review and recommendations*. Journal of applied structural equation modeling, 4(2). Viewed on 2024-03-14. Internet access:
https://jasemjournal.com/wp-content/uploads/2020/08/Memon-et-al_JASEM_Editorial_V4_Iss2_June2020.pdf
 38. Mishra, N., Najafi, S., Najafi Asadolahi, S., & Tsay, A. (2018). *How freemium gets consumers to pay a premium: The role of loss-aversion*. SSRN 2961548. Viewed on 2024-05-14. Internet access: <https://deliverypdf.ssrn.com/delivery.php?ID=>
 39. Mäntymäki, M., Islam, N. and Benbasat, I. (2019). *What Drives Subscribing to Premium in Freemium Services? A Consumer Value-Based View of Differences between Upgrading to and Staying with Premium*. Information Systems Journal, vol. 30, no. 2. Viewed on 2024-01-10. Internet access: onlinelibrary.wiley.com/doi/full/10.1111/isj.12262
 40. Mäntymäki, M., Salo, J. (2011). *Motivations in the adoption and conversion of freemium services: insights for digital entrepreneurship*. Computers in Human Behavior, vol 27, no. 6. Viewed on 2024-05-20. Internet access:
<https://www.sciencedirect.com/science/article/pii/S0747563211001099>
 41. Myllylahti, M. (2013). *Newspaper Paywalls—the Hype and the Reality*. Digital Journalism, vol. 2, no. 2. Viewed on 2024-01-15. Internet access:

- [2013, www.tandfonline.com/doi/pdf/10.1080/21670811.2013.813214?casa_token=5qoa3LymKgkAAAAA:HONDpiYJrN2M4wuAWB0AMMKC9XErHYNiMreRxHb3cERUY4ke50OCbkS57iW-nX2xm8Aw07WKH2zd](https://doi.org/10.1080/21670811.2013.813214?casa_token=5qoa3LymKgkAAAAA:HONDpiYJrN2M4wuAWB0AMMKC9XErHYNiMreRxHb3cERUY4ke50OCbkS57iW-nX2xm8Aw07WKH2zd)
42. Niemand, T., Tischer, S., Fritzsche, T. and Kraus, S. (2015). *The Freemium Effect: Why Consumers Perceive More Value with Free than with Premium Offers*. Thirty Sixth International Conference on Information Systems, Fort Worth. Viewed on 2024-01-09. Internet access: <https://core.ac.uk/download/pdf/301367403.pdf>
 43. Niemand, T., Mai, R., Kraus, S. (2019). *The Zero-Price Effect in Freemium Business Models: The Moderating Effects of Free Mentality and Price–Quality Inference*. Psychology & Marketing, vol. 36, no. 8. Viewed on 2024-01-13. Internet access: <https://onlinelibrary.wiley.com/doi/10.1002/mar.21211>
 44. O'Brien, D. (2022). *The Digital Transformation of the News Media Business – Paid Content and Entrepreneurship in Digital Journalism*. Viewed on 2024-01-19. Internet access: https://kups.ub.uni-koeln.de/64225/1/FINALE_DRUCKVERSION_20220103.pdf
 45. Panda, B. (2019). *Application of business model innovation for new enterprises: A case study of digital business using a freemium business model*. Journal of Management Development, vol. 39, no. 4. Viewed on 2024-01-07. Internet access: <https://www.emerald.com/insight/content/doi/10.1108/JMD-11-2018-0314/full/html>
 46. Pattabhiramaiah, A., Overby, E. and Xu, L. (2022). *Spillovers from Online Engagement: How a Newspaper Subscriber's Activation of Digital Paywall Access Affects Her Retention and Subscription Revenue*. Management Science, vol. 68, no. 5. Viewed on 2024-01-06. Internet access: https://lizhen-xu.github.io/papers/Pattabhiramaiah-Overby-Xu_2022_MS_Newspaper.pdf
 47. Peterson, R. A., Albaum, G., & Beltramini, R. F. (1985). *A meta-analysis of effect sizes in consumer behavior experiments*. Journal of Consumer Research, 97-103. Viewed on 2025-05-25. Internet access: <https://www.jstor.org/stable/2489385>
 48. Piedmont, R.L. (2023). Multiple Regression. In: Maggino, F. (Ed), *Encyclopedia of Quality of Life and Well-Being Research*. Springer. Viewed on 2025-02-01. Internet access: https://doi.org/10.1007/978-3-031-17299-1_1884
 49. Rahmansyah, M. and Hati, S. (2020). *The Influence of Customer Engagement Experiences between Satisfaction and Loyalty Relationships on Freemium Business Model*. Proceedings of the International Conference on Business and Management Research.

- Atlantis Press. Viewed on 2024-01-14. Internet access: <https://www.atlantis-press.com/proceedings/icbmr-20/125949963>
50. Reichheld, F. and W. Earl Sasser, Jr. Zero Defections: Quality Comes to Services. 1990. *Harvard Business Review*. From the magazine (September-October 1990). Viewed on 2024-01-09. Internet access: hbr.org/1990/09/zero-defections-quality-comes-to-services?registration=success.
 51. Russell, R. (2020). *Getting consumers to pay for content: the role of value discrepancy in freemium models*. Association for Information Systems AIS Electronic Library. ECIS 2020 Proceedings. Viewed on 2024-01-11. Internet access: https://www.researchgate.net/profile/Robert-Russell-10/publication/341180653_GETTING_CONSUMERS_TO_PAY_FOR_CONTENT_THE_ROLE_OF_VALUE_DISCREPANCY_IN_FREEMIUM_MODELS/links/5ec0ed0792851c11a86c8127/GETTING-CONSUMERS-TO-PAY-FOR-CONTENT-THE-ROLE-OF-VALUE-DISCRE
 52. Rust, R., Lemon, K. and Zeithaml, V. (2004). *Return on Marketing: Using Customer Equity to Focus Marketing Strategy*. *Journal of Marketing*, vol. 68, no. 1. Viewed on 2024-01-09. Internet access: www.jstor.org/stable/pdf/30161978.pdf?refreqid=fastly-default%3A0b70077c4cb76d066869f8f6102d2dd8&ab_segments=&origin=&initiator=&acceptTC=1.
 53. Rust, R. and Zahorik, A. (1993). *Customer Satisfaction, Customer Retention, and Market Share*. *Journal of Retailing*, vol. 69, no. 2. Viewed on 2024-01-18. Internet access: web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=d77ed845-2974-4f89-b4b8-f3887d7aaeff%40redis,
<https://www.sciencedirect.com/science/article/abs/pii/0022435993900032>
 54. Sabbeh, S. F. (2018). *Machine-Learning Techniques for Customer Retention: A Comparative Study*. *International Journal of Advanced Computer Science and Applications*, vol. 9, no. 2. Viewed on 2024-01-15. Internet access: https://thesai.org/Downloads/Volume9No2/Paper_38-Machine_Learning_Techniques_for_Customer_Retention.pdf
 55. Sanitra, M. and Jiang, Z. (2019). *How to Make the Freemium Subscription-Based Business Model Sustainable in a Long-Term?* Copenhagen Business School. Viewed on 2024-01-15. Internet access: <https://research->

