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NEW PRODUCT CATEGORY LAUNCH AS A PART OF AN EXISTING PRODUCT ECO-SYSTEM

Master's thesis

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I hereby declare that I have compiled the thesis independently
and all works, important standpoints and data by other authors
have been properly referenced and the same paper
has not been previously presented for grading.

The document length is 14 621 words from the introduction to the end of the conclusion.

Martins Olsteins ……………………………
                (May 6th, 2023)

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ABSTRACT

This thesis explores the development of a launch plan for Samsung's laptop category in the Baltic region as part of their product eco-system. It investigates the potential gains from having a product eco-system and the competitive edge Samsung can achieve in this market. Utilizing quantitative methods, the author conducted a survey with 112 respondents from Estonia, Latvia, and Lithuania, including Samsung Electronics Baltics employees and partners. The analysis of the collected data was performed using MS Excel and SPSS. Descriptive statistics were used to summarize the collected data, while inferential statistics (such as Chi-Square test, Likelihood Ratio test, Continuity Correction, Fisher's Exact test, Kolmogorov-Smirnov test, Shapiro-Wilk test, Spearman's rank correlation coefficient, Kruskal-Wallis test, etc.) were used to understand the relationships and tendencies within the data.

The majority of respondents believe that using multiple products from the same brand enhances user experience, and many are willing to pay more for products within a larger eco-system. Samsung's eco-system presents an opportunity to increase customer loyalty and attract new users. Key recommendations include adopting a customer-centric design approach, targeting marketing efforts towards an audience that values an integrated eco-system, emphasizing eco-system capabilities through packaging and point-of-sale communication, and capitalizing on the full range of products to gain a competitive edge. Additionally, Samsung should initially focus on its existing customer base for the laptop launch, as they are more likely to consider purchasing a Samsung laptop.

Keywords: Product launch, Product eco-system, Samsung, Go-to-market

INTRODUCTION

New product and new product category launch is important for any business in order to keep and/or gain competitive advantage versus the competition. In today's world businesses are constantly pushed to think of ways how to stay ahead and keep-up with innovations in that way satisfying the ever-changing needs of the customers. Launching a new product category as a part of an existing product eco-system in one way how it can be done. However, there are multiple things what need to be considered as success cannot be taken for granted.

The way people are using technologies is constantly changing. In 2016 most popular device people used when they wanted to access the internet was laptop, but 5 years later, in 2021, we see that smartphone has taken over the top one spot. Moreover, 28% of people use other mobile devices, such as Smart TVs, smart speakers, game consoles, e-book readers and smartwatches to use the internet. So, one can assume it is no longer about single device, but instead eco-system of devices is used by people in their daily lives. Nevertheless, smart phone and laptop still has instrumental role, as those are only type of devices which are used by more than half of the society (Eurostat, 2022).

Based on Canalys 2022 second quarter data, on global scale top five companies in terms of smart phone shipments in 2022 are Samsung, Apple, Xiaomi, Vivo and Oppo (Canalys, 2022). IDC says that top five companies for worldwide traditional PC shipments in third quarter of 2022 were Lenovo, HP, Dell, Apple, and ASUS (IDC, 2022). There is one company which we can see at the top five for both smart phones and PCs – it is Apple.

Currently, Samsung lacks competitive edge versus Apple and is not able to lock their customers as well in their eco-system, which is due to the fact that people perceive that all of Apple products can be easily connected to each other, while for Samsung options are more limited (Tien et al., 2019) (Almeida et al., 2021). In Baltic market this could be even more amplified as there is no laptop category in Samsung's current portfolio in Baltics, while laptop still remains most used device during daily work. Based on this, research problem is that Samsung lacks laptop category

in the Baltic market and therefore their eco-system is not complete. During thesis author will look into scenario, if Samsung would decide to launch laptops in Baltic countries. However, current product launch theory focuses on launching new individual product, but there are limited resources available on how to launch a product, if the brand is already established and there are other eco-system products present in the market (Salmen, 2021).

The aim is to create suggestions for laptop category launch plan for Samsung in Baltic region as part of their existing product eco-system. During the thesis author will focus on following research questions:

1. How do expert users perceive the benefits of a product based eco-system in the tech industry?
2. Why focusing on eco-system could be beneficial for Samsung when launching a new product?

Author uses quantitative methods for the research. Survey was conducted with 112 respondents across Estonia, Latvia, Lithuania. The survey was distributed internally to Samsung Electronics Baltics employees, as well as to partners (retail chains, mobile network operators) and store employees. These are people who deal with technology on daily basis, therefore they serve as opinion leaders in their particular groups of society, so understanding them would give necessary tools, to create a successful product launching plan. For data analysis MS Excel and SPSS is used.

In the first part of the master's thesis author looks at theoretical aspects, such as product launch theory in general. Then it is more thoroughly examined what are the specifics to product launch in tech industry, what needs to be considered and what are the key things what set it apart from other industries. After that author researches literature on customer decision journey, specifically for tech products.

Second part of the thesis covers details about Samsung Electronics Baltics in general and its product portfolio in Estonia, Latvia, and Lithuania. Author will also give an overview of tech product eco-system market in Baltic countries – what are the key players and their current position in the market.

Third part covers quantitative analysis of Samsung product eco-system's advantages and disadvantages. Firstly, research methodology and limitations are explained. Secondly, results of

the research are presented. Thirdly, based on the findings from the research author gives conclusions and recommendations for Samsung laptop category launch in Estonia, Latvia, and Lithuania.

Also, the author thanks his supervisor Martin Toding for the continuous support and guidance during the preparation of the thesis, as well as Kristjan Jasinski for the initial discussion and support in defining the topic and setting upon the right path for the start of the thesis preparation.

1. THEORETICAL FRAMEWORK

New product launch supports companies to introduce new products and maintain a competitive advantage in the market. The theory of product launch provides a framework for understanding the process and factors that contribute to the success of a product launch. This part of the thesis aims to explore the theoretical foundations of product launch, with a focus on three sub-chapters: 1) Product launch theory, 2) Product launch theory in the tech industry, and 3) The customer decision journey for tech products.

In the first sub-chapter, author will examine the key theories of product launch, covering similarities and differences between different theories, and how they can be applied in practice. These theories provide a base for understanding how new products and ideas are brought to the market and how consumers adopt new products.

The second sub-chapter will focus on the application of product launch theory in the tech industry. Author will deep-dive on the unique challenges and considerations that companies in the tech industry face when launching new products. The fast-paced nature of the tech industry, with its rapid pace of innovation and technological advancement, affects product launch strategies and requires companies to be agile and responsive to market changes.

The third sub-chapter will explore the customer decision journey for tech products. Author will research the key stages of the decision-making process, such as awareness, interest, evaluation, trial, and adoption, and how companies can use this understanding to develop effective product launch strategies. Investigating the customer decision journey, will make it easier to understand the factors that influence consumer behaviour and how to create a compelling value proposition for a product launch. The customer decision journey highlights the importance of understanding the needs, preferences, and behaviours of the target market.

Overall, this chapter will provide a comprehensive overview of the theoretical foundations of product launch, and how these theories can be applied in the tech industry to understand the customer decision journey and develop successful product launch strategies.

1.1. Product launch theory

In recent years, there have been multiple academic studies which have deep-dive on product launch theory, providing useful insights on the process and the factors that contribute to success or failure of the launch.

One of the key things that influence the success is market research and consumer insights (Salmen, 2021). Market research is necessary to understand what the target audience prefers, how does the competitive landscape look like and what in general are the market dynamics. The failure of new products can be attributed to a lack of strong market orientation when developing a new product and not involving the customer in the product development process. (Cooper, 2019) In this way company can identify the opportunities for the new product. Consumer insights give valuable insights on the customer behaviour and attitude, which can be very useful when developing strategy for product positioning.

Another important area what affects product launch success is product design and development. Product development approaches such as design thinking can support that new products are developed in a customer-centric way, helping to identify market shifts, and adapting to them in a faster manner, and experimentation can help to find the best possible way for innovation (Nakata & Hwang, 2020). Hybrid models of agile management have been recently used to develop physical products. According to research, gains are similar to IT projects – shortened product development time, higher productivity, quicker adaptability to changing market conditions and customer demand, as well as improved communication among team members. (de Borba et al., 2019) Such methods can be used for any go-to-market plan preparation as well.

Marketing and promotion strategies are also critical for the success of product launch. Marketing plan should be developed with a specific target audience in mind and appropriate resources, both people and finance, should be allocated (Cooper, 2019). Also, the product launch timing is of importance (Song et al., 2018). During this time, key part of the strategy is communication budget

where both traditional and digital media should be considered. Research shows that the bigger the consumer involvement is, the higher online advertising budget needs to be, whereas the role of social media advertising increases, if the products are less competitive versus other similar market alternatives. (Gruner et al., 2019)

In order to ensure that the new products are available to customers when they want to purchase them at the right place at the right time, critical area for any product launch is distribution and logistics (Nuscheler et al., 2019). Also, here it is very important to understand what channels are the most appropriate both for target audience, but also for re-sellers, as the way people are shopping is changing. This can include use of e-commerce platforms, traditional brick-and-mortar stores and/or applying omni-channel strategy. (Hoskins, 2020) Another layer to consider is cost, so logistics infrastructure in the country/region as well needs to be taken into account, considering the nature of the product (Jenkins et al., 2020). Prior launching laptop category, it would be essential to understand also what distribution channels currently consumers use to buy laptops, as the channel mix can be different from other products.

The actual process of launching a product is also something that needs to be considered. The idea creation and selection stage, concept development and testing, business analysis and planning, commercialization, and execution are all critical in new product development process. (Cooper, 2019). Market orientation and generating new market intelligence helps to improve the likelihood of new products to succeed, and this effect becomes larger as the better company's launch process at all stages is (Fakhreddin et al., 2021). Therefore, before any launch it is wise to look for latest insights and customer needs.

For a company with running product portfolio a great source of inspiration can be analysis of other product launches. Several case studies have been carried out to investigate the success and failure of product launches and the elements that influence it. Organizational learning heavily influences new product development process and helps to improve product innovation performance (Sattayaraksa & Boon-itt, 2018). Similar to this, analysing a failed product launch can offer insightful information – research shows that tolerating past launch failures does not affect company's innovativeness. Instead, companies who study such cases are able to bring more innovative products to the market. (Danneels & Vestal, 2020) So companies should not be afraid to take risks and fail, but instead focus should be on learning part.

In conclusion, the theory of product launch is an important component of business strategy that enables businesses to launch new goods and keep a competitive edge in the market. Key elements that affect a product launch's success include market research, customer insights, product design and development, marketing and promotion tactics, distribution and logistics, and the launch process itself. These elements have been well-understood through studies and case studies, which can assist businesses in creating successful product launch plans.

1.2. Product launch in the tech industry

Rapid technological growth and innovation in the tech sector present special challenges and requirements for product launch plans. A number of academic studies have recently looked at product launches in the IT sector, offering insightful information about the procedure and the elements that make them successful.

One of the key challenges of product launch in the tech industry is the fast-paced nature of the industry (Yoon et al., 2022), therefore timing of the launch is of importance. To make sure that a product is well-positioned to benefit from new trends and technology, it is crucial to carefully examine the time of its release, as being first to the market can help to gain long-term benefit, as it has been the case for Spotify in music streaming market (Hesmondhalgh & Meier, 2018). analysing the product development cycle and identifying significant turning phases and potential use cases is very important as missing something can lead to quickly missing the first mover advantage, as it was the case for Apple in the voice assistant market (Cusumano et al., 2020). This means that first-mover advantage is not a permanent state, and it could be possible under right circumstances to take it away from competition. Larger companies that want to increase the flexibility and agility of their product development can also benefit from applying lean start-up methodology – as a result they can increase their flexibility to respond to changes in external environment, such as technological advancements, changes in customer needs, political challenges and other (Jeseman et al., 2020).

Another challenge of product launch in the tech industry is the high level of competition. The tech industry is characterized by a large number of companies, many of which are focused on similar products and technologies, and research shows that under such circumstances it is crucial for companies' growth to succeed in new product development (Lyu et al., 2022). This high level of

competition requires companies to develop effective strategies for differentiating not only their products, but also look towards innovation in product design and packaging as it positively influences product launch performance (D'Attoma & Ieva, 2020). It is important to make a thorough market research to understand the competitive landscape and to identify opportunities for new products (Dabrowski, 2019). Analysing competitor products and features, analysing customer demands and preferences, and identifying market gaps that could be addressed by new products are some examples of how to do this.

Another key factor that affects product launch success in the tech industry is the ability to build and leverage partnerships (Bustinza et al., 2019). To create and introduce new goods, IT companies frequently work in collaborations with other businesses, including suppliers, partners, and customers. These collaborations may offer beneficial assets that are crucial for the success of a product launch, including access to cutting-edge technologies, new distribution channels, and customer insights (Xiao et al., 2021). So, partnerships should be also considered as a separate pillar for launching plan preparation.

A good go-to-market strategy is crucial for success in the tech industry. This includes a wholistic marketing and sales strategy, along with financial planning that will maximize the impact of the product innovation through its alignment and mutual integration (Kehbila, 2021). Use of digital channels to reach clients is becoming increasingly crucial. Use of social media and digital advertising can help to reach broader audience in a quick way and shape the message of the product and brand (Rompis et al., 2021).

In conclusion, launching a product in the technology sector requires careful evaluation of a number of needs and problems. Companies must create flexible and adaptable product launch plans that are timed right, differentiate their products, and communicate their key benefits to the target audience due to the dynamic nature of the sector and the high level of competition. A strong go-to-market strategy, partnerships, and market research are also necessary for success in the tech sector. Companies can improve their likelihood of success and keep a competitive edge in the market by understanding and addressing these problems. Companies need to be proactive and use the most recent technologies to stay ahead of the competition and to satisfy the constantly changing demands of the market.

1.3. The customer decision journey for tech products

New product launch plan must take into consideration the customer decision journey. It explains the steps a customer takes to decide whether to buy a product and provides a structure for understanding the factors that impact customer behaviour. The customer decision journey is critical in the technology sector since customers could find it challenging to keep up with new features and products due to the industry's fast speed of innovation and technical change. Creating successful product launch plans that resonate with customers and boost sales requires a thorough understanding of the customer decision-making process.

There are multiple models which have been developed over years that companies use to better understand customer behaviour. Author will use more traditional 5-step model as a base for deep-dive into customer decision journey for tech products. This model is illustrated in Figure 1 below. (Court et al., 2009)
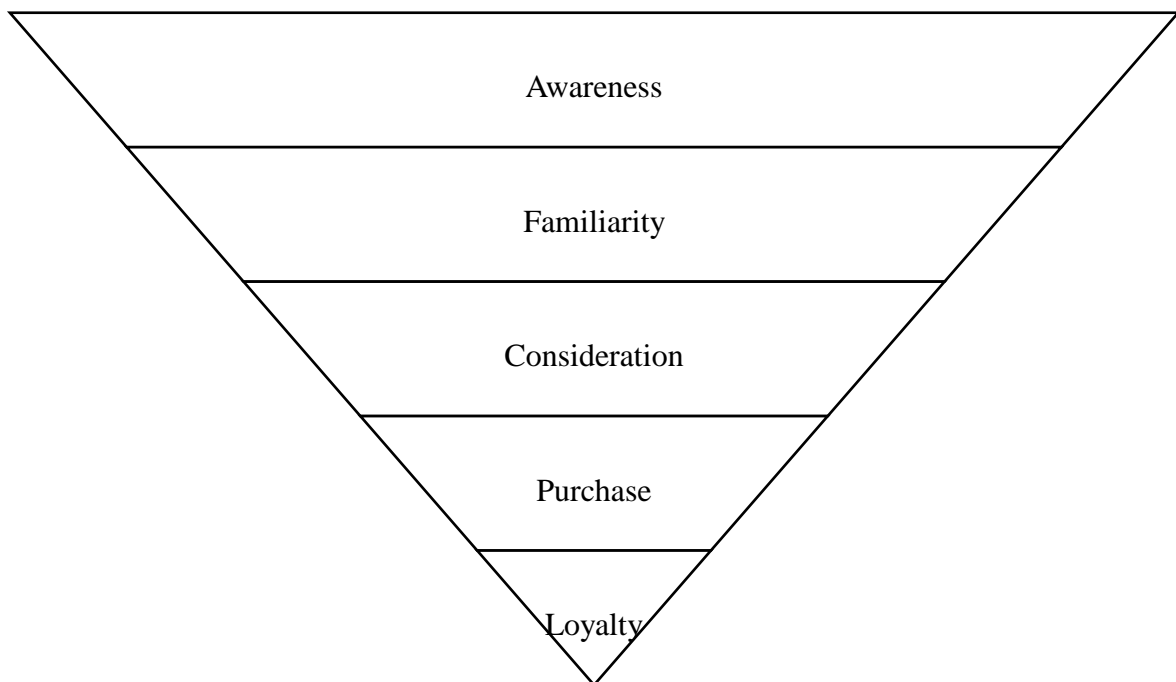
Figure 1. The traditional model of customer decision journey
Source: Court *et al.*, 2009