- api.cbs.dk/ws/portalfiles/portal/59799443/682729_Master_Thesis_Martin_and_Ziwei.pdf
56. Schober, P., Boer, C., & Schwarte, L. A. (2018). *Correlation coefficients: appropriate use and interpretation*. *Anesthesia & analgesia*, 126(5), 1763-1768. Viewed on 2024-02-12. Internet access: https://journals.lww.com/anesthesia-analgesia/fulltext/2018/05000/Correlation_CoefficientsAppropriate_Use_and.50.aspx
 57. Sciglimpaglia, D. and Marcos Raafat F. (2020). *Freemium Marketing: Use of Demand Side Research in Market Segmentation Strategy*. *Journal of Strategic Marketing*, vol. 30, no. 7. Viewed on 2024-01-13. Internet access: <https://www.tandfonline.com/doi/full/10.1080/0965254X.2020.1824013>
 58. Shampanier, K., Mazar, N. and Ariely, D. (2007). *Zero as a Special Price: The True Value of Free Products*. *Marketing Science*, vol. 26, no. 6. Viewed on 2024-01-08. Internet access: <https://www.jstor.org/stable/pdf/40057223.pdf>
 59. Simon, F. and Graves, L. *Pay Models for Online News in the US and Europe: 2019 Update*. Reuters Institute for Study of Journalism and University of Oxford. Viewed on 2024-01-19. Internet access: https://ora.ox.ac.uk/objects/uuid:59c4c4a1-7720-4a2d-93fd-2350a0534e69/download_file?file_format=pdf&safe_filename=Simon%2B-%2BPaymodels%2Bfor%2BOnline%2BNews%2BFINAL.pdf&type_of_work=Report
 60. Stahl F., Heitmann, M., Lehmann, D. R. and Neslin, S. A. (2012). *The Impact of Brand Equity on Customer Acquisition, Retention, and Profit Margin*. *Journal of Marketing*, vol. 76, no. 4. Viewed on 2024-01-15. Internet access: <https://journals.sagepub.com/doi/full/10.1509/jm.10.0522>
 61. Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77(2), 203-220. Viewed on 2025-05-25. Internet access: <https://www.sciencedirect.com/science/article/pii/S0022435901000410>
 62. Tavakol, M., & Dennick, R. (2011). *Making sense of Cronbach's alpha*. *International journal of medical education*, 2, 53. Viewed on 2024-05-20. Internet access: <https://pmc.ncbi.nlm.nih.gov/articles/PMC4205511/>
 63. Taherdoost, Hamed (2019). *What is the best response scale for survey and questionnaire design; Review of different lengths of rating scale/ Attitude scale/ Likert scale*. *International Journal of Academic Research Management*, vol 1, no. 1. Viewed on 2025-10-10. Internet access: <https://shorturl.at/UUBV3>

64. Vatcheva, K. P., Lee, M., McCormick, J. B., & Rahbar, M. H. (2016). Multicollinearity in regression analyses conducted in epidemiologic studies. *Epidemiology (Sunnyvale, Calif.)*, 6(2), 227. Viewed on 2025-05-25. Internet access: <https://pmc.ncbi.nlm.nih.gov/articles/PMC4888898/>
65. Verhoef, P. C. (2003). Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development. *Journal of Marketing*, vol. 67, no. 4. Viewed on 2024-01-16. Internet access: <https://journals.sagepub.com/doi/pdf/10.1509/jmkg.67.4.30.18685>
66. Viechtbauer, W., & Cheung, M. W. L. (2010). *Outlier and influence diagnostics for meta-analysis*. Research synthesis methods, 1(2), 112-125. Viewed on: 2025-05-25. Internet access: <https://onlinelibrary.wiley.com/doi/full/10.1002/jrsm.11>
67. Yan, J. and Wakefield, R. (2018). *The Freemium (Two-Tiered) Model For Individual Cloud Services: Factors Bridging The Free Tier and The Paying Tier*. Journal of Information Technology Management, vol. 29, no. 1. Viewed on 2024-01-08. Internet access: <http://jitm.ubalt.edu/XXIX-1/article3.pdf>
68. Yang, B., Sonechkin, D. M., Datsenko, N. M., Ivashchenko, N. N., Liu, J., & Qin, C. (2012). *Eigen analysis of tree-ring records: part 3, taking heteroscedasticity and sampling effects into consideration*. Theoretical and Applied Climatology, 107, 519-530. Viewed on: 2025-05-25. Internet access: <https://link.springer.com/article/10.1007/s00704-011-0498-5>
69. Zeithaml, V. A. (1988). *Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence*. Journal of marketing, 52, no. 3, 2-22. Viewed on 2024-05-20. Internet access: <https://journals.sagepub.com/doi/abs/10.1177/002224298805200302>

SUMMARY IN ENGLISH

VALUE-CREATING FACTORS OF A FREEMIUM MEDIA PLATFORM FOR WILLINGNESS TO UPGRADE AND CONSUMER RETENTION

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Master Thesis

Global business and economics Master Programme

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SUMMARY

99 pages, 26 tables, 8 figures, 69 references

This Master thesis investigates the value-creating factors that influence users' willingness to upgrade (WTU) and retention on freemium media platforms, with a specific focus on the Lithuanian online business news platform vz.lt. The aim of the research was to identify and assess the impact of selected constructs on user behaviour in the context of a freemium business news platform vz.lt. The objectives included evaluating the freemium model's relevance in the media industry, identifying theoretical determinants of value creation, developing and testing a research model, and formulating practical recommendations based on the results.

To achieve these objectives, the thesis employed a quantitative research design. A structured online questionnaire using a 7-point Likert scale was developed and administered to users of vz.lt. The questionnaire was based on previously validated instruments and adapted to the media industry context. 216 responses from freemium users and 60 from premium users were collected. Multiple regression analysis using SPSS was conducted to examine the influence of six value-creating factors—enjoyment, social value, perceived quality, perceived value for money, epistemic value, and trust in the brand—on WTU and retention.

The research findings revealed that six out of sixteen tested hypotheses were supported. For freemium users, social value significantly influenced WTU, while enjoyment and brand trust positively affected retention. Among premium users, only perceived value for money had a significant positive effect on retention. Additionally, the mutual relationship between WTU and retention was confirmed as significant in both directions. These findings suggest that different

mechanisms drive user behaviour in free and paid tiers, and that emotional and social factors are more influential among freemium users, whereas rational evaluation prevails in the premium segment.

The thesis concludes that while freemium models are effective in customer acquisition, user retention and conversion require deeper attention to perceived value and experience. It also highlights the importance of context, showing that results can differ across sectors, cultures, and user groups. The findings offer practical implications for media platform managers, including the need to enhance social engagement strategies, emotional appeal, and the perceived value of premium offerings.

The research contributes to the academic understanding of freemium strategies in the underexplored Lithuanian media sector. The full results are available in the thesis document and may be relevant to both scholars and practitioners seeking to optimise value creation and user conversion in freemium ecosystems.

SUMMARY IN LITHUANIAN

VERTĘ KURIANČIŲ FAKTORIŲ ĮTAKA VARTOTOJŲ PASIRYŽIMUI MOKĖTI PAPILDOMAI IR TĖSTI PRODUKTO VARTOJIMĄ IŠ DALIES MOKAMOJE ŽINIASKLAIDOS PALTFORMOJE

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Darbo vadovė assoc. prof., dr. Aurelija Ulbinaitė, Vilnius, 2025

SANTRAUKA

99 puslapiai, 26 lentelės, 8 paveikslai, 69 šaltiniai

Šis magistro baigiamasis darbas nagrinėja vertę kuriančius veiksnius, darančius įtaką vartotojų pasiryžimui pereiti prie mokamos versijos (PPPMV) ir jų lojalumui iš dalies mokamo tipo žiniasklaidos platformose, ypač dėmesį skiriant Lietuvos internetinei verslo naujienų platformai vz.lt. Tyrimo tikslas buvo identifikuoti pasirinktų konstruktyvų įtaką vartotojų elgsenai iš dalies mokamos verslo naujienų platformos vz.lt kontekste. Uždaviniai apėmė freemium modelio reikšmės žiniasklaidos sektoriui įvertinimą, teorinių vertės kūrimo veiksmų nustatymą, tyrimo modelio sukūrimą ir patikrinimą bei praktinių rekomendacijų formulavimą remiantis tyrimo rezultatais.

Siekiant šių uždavinių, darbe taikyta kiekybinio tyrimo metodologija. Buvo sukurtas struktūrizuotas internetinis klausimynas, pagrįstas 7 balų Likerto skalės principu, kuris buvo pateiktas vz.lt vartotojams. Klausimynas buvo sudarytas remiantis anksčiau validuotais instrumentais ir pritaikytas žiniasklaidos sektoriaus specifikai. Surinkta 216 atsakymų iš nemokamos versijos naudotojų ir 60 iš mokamos versijos naudotojų. Duomenims analizuoti buvo taikoma daugianarė regresijos analizė naudojant SPSS programinę įrangą. Buvo vertinamas šešių vertę kuriančių konstruktyvų – malonumo, socialinės vertės, suvokiamos kokybės, suvokiamos vertės už pinigus, episteminės vertės ir pasitikėjimo prekės ženklu – poveikis PPPMV ir lojalumui.

Tyrimo rezultatai parodė, kad šešios iš šešiolikos hipotezių buvo patvirtintos. Nemokamos versijos naudotojų atveju socialinė vertė reikšmingai veikė PPPMV, o malonumas ir pasitikėjimas prekės ženklu teigiamai veikė lojalumą. Mokamos versijos naudotojų grupėje vienintelis reikšmingas veiksnys buvo suvokiama vertė už pinigus, teigiamai veikianti lojalumą. Be to, buvo patvirtintas abipusis ryšys tarp PPPMV ir lojalumo – abu konstruktai reikšmingai veikia vienas kitą. Šie rezultatai rodo, kad skirtingi mechanizmai lemia vartotojų elgseną nemokamose ir mokamose platformos dalyse: nemokamos versijos naudotojams didesnę reikšmę turi emociniai ir socialiniai aspektai, o mokantiems naudotojams – racionalus naudos vertinimas.

Daroma išvada, kad nors iš dalies mokamas verslo modelis yra veiksmingas vartotojų pritraukimui, jų išlaikymui ir konversijai būtina daugiau dėmesio skirti suvokiamai vertei ir naudotojų patirčiai. Taip pat pabrėžiama konteksto svarba – rezultatai gali skirtis priklausomai nuo sektoriaus, kultūrinės aplinkos ar vartotojų grupių. Tyrimo rezultatai turi praktinę vertę žiniasklaidos platformų vadovams – siūloma stiprinti socialinį įsitraukimą, emocinį patrauklumą ir mokamo turinio vertę.

Darbas prisideda prie akademinių žinių apie iš dalies mokamo žiniasklaidos verslo modelio strategijas Lietuvoje, kurios iki šiol buvo menkai nagrinėtos. Visa tyrimo medžiaga pateikta magistro darbe ir gali būti naudinga tiek mokslininkams, tiek praktikams, siekiantiems optimizuoti vertės kūrimą ir vartotojų konversiją iš dalies mokamų verslo modelių ekosistemose.