Awareness is the first phase in the journey. Customers start to become aware about a new product or feature at this point and start collecting details about it. Nowadays, every single person in the world in one way or another interact with social media in some way, therefore its importance in reaching customers and driving sales. Research shows that using social media to introduce new

product helps to grab wider attention and create a positive attitude towards the product by using sense of community (Baum et al., 2019). Also, social media analytics can be used to understand in which way to steer the communication in order to maximize its effect. Rathore and Iluvarasan compared sentiment of social media comments of pizza, car, and smartphone before and after launching, and found out that for car and smartphone companies need to put emphasis on user attitudes towards product attributes. (Rathore & Iluvarasan, 2020)

The second phase of the customer decision journey is familiarity. Customers start to show interest in a product and consider it as one of potential options. During this phase customers rely on lot of numerical information such as pricing, features, and customer reviews (Santana et al., 2020). Research shows that in order to maximize customer engagement in social media (likes, shares, comments) at this stage, social media posts need to be more informational than entertaining, and should include an activating element, such as link, quiz, or question (Demmers et al., 2020).

Third phase is consideration. At this stage customers may start to think about making a purchase after they have given the product or service a closer look. Customers are evaluating the product's features and advantages at this point and comparing it with alternative options. In online, reviews are super important – bad reviews are considered reliable, even if there is low number, while good reviews are reliable only if there are many of them (Gavilan et al., 2018). For tech products customer may want to see them physically, check product comparison sites and also more often product manufacturer sites are used to look up specifications, features, and functions (Akalamkam & Mitra, 2018). Mostly online channels are used by potential customers in this stage, while in familiarity phase both online and offline sources are used (Zaware, 2020).

The next phase in the customer decision journey is purchase. At this point, customers choose whether to purchase the product. When purchasing mobile phones both online and offline channels are used (Zaware, 2020). Recently, sharing economy has increased rapidly, so rental options for tech products can be considered as well. (Liu et al., 2019). This means that the customer decision journey may include thinking about a product's long-term value rather than just the initial purchase price. To decrease friction and boost the likelihood that a client will finalize a purchase, it is crucial for businesses to make the shopping process as simple and smooth as possible (Nolle & Wisselink, 2019).

Loyalty is the last phase in the consumer decision-making process. At this stage, customers evaluate their purchase decision and decide whether to give advice to others based on their experience. In general, loyalty is impacted the most by product satisfaction, customer journey satisfaction and customer inspiration (Herhausen et al., 2019). Therefore, in order to understand how satisfied customers are with the product and to identify areas for development, businesses must collect and analyse customer feedback throughout the customer journey. Not all aspects of customer experience are equally important and contribution to loyalty differs, but at the same time it has to be balanced effort – only combination of things will improve end-result (Pekovic & Rolland, 2020).

While the phases of customer decision journey are usually shown in a linear way, it is important to understand that the journey can be different for different customers (Mele et al., 2021). Some customers' journeys may be more linear, with customers progressing logically through the stages of awareness, familiarity, consideration, purchase, and loyalty. Other customers' journeys may be more chaotic, with them returning to earlier stages several times before making a purchase decision. Customers may also skip stages or move back and forth between them based on their preferences and the information they have or even technology itself can facilitate the purchase process (Grewal & Roggeveen, 2020). Companies need to take into consideration that each customer journey can be unique, and there is no one-size-fits-all solution available, therefore the approach to understand and engage with customers should be consistent and flexible throughout the customer decision journey.

In the tech sector, a key step in the product launch process is understanding the customer decision journey. Creating successful product launch plans that appeal to customers and boost sales requires a thorough understanding of the customer decision-making process, including the awareness, interest, evaluation, purchase, and post-purchase evaluation stages. Companies can develop effective strategies for dealing with customers and generating revenue by knowing these stages and the elements that influence customer behaviour, such as customer needs, preferences, and pain points. By incorporating this knowledge into their product launch plans, tech companies can develop products that resonate with their target audience, leading to higher customer satisfaction and revenue growth.

2. SAMSUNG ELECTRONICS BALTICS AND MOBILE MARKET IN BALTICS

During this part of the thesis author gives an overview of Samsung Electronics Baltics and snapshot of current tech eco-system product market in Baltics. During this thesis author will presume that tech eco-system consists of following product groups: smartphones, tablets, smartwatches, bluetooth earphones, laptops. For the overview following data has been used: information which can be found on Samsung and its competitors' websites, media articles, press releases, etc.

2.1. Overview of Samsung Electronics Baltics

Samsung Electronics Baltics is a subsidiary of Samsung Electronics. Samsung Electronics is a South Korean multinational electronics company with headquarters in Suwon, South Korea. The company was established in 1969 (Samsung, 2023). Samsung Electronics Baltics was established in 2007 to serve as regional headquarters for Samsung in the three Baltic states – Estonia, Latvia, and Lithuania (Lursoft, 2023). Head office of Samsung Electronics Baltics is located in Riga, Latvia, however, there are smaller offices in Vilnius, Lithuania, and Tallinn, Estonia. Since its establishment, the company has become of the leading players in the electronics industry in Baltics, getting recognition as most loved electronics brand in Baltics in 2021 (Baltic Brand, 2022).

Currently, Samsung offers a wide range of products within Baltic countries, such as smartphones, tablets, wearable devices (smartwatches, bluetooth earphones), accessories (covers, chargers, etc.), TVs, Audio equipment, projectors, refrigerators, washing machines, vacuum cleaners, dishwashers, monitors, memory storage devices, etc. However, as of March 2023 Samsung does not offer laptops in Baltic countries, though they are listed in their Germany website, for example.

Samsung Electronics Baltics sells its products through a variety of distribution channels in Baltic countries, including retail stores, such as Euronics and Onoff, and online stores, such as kaup24.ee

and 1a, and partnerships with telecommunications operators, such as Telia, Elisa, Bite and Tele2. Also, Samsung operates their own direct-to-consumer channel with web store available in all three Baltic countries.

Samsung Electronics Baltics provides comprehensive customer service and support to consumers in Baltics. The company offers warranties on its products, as well as repair services for devices that are damaged or malfunctioning via authorized service centres. Samsung also provides online and phone support to help consumers troubleshoot issues with their devices.

2.2. Overview of tech eco-system product market in Baltics

As stated previously, for this thesis it is assumed that such products as smartphones, tablets, smartwatches, bluetooth earphones and laptops make tech eco-system. Therefore, these will be the product groups which will be under scope of this sub-chapter.

In general tech products are particularly important for people, as these are primary devices that are used in order to access the internet, search for information, perform daily jobs, and do other necessities. Based on Eurostat report from 2021, on average 80% of individuals in Baltics used smartphone to access the internet, 56% used laptop, 24% used tablet and 25% used other mobile devices, such as smart TV, smart speakers, game consoles, e-book readers and smartwatches (Eurostat, 2021). Data for Estonia, Latvia, Lithuania separately is visible in Figure 2 below.
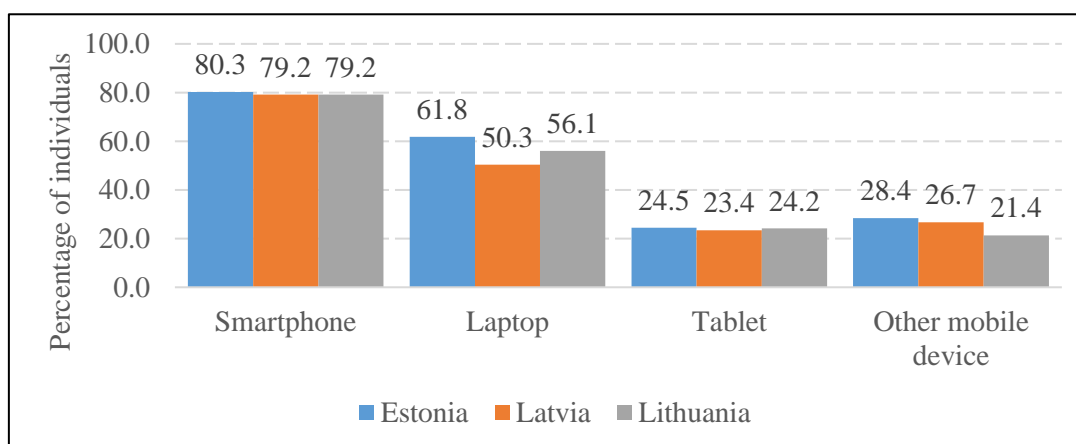