ANNEXES

Annex 1. Definitions of the constructs

Construct	Definition	Reference
Enjoyment	The extent to which using the service is perceived as enjoyable in its own right.	Davis et al. quoted by Mäntymäki et al. (2019)
Social value	The extent to which using the service helps achieve gains in obtaining information about other people's content preferences; sharing favorite content with others.	Mäntymäki et al. (2019)
Perceived quality	responsiveness, trust, reliability of the service	Hamari et al., 2020
Perceived value for money	The extent to which premium subscription to the service offers good value for money.	Sweeney and Soutar, 2001
Epistemic value	The extent to which using the service facilitates the discovery of new content and the broadening of a user's preferences.	Sheth et al., 1991, Sweeney and Soutar, 2001
Trust of the brand	Feeling of security that the brand will meet users' expectations	Chaudhuri and Holbrook, 2001
Intention to upgrade to the premium subscription	User's subjective probability that a he/she will upgrade to the premium subscription (basic users) /retain his/her premium subscription (premium users).	Bhattacharjee, 2001b; Fishbein & Ajzen, 1975, quoted by Mäntymäki et al., 2019
Retention of users	The upcoming likelihood of a customer to stay with the service provider	Danesh et al., quoted by Alkitbi et. al., 2020

Source: Made by author based on Alkitbi et. al., 2020; Bhattacharjee, 2001b; Chaudhuri and Holbrook, 2001; Fishbein & Ajzen, 1975; Brüggemann and Lehmann-Zschunke, 2020; Chaudhuri and Holbrook, 200; Hamari et al., 2020; Mäntymäki et al. (2019); Sheth et al., 1991; Sweeney and Soutar, 2001.

Annex 2. Summary of authors analysing user WTU and retention in freemium business platforms

Author	Year of the Paper	Citation quantity	Amount of countries	Sample size (years of investigation, frequency)	TS, CC, P	Aim of the paper, main research question, hypothesis	Dependent variables	Independent variables	Analysis Type	Main methods	Main results and conclusions	
Eva Ascarza et al.	2018	232	Not specified	NA		Qualitative study of existent research	The goal is to draw on previous research and current practice to provide insights on managing retention and identify areas for future research	Customer retention of freemium services.	Customer satisfaction, usage behavior, switching costs, customer characteristics, marketing efforts, social connectivity.	Literature analysis	Qualitative analysis of existent literature.	Offered broad view on customer retention. Discussed a variety of metrics to measure and monitor retention, presented an integrated framework for managing retention that leverages emerging opportunities offered by new data sources and new methodologies such as machine learning. Highlighted the importance of distinguishing between which customers are at risk and which should be targeted—as they are not necessarily the same customers.
Kim-Joar Ranheim Bekkelund	2011	7	Not specified	22	Cross sectional	how companies that use freemium acquire customers through their existing users and customers.	Not specified, but the research focuses on understanding customer acquisition process on freemium models.	Not specified, but are likely related to factors influencing the customer acquisition process, including various strategies, tactics and characteristics of freemium offerings.	Qualitative analysis	Qualitative semi-structured interviews for data collection. Additional methods like respondent validation and triangulation were employed to test the validity of the findings.	Proposes a new framework called crowdsourced customer acquisition which suggests free users can bring new users who can be converted in the paying customers	
Anna B. Holm, and Franziska Günzel-Jensen.	2017	77	7 companies		Qualitative study of online digital companies	Highlight the key points for succeeding with the freemium business model in online digital business from a strategic point of view.	Success and sustainability of freemium business model in online digital business	Continuous innovation, growth imperative, offerings value, balance between free and premium offerings, value from free users, continuous learning, social network, product bundling and integration, free users management costs, internationalization, new technologies through mergers and acquisitions.	Qualitative analysis	Case study	Successful freemium companies' strategy is based on continuous innovation and growth imperatives. It requires not only a constant new user acquisition, but also persistent user retention.	
Kristina Shampanier, Nina Mazar and Dan Ariely	2007	788	Not specified	3 surveys of 60+ 398+232 participants	TS	The aim is to prove that zero price has a special effect in consumer's mind prompting them perceive the benefits associated with free products as higher	Benefit perception of a zero-priced good.	Zero-price and non-zero price	Quantitative analysis	Survey, experiments with real purchases, data analyzed by regression.	Decisions about free (zero price) products differ, in that people do not simply subtract costs from benefits but instead they perceive the benefits associated with free products as higher.	
Juho Hamari, Nicolai Hanner, and Jonna Koivisto	2017	230	1	869	Cross sectional	How service quality dimensions such as assurance, empathy, reliability, and responsiveness influence user intentions to continue using the service and their intentions to make purchases within the service.	User intentions of continuous usage, intentions to purchase	Dimensions of service quality perceptions: assurance, empathy, reliability, and responsiveness	Quantitative analysis	Data collected by online survey, for analysis component-based partial least squares structural equation modeling was used.	Service quality (of freemium) dimensions influence usage intentions, but not purchase intentions. Increasing the quality of a freemium service has surprisingly little effect on the demand for additional premium services directly (beyond the mediated effect through increased retention).	
Yi-Cheng Ku, Yi-An Lin, and Zhijun Yan	2017	12	1	399	Cross sectional	Which factors drive users to pay for freemium services in mobile apps.	Intention to pay for premium service in mobile apps.	Perceived value, perceived risk, perceived effort, perceived usefulness, perceived assurance, developer trust.	Quantitative analysis	Empirical survey for data collection, use of a five-point Likert scale to measure constructs, model was evaluated by partial least square method, assessment of convergent and discriminant validity by AVE.	App user's intention to pay is determined by perceived value, a thorough comparison of benefits and sacrifices, and trust of developer.	
Jongbum Kim, Jeongho Lee, and Hangjung Zo	2018	19	specified, but suggested that there were international	713	Cross sectional	to investigate the effect of satisfaction on loyalty intentions (continuance intention and intention to purchase) of freemium	User loyalty intentions of freemium software	personal innovativeness, usage period, interpersonal relationships, alternative attractiveness, switching costs, value for money, relative advantage	Quantitative analysis	Web-based survey	The results from a series of regressions show that satisfaction affects continuance intention but does not influence purchase intention although it indirectly affects purchase intention by interacting with various characteristics.	
Simon Bründl	2018	10	Not specified	Data set included the participation activities of 153,820 users	TS	How different levels of user participation behavior, namely passive, active, and co-active behavior, influence the likelihood of users subscribing to premium options of a freemium service	Likelihood of subscribing to premium options	Passive behavior, active behavior, and co-active behavior	Quantitative analysis	Data collection via software, binomial-logit model	Co-active behavior has a stronger effect on WTP for premium options than the classic forms of passive and active behavior. Recent research has shown that users' participation, e.g. liking or commenting on content, increases the probability to pay for a social content service's premium option	