Figure 2. Device used to access the internet, 2021
Source: Eurostat, 2023

For Samsung, Apple, and other companies in the tech market, locking people in tech product eco-system is important as it helps to boost customer retention (Hiremath & Gupta, 2022). As visible in Figure 3, tech product eco-system market in Baltics reached 1.2 billion euros in 2022, and market keeps growing: in 2021 growth versus previous year reached 20%, while in 2022 growth versus previous year was 9%.
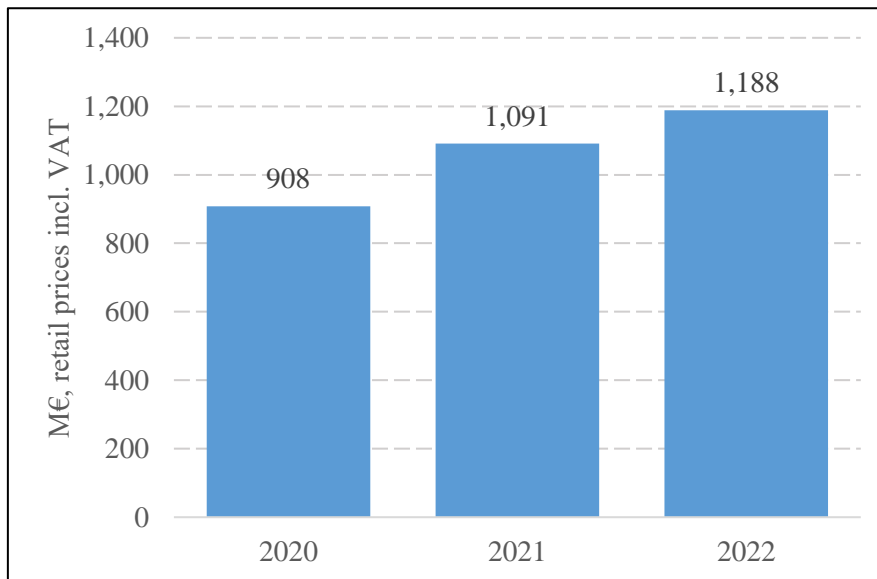

Figure 3. Tech eco-system product market size in Baltics, amount in retail prices
Source: Samsung Electronics Baltics, 2023

From the competitive standpoint situation in products groups is quite different in Baltic countries. First, not all players are present in all product categories. Author looked into Samsung, Apple, Huawei, Xiaomi, and Lenovo presence in 12 online web stores of such Baltic operators and retailers, as Telia, LMT, Tele2, Elisa, Bite, Euronics, RD Electronics and Topo Centras. Full compiled overview is visible in Table 1 below. Apple was represented with full tech eco-system in 8 out of 12 web stores. Huawei was present with full eco-system in 5 out of 12 web stores. Samsung, Xiaomi, and Lenovo do not have presence in all 5 categories in any of 12 web stores, as Samsung and Xiaomi do not have any laptop products ranged, while Lenovo does not have any smartwatch.

Table 1. Overview of tech eco-product presence in Baltic operator and retailer web stores 2023

Brand	Category	Estonia				Latvia				Lithuania			
		Telia	Elisa	Tele2	Euronics	LMT	Tele2	Bite	RD	Telia	Tele2	Bite	Topo C.
SAMSUNG	Smartphone	x	x	x	x	x	x	x	x	x	x	x	x
	Tablet	x	x	x	x	x	x	x	x	x	x	x	x
	Smartwatch	x	x	x	x	x	x	x	x	x	x	x	x
	Earphones	x	x	x	x	x	x	x	x	x	x	x	x
	Laptop	-	-	-	-	-	-	-	-	-	-	-	-
APPLE	Smartphone	x	x	x	x	x	x	x	x	x	x	x	x
	Tablet	x	x	x	x	x	x	x	x	x	x	x	x
	Smartwatch	x	x	-	x	x	-	-	x	x	-	x	x
	Earphones	x	x	x	x	x	x	x	x	x	x	x	x
	Laptop	x	x	-	x	x	x	x	x	x	x	x	x
HUAWEI	Smartphone	x	x	x	x	x	x	x	x	-	-	x	x
	Tablet	-	x	x	x	x	x	x	x	-	-	-	x
	Smartwatch	x	x	x	x	x	x	x	x	-	x	x	x
	Earphones	x	x	x	-	x	x	x	x	-	x	x	x
	Laptop	x	x	-	x	x	x	-	x	-	-	-	x
XIAOMI	Smartphone	x	x	x	x	x	x	x	x	x	x	x	x
	Tablet	-	-	-	x	-	x	-	x	-	-	-	x
	Smartwatch	-	-	-	x	-	x	x	x	x	x	x	x
	Earphones	x	-	x	-	-	x	x	x	x	x	-	x
	Laptop	-	-	-	-	-	-	-	-	-	-	-	-
LENOVO	Smartphone	-	-	-	-	-	-	-	-	-	-	-	-
	Tablet	-	x	-	x	x	-	x	x	-	x	x	x
	Smartwatch	-	-	-	-	-	-	-	-	-	-	-	-
	Earphones	-	-	-	-	-	-	-	-	-	-	-	x
	Laptop	x	x	-	x	x	x	x	x	x	x	x	x

Source: Compiled by author based on Telia.ee, 2023; Elisa, 2023; Tele2.ee, 2023; Euronics, 2023; LMT, 2023; Tele2.lv, 2023; Bite.lv, 2023; RD Electronics, 2023; Telia.lt, 2023; Tele2.lt, 2023; Bite.lt, 2023; Topo Centras, 2023

In general, mobile penetration in Baltics is very high and according to the World Bank data in all 3 countries there are more than 100 mobile subscriptions per 100 people (The World Bank, 2021). Based on Samsung Electronics Baltics data biggest product category out of previously mentioned 5 categories is smartphones. In 2022, it was 56% of total tech eco-system product market. In terms of amount sold in retail prices including VAT, as visible in Figure 4 in smartphone market there were 2 clear leaders - Apple was the number one player in 2022 with 44%, Samsung was second with 40%. Xiaomi was number 3 with 8% market share.
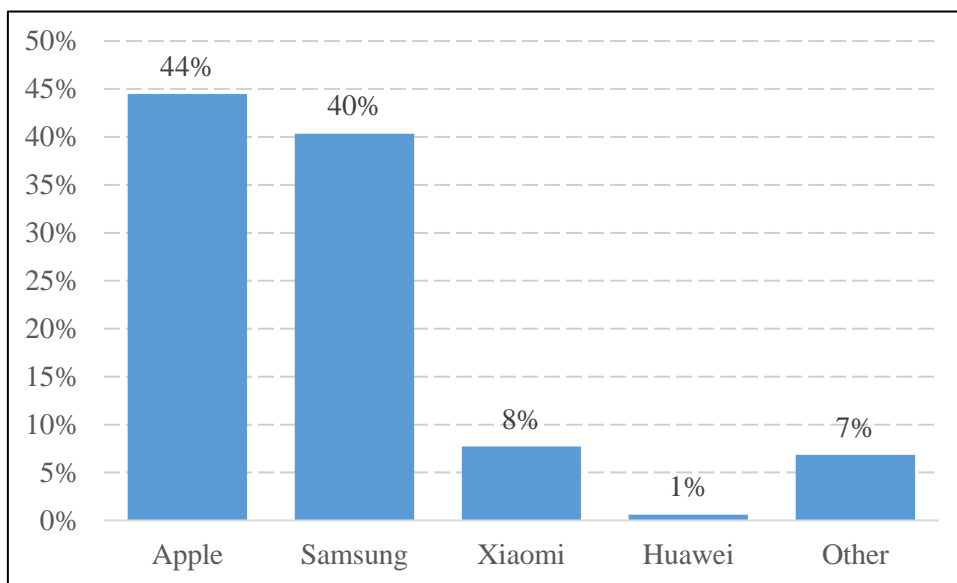