Björn A. Hüttel et al.	2018	29	Not specified	187	Cross sectional	1. Does the context of online service offerings influence the zero-price-effect (ZPE)? 2. Is the ZPE truly linked to an increase in perceived benefits related to a service offering? 3. How does a price of zero influence consumers' perceptions of non-monetary costs (NMCs), over and above the effects related to perceived benefits?	Consumer choice (selection of basic or premium offering), perceived affect, perceived benefits, and perceived non-monetary costs NMCs.	Cost condition (free/paid) and type of offering (basic/premium)	Quantitative analysis	Experimental design with manipulations of cost condition and offering type, data collection through online panels, scenario-based descriptions presented to participants, scales and surveys.	Free versions trigger positive affect which leads to reinforcing their benefits (benefit inflation) and diminishing their nonmonetary costs (cost inflation), e.g., acceptance of ads. In other words, consumers show an irrationally high demand when the monetary price is zero despite the free mentality online, the presumably lower utility, and the NMCs linked to free e-services.
Xian Gu, P.K. Kannan, and Liye Ma	2018	118	Not specified	2051	P	Aim to investigate the impact of extending the product line of premium products on the revenues of a freemium business	Sales quantity of the paperback version of book titles.	Introduction of new formats (hardcover and e-book versions), and time period (pre-experimental vs. experimental)	Quantitative analysis	Difference-in-differences method combined with a negative binomial distribution	Extending the premium product line spurs demand for the existing premium version. We found that extending the premium product line, either with the hardback or the e-book, led to a positive impact on the sales of the existing premium option, the paperback.
Thomas Niemand, Robert Mai, and Sascha Kraus	2019	72		2	Cross sectional if considered both studies separately, panel if considered together	1. Free mentality moderates the relation between price perception and value. The zero-price effect is strengthened when free mentality is high. 2. Price-quality inference moderates the relation between price perception and value. The zero-price effect is weakened when the high price-quality inference is high. 3. Free mentality and price-quality inference jointly moderate the relation between price perception and value. a) The zero-price effect is weakened when free mentality is high and price-quality inference is high (conflictive condition); and b)	Consumers perceived value of free and premium options of digital products or services	Free mentality, price-quality interference, intuitions about free offers	Quantitative analysis	IAT and CBC	This study identifies two central intuitions about freemium offers: a free mentality (the tendency to intuitively expect that all digital services should be available at no cost) and price-quality inference (the tendency to intuitively expect a positive relationship between price and quality). Free mentality and price-quality inference moderate the zero-price effect. Free mentality strengthens the zero-price effect, price-quality weakens it. Both variables jointly moderate the zero-price effect. The zero-price effect is substantially weakened when conflictive intuitions of high free mentality and high price-quality inference are present.
Matti Mäntymäki, Najmul Islam, and Izak Benbasat	2019	100		1	Cross sectional	1. The effect of intrusiveness of advertising has a stronger effect on the intention to upgrade than on the intention to retain the premium subscription. 2. The effect of intrusiveness of advertising on enjoyment	Intention to upgrade or retain the premium subscription of digital content service	Social connectivity, discovery of new content, ubiquity, intrusiveness of advertising, price value of the premium subscription, enjoyment, Intention to upgrade to the premium subscription/retain the premium subscription.	Quantitative analysis	Data collection through a survey	The results show that enjoyment and price value of the premium subscription predict the intention to upgrade to premium, whereas the intention to retain the premium subscription is driven by ubiquity and the discovery of new content. Social connectivity has no effect on the intention to upgrade but does have a small negative effect on the intention to retain the premium subscription.
Juho Hamari, Nicolai Hanner, and Jonna Koivisto	2019	182		1	Cross sectional	To investigate how consumers' perceived value is associated with their intention to use freemium services and to purchase premium content.	Intentions of continuous usage and purchase intentions	Game quality, economic value, enjoyment value, and social value.	Quantitative analysis	Data collection through a survey, the data was analyzed using the component-based partial least squares structural equation modeling method to assess validity and reliability.	Increasing perceived value of the freemium service (i.e. enjoyment) may both add to and retract from future profitability via increased retention on one hand, reduced monetization on the other.

Juho Hamari, Nicolai Hanner, and Jonna Koivisto	2019	182	1	869	Cross sectional	To investigate how consumers' perceived value is associated with their intention to use freemium services and to purchase premium content.	Intentions of continuous usage and purchase intentions	Game quality, economic value, enjoyment value, and social value.	Quantitative analysis	Data collection through a survey, the data was analyzed using the component-based partial least squares structural equation modeling method to assess validity and reliability.	Increasing perceived value of the freemium service (i.e. enjoyment) may both add to and retract from future profitability via increased retention on one hand, reduced monetization on the other.
Robert Russel	2020	1	7	174	CC	How freemium design influences the value discrepancy when users are familiar with the product	Value discrepancy, conversion intention	Quantity restriction, choice restriction, advertising presence, and price for the premium version.	Quantitative analysis	Discrete choice experiment, Bayesian multinomial logit model	The value discrepancy between the free and the premium versions is a major driver of users' conversion decisions. Decreasing the free version's value and increasing the premium version's value has a positive effect on conversion intentions. The importance weight of advertising is surprisingly low, indicating that consumers may either be used to advertising on websites, or, if advertising annoys them, they have found technologies with which to avoid exposure to advertising.
Donald Sciglimpaglia, and Feraidoon Raafat	2020	5	81	5039	Cross sectional	How should an upgrade offer be used to generate additional downstream revenue streams for a complementary freemium product offering? How can demand-side market segmentation be used to develop the core freemium upgrade offering?	User behaviour and preferences: willingness to pay for upgraded services, past purchase behavior of software indicating future purchase behavior, and preferences for various possible upgrades.	User demographics: age, gender, income; at-home printing behavior: frequency, type of projects printed	Quantitative analysis	Case study, survey, descriptive statistics	Market segmentation can be used to select and optimize offerings to generate additional revenue streams. The authors show how a freemium offering may best be implemented for differential market segments.
Muhammad Rezky Rahmansyah, Sri Rahayu Hijrah Hati	2020	4	1	240	Cross sectional	The goal was to investigate the relationship between satisfaction, continuance intention, and purchase intention in the context of freemium applications.	Continuance intention and purchase intention.	User satisfaction, intrinsic enjoyment, utilitarian value, temporal experience, and social facilitation.	Quantitative analysis	Data collection from online questionnaire, data analyzed with structural equation modelling.	plays a crucial role in determining users' continuance intention but has an inverse relationship with purchase intention in the context of freemium applications. In addition, the research indicated that social facilitation is one of the dimensions of customer's engagement experiences, which has the most encouraging factor on users to continue their intention to use
Chenhui Guo, Xi Chen, Paulo Goes, Cheng Zhang	2022	7	Not specified (could be various as the data is collected from an online Asian platform)	597 657 active players included in the analysis	P	Investigate the influence of social factors, especially peer behavior within the online game, on players' consumption behaviors, measured in terms of playing time and payment for premium features.	Playing time and payment	Peer usage and purchase	Quantitative analysis	Data collection, fixed-effects type II Tobit model with instrumental variables technique	Peers' spending time has a more substantial effect on players' spending money than does spending money in a digital freemium environment
Philipp Brüggemann, and Nina Lehmann-Zschunke	2022	2	Not specified	Not specified	TS	Which factors influence the termination of premium users of a freemium platform in which way?	Termination rate per calendar week	Share of 6-month subscriptions per week, share of premium users with high involvement per week, amount of new content provided on the platform per week, number of visited horse profiles per premium user per week, number of videos viewed per premium user per week, share of last logins in relation to all premium users per week.	Quantitative analysis	Data collection, regression analysis, robust maximum likelihood estimation.	A shorter contract term leads to a lower termination rate. Increasing involvement of premium users leads to a reduction in the termination rate. A lot of new platform-specific content has a negative impact on the termination rate.
Bikram Karmakar, Peng Liu, Gourab Mukherjee, Hai Che and Shantanu Dutta	2023	7	not specified (could be various as the data is collected from an online games platform)	15000	TS	To analyze player behavior in online freemium role playing games (RPG) and develop a statistical joint modeling framework to understand the interdependencies between various player motivations	player retention, specifically drop-out	Players' engagement, collaboration, and achievement, players' gender and city tier.	Quantitative analysis	Data collection, hierarchical general linear mixed models, Bayesian estimation procedures using Hamiltonian Monte Carlo methods. Natural cubic splines are used to model non-linear growth patterns in player characteristics.	Level progression impacts player's motivation through enhanced gaming experience that occurs through collaboration and achievement. While the findings are based on data from a popular action based RPG, the model framework can be applied to increase customer retention in other freemium products that use interdependencies among users to increase users' stickiness.

Source: Table made by the author based on the authors discussed in the thesis.

Annex 3. Questionnaire (English translation)

For Free Version Users

1. I enjoy using the free version of vz.lt.
2. Using the free version of vz.lt is pleasant for me.
3. I find using the free version of vz.lt interesting.
4. I will continue using the free version of vz.lt for at least 3 months.
5. In the next 3 months, I will switch from the free version of vz.lt to the premium version.
6. There is a possibility that I will switch from the free version of vz.lt to the premium version within the next 3 months.
7. The longer I use the free version of vz.lt, the more likely I am to switch to the premium version.
8. The greater my intention to switch to the premium version, the longer I plan to use vz.lt.

For Premium Version Users

9. Using the premium version of vz.lt is pleasant for me.
10. I am happy to use the premium version of vz.lt.
11. I find using the premium version of vz.lt interesting.
12. Using the vz.lt premium package enhances my image.
13. I believe that the quality of the vz.lt premium version is high.
14. I believe that the vz.lt premium version provides me with the information I expect to receive.
15. The vz.lt premium package offers good value for money.
16. The vz.lt premium platform helps me obtain the necessary information.
17. The vz.lt premium platform helps me discover information I would not usually find.
18. The vz.lt premium platform helps me stay informed about business news in Lithuania and worldwide.
19. I will continue using the premium version of vz.lt for at least 3 months.
20. The vz.lt premium package is reasonably priced.
21. Overall, I am satisfied with vz.lt's pricing.
22. The quality of the vz.lt premium package is good, considering its price.

- 23. If I were less willing to pay for the vz.lt premium version, I would consider canceling my subscription.
- 24. The longer I use the vz.lt premium version, the more I am convinced that it is worth paying for.

For Both Groups

- 25. Using the vz.lt premium package creates a good impression on others.
- 26. People important to me have a positive experience using the vz.lt premium version.
- 27. I believe that the quality of the vz.lt free version is high.
- 28. I believe that vz.lt news and articles are of high quality.
- 29. I think the vz.lt website is well designed.
- 30. I believe that vz.lt news is reliable.
- 31. I trust vz.lt news.
- 32. Vz.lt is a trustworthy company.
- 33. I believe that vz.lt consistently provides accurate and unbiased information.
- 34. I plan to use the vz.lt platform at least as often in the future as I do now.
- 35. In the next month, I plan to use the vz.lt platform at least as often as I do now.

Demographic Information

- 36. My age.
- 37. My education level.
- 38. My gender.
- 39. Place of residence.
- 40. Employment status.
- 41. What is your income level (net income)?

Source: Questionnaire made by the author based on Batterton & Hale, 2017; Hamari et al., 2020; Joshi et al., 2015; Mäntymäki et al., 2019; Taherdoorst, 2019).