Figure 4. 2022 smartphone market share in Baltics, amount in retail prices
Source: Samsung Electronics Baltics, 2023

Contrary to smartphones, laptop market is very fragmented as visible below in Figure 5. It is the second biggest in terms of size, taking up 29% of tech eco-system product market. As of 2022, Apple has the highest market share in Baltic market, taking up 32% of the total laptop market. Lenovo has the second highest market share, 9%age points less than Apple, at 23%. Dell, HP, Asus takes up spots 3 to 5, being separated by 3%age points, with 14, 12 and 11% market share, respectively.
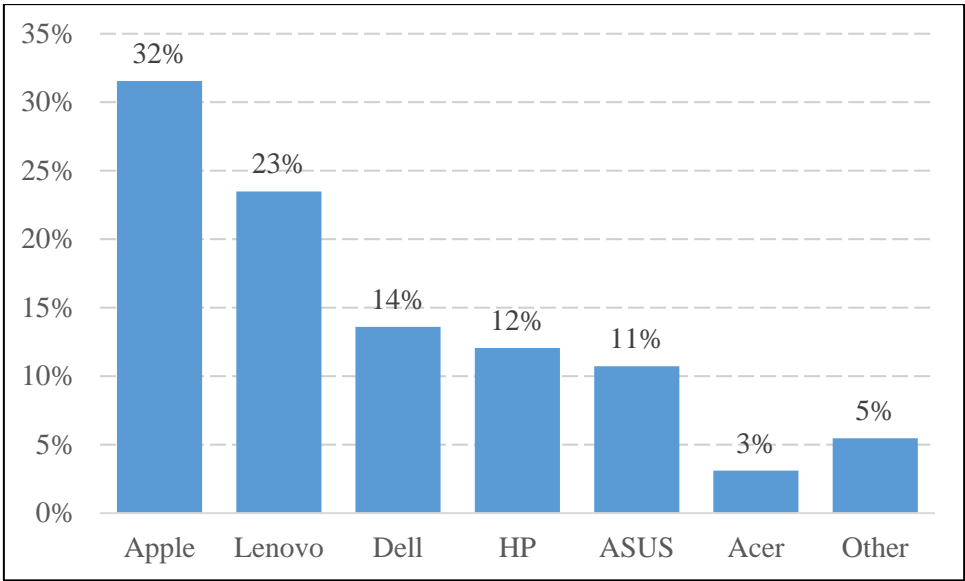
Figure 5. 2022 laptop market share in Baltics, amount in retail prices
Source: Samsung Electronics Baltics, 2023

Next largest part of tech eco-system market is made by smartwatches (6%portion). It is still a market with immense potential growth in coming years. Based on Statista, globally it is expected that this category will have annual growth of 8.26%, and current user penetration in 2023 is only 2.74% (Statista, 2023). According to Samsung Electronics Baltics data, as visible in Figure 6 below, in 2022 market leader was Samsung with 41% market share in amount, followed by 30% for Apple and 12% for Huawei. In smartwatch category Garmin is also a strong player, taking up 9% of total Baltic market in 2022.
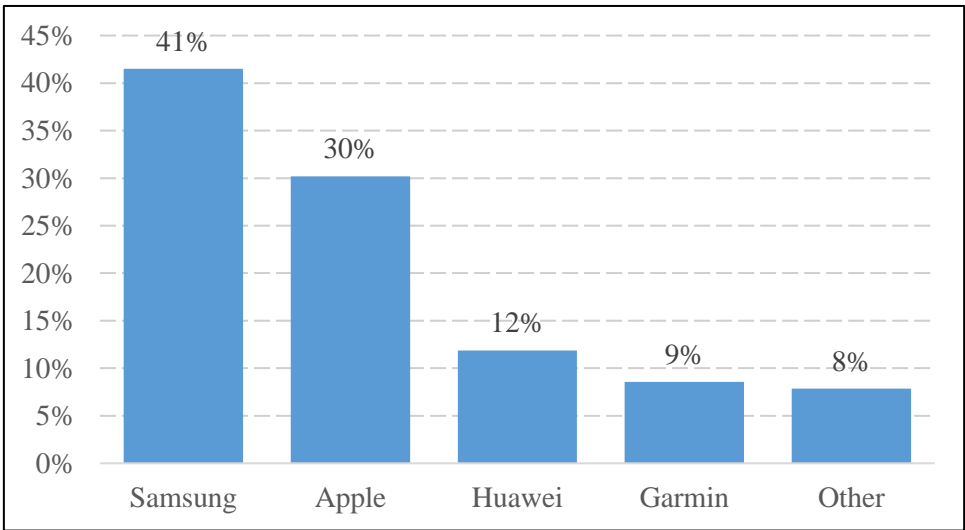

Figure 6. 2022 smartwatch market share in Baltics, amount in retail price
Source: Samsung Electronics Baltics, 2023

After years of decline, since 2020 tablet market has returned back to growth, as pandemic restored interest for such devices for education and work purposes (Statista, 2023). Based on Samsung Electronics Baltics data, in Baltics tablet market is in 2022 was the same size as smartwatch market, taking up 6% of total tech eco-system product market. Samsung held the number one position in Baltics with 44% market share, followed by Apple with 30% and Lenovo with 20%, as seen in Figure 7.
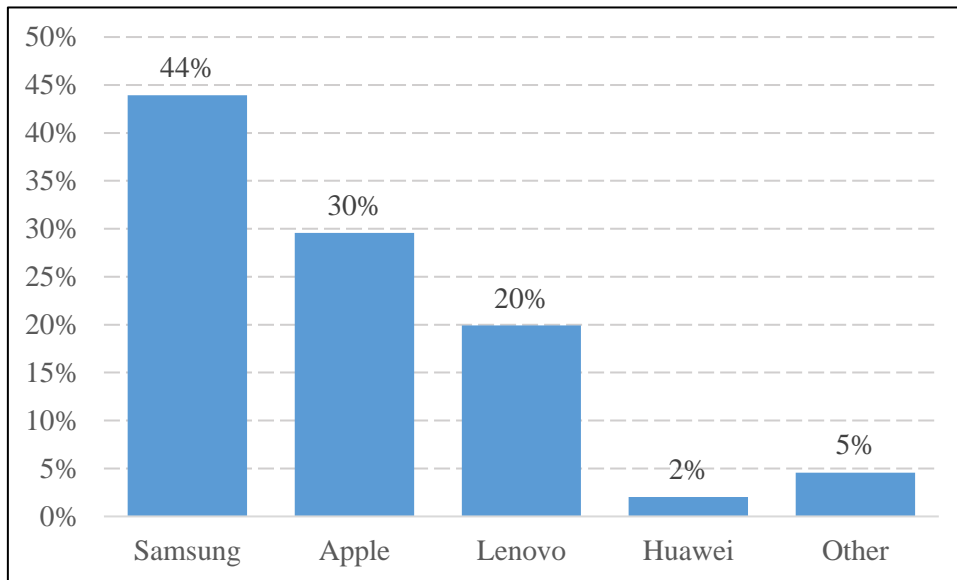
Figure 7. 2022 tablet market share in Baltics, amount in retail price
Source: Samsung Electronics Baltics, 2023