Annex 4. Questionnaire (Grouped by Constructs)

Enjoyment

1. I enjoy using the free vz.lt version.
2. Using the free vz.lt version is pleasant for me.
3. Using the free vz.lt version is interesting to me.
4. Using the premium vz.lt version is pleasant for me.
5. I am happy to use the premium vz.lt version.
6. Using the premium vz.lt version is interesting to me.

Social Value

7. Using the vz.lt premium package improves my image.
8. My friends think that using the vz.lt premium version is a good idea.
9. Using the vz.lt premium package leaves a good impression on others.
10. People important to me have a positive experience using the vz.lt premium version.

Perceived Quality

11. I think the quality of the vz.lt premium version is high.
12. I think the quality of the free vz.lt version is high.
13. I think the news and articles on vz.lt are of high quality.
14. I think the vz.lt website is well-designed.

Value for Money

15. The vz.lt premium package offers good value for money.
16. The vz.lt premium package is reasonably priced.
17. Overall, I am satisfied with vz.lt pricing.
18. The quality of the vz.lt premium package is good, considering its price.

Epistemic Value

19. I believe the vz.lt premium version provides me with the information I expect to receive.
20. The vz.lt premium platform helps me obtain the information I need.
21. The vz.lt premium platform helps me discover information I would not usually find.

22. The vz.lt premium platform keeps me informed about business news in Lithuania and worldwide.

Trust of the Brand

23. I think the news on vz.lt is reliable.
24. I trust the news on vz.lt.
25. Vz.lt is a reliable company.
26. I believe that vz.lt consistently provides accurate and unbiased information.

Willingness to Upgrade

27. Within the next three months, I will switch from the free vz.lt version to the premium version.
28. I plan to upgrade to premium vz.lt version within the next 3 months.
29. There is a possibility that I would switch to the premium vz.lt version within the next 3 months.
30. The longer I use the free version of vz.lt, the more likely I am to switch to the premium version.
31. The greater my intention to switch to the premium version, the longer I plan to use vz.lt.

Retention

32. I will continue using the free vz.lt version for at least three months.
33. I will continue using the vz.lt premium version for at least three months.
34. I intend to use vz.lt platform at least as often within the next month as I have used it lately.
35. I intend to use vz.lt platform in the future at least as often as I have previously did.
36. If I were less willing to pay for the vz.lt premium version, I would consider canceling my subscription.
37. The longer I use the vz.lt premium version, the more I am convinced that it is worth paying for.

Annex 5. Questionnaire (Original language Lithuanian)

Nemokamos versijos naudotojams

1. Man patinka naudotis nemokama vz.lt versija.
2. Naudojimasis nemokama vz.lt versija man yra malonus.
3. Naudotis nemokama vz.lt versija man yra įdomu.
4. Aš toliau naudosiuosi vz.lt nemokama versija bent 3 mėnesius.
5. Per artimiausius 3 mėnesius pereisiu nuo nemokamos vz.lt versijos prie premium versijos.
6. Planuoju pereiti nuo nemokamos vz.lt versijos prie premium versijos per artimiausius 3 mėnesius.
7. Yra galimybė, kad pereisiu nuo nemokamos vz.lt versijos prie premium versijos per artimiausius 3 mėnesius.
8. Kuo ilgiau naudoju nemokamą vz.lt versiją, tuo labiau tikėtina, kad pereisiu prie premium versijos.
9. Kuo mano ketinimas pereiti prie premium versijos yra didesnis, tuo ilgiau planuoju naudotis vz.lt.

Premium versijos naudotojoms

10. Naudojimasis premium vz.lt versija man yra malonus.
11. Džiaugiuosi, galėdama(-s) naudotis premium vz.lt versija.
12. Naudotis premium vz.lt versija man yra įdomu.
13. Naudojimasis vz.lt premium paketu pagerina mano įvaizdį.
14. Manau, kad vz.lt premium versijos kokybė yra aukšta.
15. Manau, kad vz.lt premium versija pateikia man informaciją, kurią tikiuosi gauti.
16. Vz.lt premium paketas siūlo gerą kainos ir kokybės santykį.
17. Vz.lt premium platforma padeda man gauti reikalingą informaciją.
18. Vz.lt premium platforma padeda man atrasti informaciją, kurios paprastai nerasčiau.
19. Vz.lt premium platforma padeda man būti informuotam apie verslo naujienas Lietuvoje ir pasaulyje.
20. Toliau naudosiuosi vz.lt premium versija bent 3 mėnesius.
21. Vz.lt premium paketas yra už priimtina kainą.
22. Apskritai, esu patenkinta (-s) vz.lt kainodara.
23. Vz.lt premium paketo kokybė yra gera, atsižvelgiant į jo kainą.

24. Jei būčiau mažiau linkęs mokėti už premium vz.lt versiją, svarstyčiau apie prenumeratos nutraukimą.

25. Kuo ilgiau naudoju premium vz.lt versiją, tuo labiau įsitikinu, kad verta už ją mokėti.

Abiems grupėms

26. Mano draugai mano, kad naudotis vz.lt premium versija yra gera idėja.

27. Naudojimasis vz.lt premium paketu sudaro gerą įspūdį kitiems žmonėms.

28. Man svarbūs žmonės turi teigiamą patirtį naudojantis vz.lt premium versija.

29. Manau, kad vz.lt nemokamos versijos kokybė yra aukšta.

30. Manau, kad vz.lt naujienos ir straipsniai yra aukštos kokybės.

31. Manau, kad vz.lt svetainė yra gerai sukurta.

32. Manau, kad vz.lt naujienos yra patikimos.

33. Aš pasitikiu vz.lt naujienomis.

34. Vz.lt yra patikima įmonė.

35. Tikiu, kad vz.lt nuosekliai teikia tikslią ir nešališką informaciją.

36. Planuoju, kad ateityje naudosisiuos vz.lt platforma bent jau tiek pat dažnai, kaip dabar.

37. Per artimiausią mėnesį planuoju naudotis vz.lt platforma bent jau tiek pat dažnai, kaip dabar.

38. Mano amžius.

39. Mano išsilavinimas.

40. Mano lytis.

41. Gyvenamoji vieta.

42. Darbinė padėtis.

43. Koks yra Jūsų pajamų dydis (į rankas)?

Source: Questionnaire made by the author based on Batterton & Hale, 2017; Hamari et al., 2020; Joshi et al., 2015; Mäntymäki et al., 2019; Taherdoorst, 2019).