3% of tech eco-system product market is bluetooth earphones product category. It is more complimentary product, as it is impossible to use them on their own, however, they do help to enhance user experience with other products. As visible in Figure 8 below, based on Samsung Electronics Baltics data, Apple is the market leader in this category with 46% market share, followed by Samsung with 27% share and then JBL with 7% share.
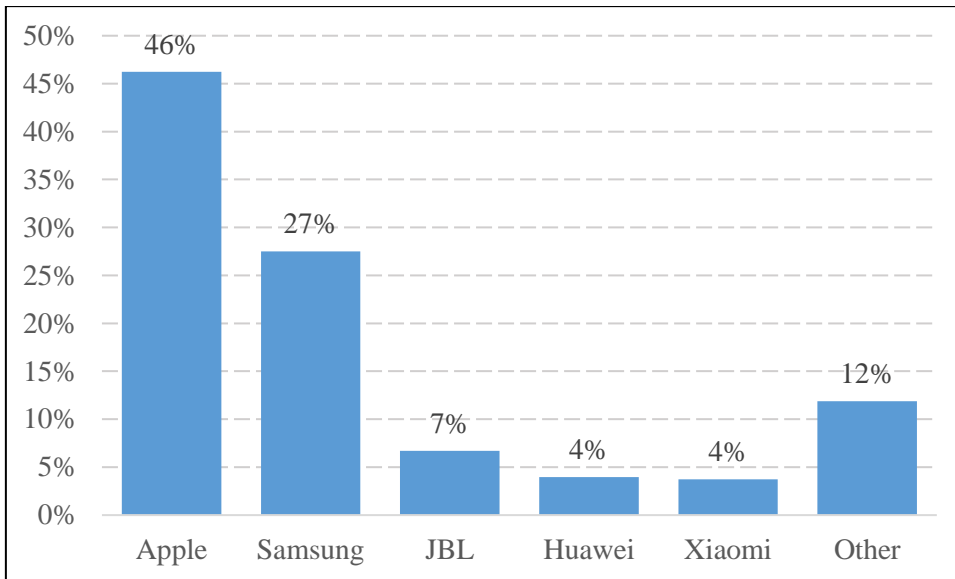
Figure 8. 2022 bluetooth earphones market share in Baltics, amount in retail price
Source: Samsung Electronics Baltics, 2023

Apple and Huawei are the brands present in all 5 tech eco-system product categories. Apple is occupying top two market share position in all 5 of them. However, Huawei consumer business since 2019 has significantly decreased due to executive order issue by then US president Donald Trump which put Huawei on trade blacklist, thus limiting partnership with other US companies due to potential security risks (Curwen, 2020). Samsung is occupying top two position in 4 out of 5 tech eco-system product categories in Baltics, but they are not present in laptop category, which leaves potential room for growth, if they would expand their presence also to this category.

3. MEASURING ADVANTAGES AND DISADVANTAGES OF SAMSUNG PRODUCT ECO-SYSTEM

The following chapter focuses on the research conducted by author to understand the potential benefits and drawbacks of the Samsung product eco-system and its competitiveness in the Baltic region. As described in introduction of the thesis, research aims and objectives are to identify the competitive advantages offered by Samsung's eco-system and to determine the potential gains for customers. Research questions are:

1. How do expert users perceive the benefits of a product based eco-system in the tech industry?
2. Why focusing on eco-system could be beneficial for Samsung when launching a new product?

This chapter provides and information on research methodology and potential limitations, then results of the research will be described and afterwards conclusions and recommendations will be given for an effective introduction of the laptop market segment as a part of Samsung's eco-system in the Baltic countries.

3.1. Methodology of the research and limitations

For the research author uses quantitative data analysis approach. Author designed a survey with 32 questions to collect the data. Out of all the questions, 16 were multiple-choice questions, 15 used Likert-scale, while 1 question was open-ended. Such approach was chosen as it allows to do statistical analysis and also helps to better understand respondents' attitude and perception towards product eco-system in general and Samsung product eco-system in particular. Author used customer decision journey theory, which was described in first chapter of this thesis, research questions, as well as technology acceptance model theory in order to design the questions (Charness & Boot, 2016). Full list of questions and possible options for answers is visible in Appendix 1.

In general, potential target audience includes any tech product user in Baltic countries. For this research non-probability sampling method was used for this research with a combination of convenience sampling and judgement sampling. The survey was distributed via various channels, including via e-mail to Samsung Electronics Baltics employees, to both retail chain and mobile network operator partners across Estonia, Latvia, and Lithuania, and to shop assistants of partner stores via Facebook groups. This ensured that the survey reached a wide range of individuals who use technology on daily basis and can be considered as opinion leaders of their respective social groups. In total there were 112 respondents for the survey.

Data analysis was done in MS Excel and SPSS. Descriptive statistics were used to summarize the collected data, while inferential statistics (such as Chi-Square test, Likelihood Ratio test, Continuity Correction, Fisher's Exact test, Kolmogorov-Smirnov test, Shapiro-Wilk test, Spearman's rank correlation coefficient, Kruskal-Wallis test, etc.) were used to understand the relationships and tendencies within the data in order to get insights for the competitive advantages of Samsung eco-system and potential gains for customers.

This methodology has some potential limitations as well. One of them would be the potential for response bias, which would happen if surveyed people gave answers which are socially desirable, or they misunderstand the questions. In order to avoid such issue, the survey questions were designed to be as clear as possible.

Another limitation is the sample size and the composition of the sample. Although more than 100 respondents from different backgrounds were reached, due to non-probability sampling methods used, the sample is not fully representative of the general population of technology users in Baltic countries. This was partially addressed by targeting opinion leaders of the respective social groups, but future research could consider having a larger sample size or using stratified sampling principles to get a more representable and accurate sample with enhanced statistical power.

On top of that, self-reported data of respondents might have inaccuracies due to forgetting things or faulty perceptions. To minimize such limitation, research was focused on current experience and respondents were not asked to recall past experiences or predict what might happen in the future.

Also, quantitative analysis could limit the detail of understanding the experience, opinions, and emotions of surveyed people (Queirós et al., 2017). To fully understand the complexities of people individual experiences future research could consider using mixed approach of qualitative and quantitative analysis to get more in-depth understanding of customer attitudes and preferences when using product eco-system (Rutberg & Bouikidis, 2018).

3.2. Results of the research

During this section of the thesis author gives an overview on the results of the quantitative analysis research. First, author looks into general sample demographics, device usage and brand preference of the respondents. After that, analysis focuses on respondents' experience with product eco-systems and their value and importance. Then deep dive on Samsung specific questions is done. Lastly, author investigates brand importance in purchasing decisions.

Based on the survey data from question number 1 that is visible in Figure 9, out of 112 respondents, 111 were from Baltic countries, however, 1 respondent indicated that he is from another country. Majority of the sample, 51% or 57 respondents come from Latvia, while 26 respondents or 23% come from Estonia. Remaining part – 28 respondents or 25% of the total sample – are from Lithuania. This has been reflected in Figure 9.
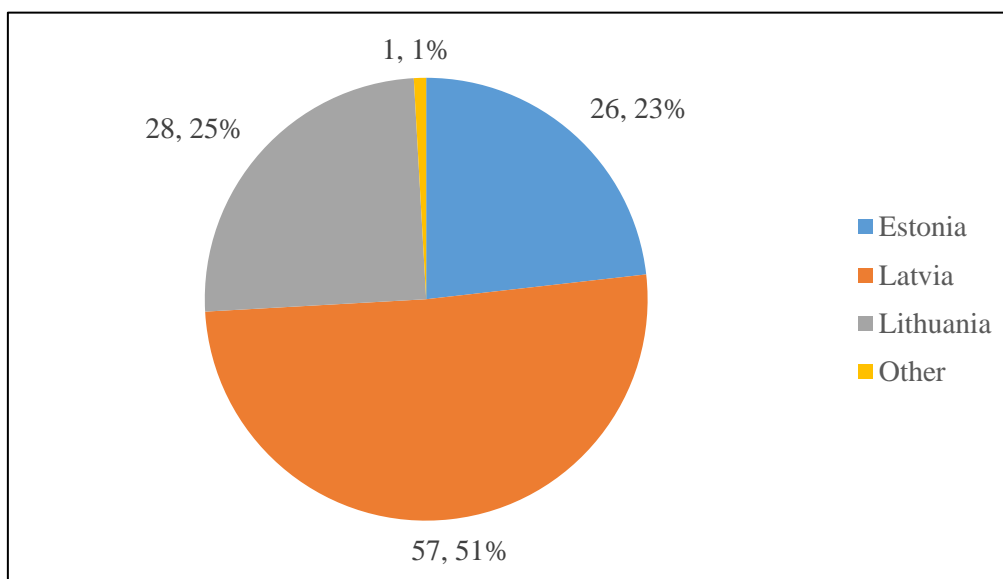

Figure 9. Demographic profile of the respondents: Country, n=112
Source: Compiled by the author based on the survey results

Figure 10 represents question 2 data. As visible, 1 respondent indicated that he is 17 or younger, 9 respondents or 8% of total sample are 18 to 25 years old. More than half of the total sample are between 26 to 35 years old – 40 respondents or 36% are 26 to 30 years old, while 23 people or 21% are 31 to 35 years old. Slightly more than one third of all the respondents are 36 years old or older: 15 people indicated that their age is between 36 and 40, 18 people said that they are 41 to 45 years old. 2 people indicated their age between 46 and 50, while 4 more said that they are between 51 to 60 years old.
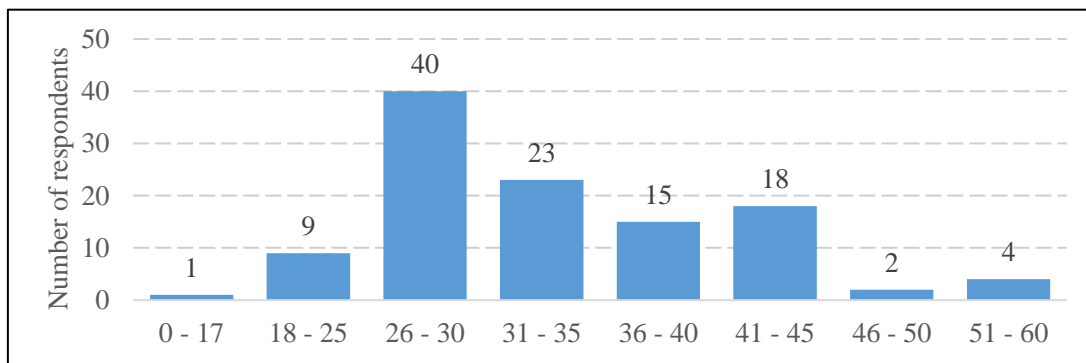

Figure 10. Demographic profile of the respondents: Age, n=112
Source: Compiled by the author based on the survey results

In question 3 respondents were asked about their gender. Based on crosstabulation visible in Table 2, gender distribution among the sample is even. 57 out of 112 respondents or 51% are male, while remaining 49% are female. Also, on country perspective picture is similar. 54% or 14 of Estonian respondents were male, 46% female. Lithuanians were split 50% each, 14 respondents were female, 14 males. In Latvia, there were slightly more female respondents: 51% or 29 were female, 49% or 28 were male. The 1 person who indicated that is from another country was male.

Table 2. Demographic profile of the respondents: Gender, n=112

Country		Female	Male	Total
Estonia	count	12	14	26
	%	46.2%	53.8%	100.0%
Latvia	count	29	28	57
	%	50.9%	49.1%	100.0%
Lithuania	count	14	14	28
	%	50.0%	50.0%	100.0%
Other	count	0	1	1
	%	0.0%	100.0%	100.0%
Total	count	55	57	112
	%	49.1%	50.9%	100.0%

Source: compiled by the author based on the survey results

When it comes to smartphone brand, which respondents are using, there were 2 clear leaders – Samsung and Apple. This was asked in question 4. As visible in Figure 11, 59% of all the respondents or 66 people use Samsung devices, while 36% or 40 respondents use Apple as their smartphone. 4 people or 3% said that they are using Xiaomi devices, while 2% or 2 people indicated that they use another brand smartphone.
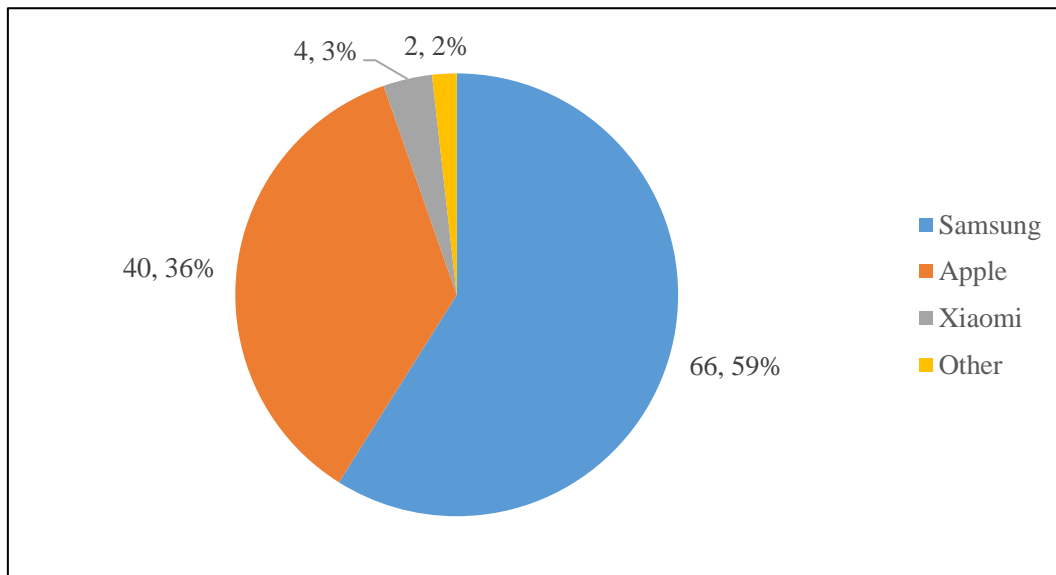

Figure 11. Smartphone brand preference, n=112
Source: Compiled by the author based on the survey results

However, for personal computers variety of brands used by respondents was much wider. Based on crosstabulation visible in Table 3 based on questions 4, 5 and 6, one can observe that 110 out of 112 respondents are having personal computers. Most popular brand amongst respondents is Lenovo, which is used by 27% or 30 people. It is closely followed by Apple (21% or 23 respondents), Asus (18% or 20 people). 10 people said they are using HP computers, 9 are using Dell, 6 are using Acer and 12 people said that they are using some other brand. Situation is different if one looks at also at current smartphone brand being used. Among those 40 respondents who use Apple smartphones almost half, 48%, use Apple computers. Lenovo is next, being used by 25% of Apple smartphone owners, followed by Asus and Dell, each used by 7.5%, and then by HP used by 5% and Acer used by 2.5%. 5% of Apple smartphone users use other brand computers. Out of 66 Samsung smartphone users only 4 or 6% use Apple computers. More popular brands among them are Lenovo used by 30%, Asus used by 26%, followed by Dell (9%), Acer 5% and other brands (12%). For Xiaomi smartphone users most, popular brand is Acer used by 50%, 25% use

HP and 25% other brand computers. Out of those who have other brand smartphones half uses HP, while other half other brand computers.

Table 3. Personal computer brand preference based on smartphone brand owned, n=112

Smartphone brand		None	Acer	Apple	Asus	Dell	HP	Lenovo	Other	Total
Samsung	count	2	3	4	17	6	6	20	8	66
	%	3%	5%	6%	26%	9%	9%	30%	12%	100%
Apple	count	0	1	19	3	3	2	10	2	40
	%	-	3%	48%	8%	8%	5%	25%	5%	100%
Xiaomi	count	0	2	0	0	0	1	0	1	4
	%	-	50%	-	-	-	25%		25%	100%
Other	count	0	0	0	0	0	1	0	1	2
	%	-	-	-	-	-	50%	-	50%	100%
Total	count	2	6	23	20	9	10	30	12	112
	%	2%	5%	21%	18%	8%	9%	27%	11%	100%

Source: compiled by the author based on the survey results

Questions 7 to 18 were more aimed towards answering research question 1: How do expert users perceive the benefits of a product based eco-system in the tech industry.

As visible in Table 4, based on answers for question 7, 77 out of 112 survey respondents or 68.8% have had experience in using product eco-system. 74% or 49 out of 66 Samsung smartphone users claimed to have used product eco-system, 60% or 24 out of 40 Apple smartphone users, 50% or 2 out of 4 Xiaomi smartphone users, and 100% or 2 out of 2 other brand smartphone users.

Table 4. Experience in using product eco-system based on smartphone brand owned, n=112

Smartphone brand		Have experience	Do not have experience	Total
Samsung	count	17	49	66
	%	25.8%	74.2%	100.0%
Apple	count	16	24	40
	%	40.0%	60.0%	100.0%
Xiaomi	count	2	2	4
	%	50.0%	50.0%	100.0%
Other	count	-	2	2
	%	-	100.0%	100.0%
Total	count	35	77	
	%	31.3%	68.8%	100.0%

Source: compiled by the author based on the survey results

Question 8 in the survey asked respondents, if they think that having a range of product from the same brand that work together can improve overall user experience. Author checked, if there is difference in answers for people who have used product eco-system before and who have not. In order to understand significance of the results Chi-square test of independence was performed. As visible below in Table 5. For the Pearson Chi-Square test, the asymptotic significance (2-sided is 0.003, which is less than 0.05 significance level and therefore suggest a significant association between the variables. This is further backed up also by Likelihood Ratio test, Continuity Correction and Fisher's Exact Test.