Annex 6. Descriptive statistics for Freemium users

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
1 Man patinka naudotis nemokama vzlt versija	216	1	7	5.03	1.709
2 Naudojimasis nemokama vzlt versija man yra malonus	216	1	7	4.85	1.653
3 Naudotis nemokama vzlt versija man yra įdomu	216	1	7	4.95	1.556
4 Aš toliau naudosisi vzlt nemokama versija bent 3 mėnesius	216	1	7	5.19	1.636
5 Per artimiausius 3 mėnesius pereisiu nuo nemokamos vzlt versijos prie premium versijos	215	1	7	2.19	1.319
7 Yra galimybė kad pereisiu nuo nemokamos vzlt versijos prie premium versijos per artimiausius 3 mėnesius	216	1	7	2.48	1.414
8 Kuo ilgiau naudoju nemokamą vzlt versiją tuo labiau tikėtina, kad pereisiu prie premium versijos	215	1	7	3.09	1.642
9 Kuo mano ketinimas pereiti prie premium versijos yra didesnis tuo ilgiau planuoju naudotis vzlt	215	1	7	3.67	1.811
26 Mano draugai mano kad naudotis vzlt premium versija yra gera idėja	173	1	7	4.03	1.089
27 Naudojimasis vzlt premium paketu sudaro gerą įspūdį kitiems žmonėms	173	1	7	3.94	1.417
28 Man svarbūs žmonės turi teigiamą patirtį naudojantis vzlt premium versija	174	1	7	4.04	1.165
29 Manau kad vzlt nemokamos versijos kokybė yra aukšta	180	1	7	4.48	1.396
30 Manau kad vzlt naujienos ir straipsniai yra aukštos kokybės	179	1	7	5.25	1.226
31 Manau kad vzlt svetainė yra gerai sukurta	181	1	7	4.95	1.203
32 Manau kad vzlt naujienos yra patikimos	182	1	7	5.37	1.200
33 Aš pasitikiu vzlt naujienomis	182	1	7	5.40	1.160
34 Vzlt yra patikima įmonė	183	1	7	5.37	1.076
35 Tikiu kad vzlt nuosekliai teikia tikslią ir nešališką informaciją	183	1	7	5.16	1.130
36 Planuoju kad ateityje naudosisiu vzlt platforma bent jau tiek pat dažnai kaip dabar	183	1	7	5.12	1.261
37 Per artimiausią mėnesį planuoju naudotis vzlt platforma bent jau tiek pat dažnai kaip dabar	183	1	7	5.10	1.361
Valid N (listwise)	172				

Annex 7. Descriptive statistics for Premium users

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
10 Naudojimasis premium vzl't versija man yra malonus	59	1	7	5.19	1.666
11 Džiaugiuosi galėdama (-s) naudotis premium vzl't versija	59	1	7	5.27	1.680
12 Naudotis premium vzl't versija man yra įdomu	58	1	7	5.26	1.540
13 Naudojimasis vzl't premium paketu pagerina mano įvaizdį	59	1	7	3.75	1.758
14 Manau kad vzl't premium versijos kokybė yra aukšta	58	1	7	5.16	1.309
15 Manau kad vzl't premium versija suteikia man informaciją kurią tikiuosi gauti	59	1	7	5.39	1.189
16 Vzl't premium paketas siūlo gerą kainos ir kokybės santykį	59	1	7	4.54	1.164
17 Vzl't premium platforma padeda man gauti reikalingą informaciją	59	1	7	5.27	1.215
18 Vzl't premium platforma padeda man atrasti informaciją kurios paprastai nerasciau	59	1	7	4.27	1.298
19 Vzl't premium platforma padeda man būti informuotam apie verslo naujienas Lietuvoje ir pasaulyje	59	1	7	5.39	1.273
20 Toliau naudosiuosi vzl't premium versija bent 3 mėnesius	59	1	7	5.36	1.779
21 Vzl't premium paketas yra už priimtina kainą	59	1	7	4.24	1.250
22 Apskritai esu patenkinta (-s) vzl't kainodara	59	1	7	4.22	1.204
23 Vzl't premium paketo kokybė yra gera atsižvelgiant į jo kainą	59	1	7	4.49	1.165
24 Jei būčiau mažiau linkęs mokėti už premium vzl't versiją svarstytčiau apie prenumeratos nutraukimą	59	1	7	4.53	1.278
25 Kuo ilgiau naudoju premium vzl't versiją tuo labiau įsitikinu kad verta už ją mokėti	59	1	7	4.34	1.077
26 Mano draugai mano kad naudotis vzl't premium versija yra gera idėja	57	1	7	4.44	1.225
27 Naudojimasis vzl't premium paketu sudaro gerą įspūdį kitiems žmonėms	57	1	7	3.79	1.634
28 Man svarbūs žmonės turi teigiamą patirtį naudojantis vzl't premium versija	57	1	7	4.44	1.464
29 Manau kad vzl't nemokamos versijos kokybė yra aukšta	57	1	7	4.32	1.441
30 Manau kad vzl't naujienos ir straipsniai yra aukštos kokybės	57	1	7	5.28	1.250
31 Manau kad vzl't svetainė yra gerai sukurta	57	1	7	5.11	1.277
32 Manau kad vzl't naujienos yra patikimos	56	1	7	5.64	1.103
33 Aš pasitikiu vzl't naujienomis	57	1	7	5.65	1.110
34 Vzl't yra patikima įmonė	57	1	7	5.65	1.126
35 Tikiu kad vzl't nuosekliai teikia tikslią ir nešališką informaciją	57	1	7	5.26	1.289
35 Tikiu kad vzl't nuosekliai teikia tikslią ir nešališką informaciją	57	1	7	5.26	1.289
36 Planuoju kad ateityje naudosiuos vzl't platforma bent jau tiek pat dažnai kaip dabar	57	1	7	5.26	1.357
37 Per artimiausią mėnesį planuoju naudotis vzl't platforma bent jau tiek pat dažnai kaip dabar	57	1	7	5.42	1.487
Valid N (listwise)	53				