Table 5. Chi-square test: association between questions 7 and 8

	Value	df	Asymptotic significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.126	1	0.003	-	-
Continuity Correction	6.109	1	0.013	-	-
Likelihood Ratio	9.636	1	0.002	-	-
Fisher's Exact Test	-	-	-	0.008	0.008
N of valid cases	112	-	-	-	-

Source: compiled by the author based on the survey results

Based on data visible in Figure 12, out of those who have used product eco-system before, 100% of the people believe that having a range of products from the same brand that work together well can improve the overall user experience. However, out of those 35 people who have not used product eco-system before, 4 people (11%) do not believe that.
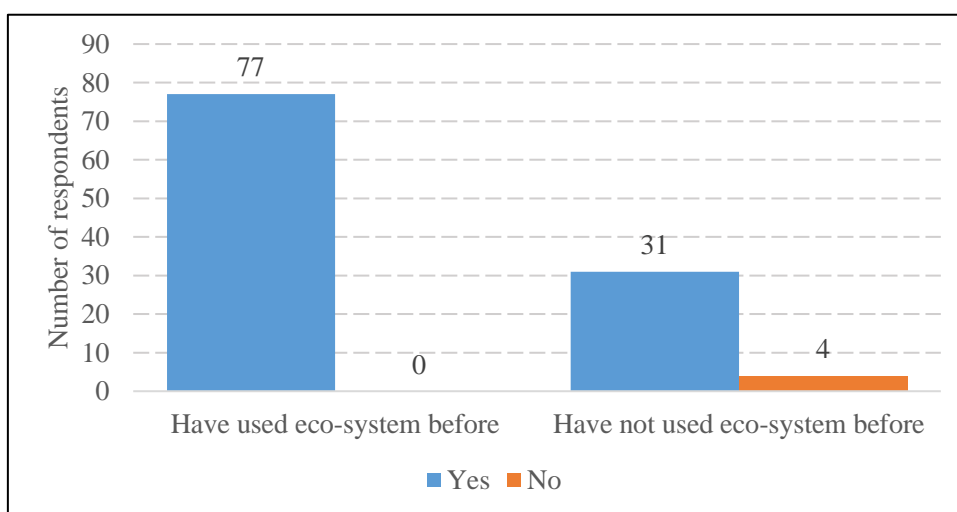

Figure 12. Perceived impact of product eco-system on user experience, n=112
Source: Compiled by the author based on the survey results

For questions 9 to 12 author looked into relationship between those questions and question 7, where respondents answered, if they have a prior experience with product eco-system or not. As indicated below in Table 6, Pearson Chi-Square test shows that there is statistically significant relationship between answers to questions 7 and 9, and this is also backed up by likelihood ratio. However, Continuity Correction test is slightly above 0.05 significance level, which might mean that further investigation could be required.

Table 6. Chi-square test: association between questions 7 and 9

	Value	df	Asymptotic significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.214	1	0.040	-	-
Continuity Correction	3.394	1	0.065	-	-
Likelihood Ratio	4.150	1	0.042	-	-
Fisher's Exact Test	-	-	-	0.058	0.033
N of valid cases	112	-	-	-	-

Source: compiled by the author based on the survey results

Based on the data visible in Figure 13, 53 out of 77 people (69%) who have used product eco-system before said that they have bought a product based on its compatibility with other products in an eco-system. However, for those who have not used product eco-system before, more than half (51%) or 18 out of 35 respondents claimed that they have not purchased any products due to their compatibility with a product eco-system.
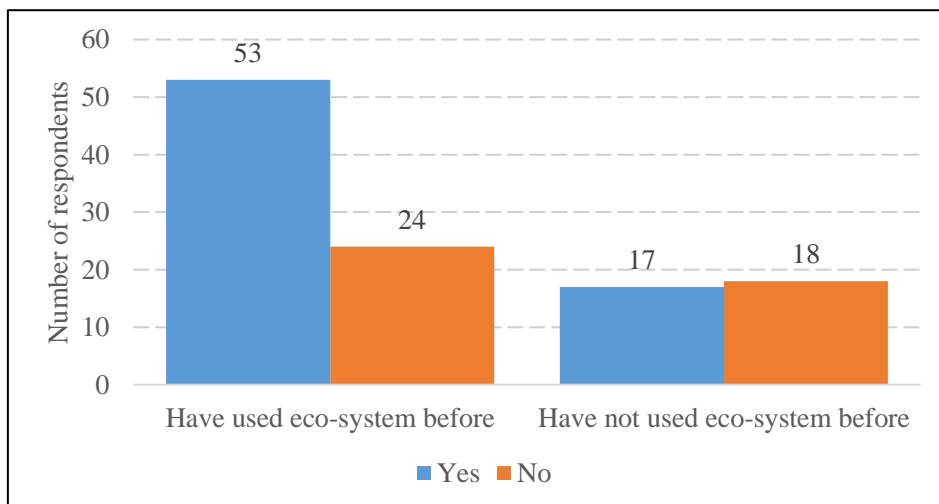

Figure 13. Frequency of purchases based on product compatibility within an eco-system, n=112
Source: Compiled by the author based on the survey results

Pearson Chi-Square test showed that there is no significant relationship between question 7 and question 10, which asked respondents, if they have ever encountered difficulties when trying to connect products from different manufactures, as can be seen in Table 7 below.

Table 7. Chi-square test: association between questions 7 and 10

	Value	df	Asymptotic significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.053	1	0.305	-	-
Continuity Correction	0.616	1	0.433	-	-
Likelihood Ratio	1.096	1	0.295	-	-
Fisher's Exact Test	-	-	-	0.345	0.219
N of valid cases	112	-	-	-	-

Source: compiled by the author based on the survey results

Within both groups of respondents, majority of the people have encountered such difficulties: 57 out of 77 (74%) of those who have used product eco-system, and 29 out of 35 (83%) out of those who have not used product eco-system before, as can be seen below in Figure 14.
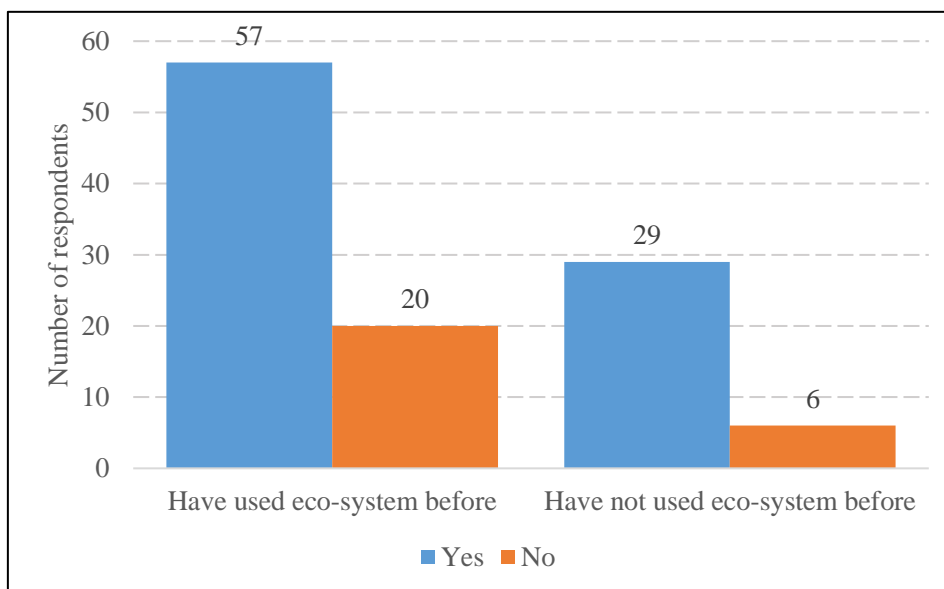
Figure 14. Difficulties in connecting products from different manufacturers, n=112
Source: Compiled by the author based on the survey results

Table 8 shows the results of Chi-Square tests which were done to determine the significance of relationship between question 7 and question 11. Based on the test results, Pearson Chi-Square shows that p-value is 0.033 which is below 0.05 significance level and means that there is a statistically significant association between the two variables. Also, for Likelihood ratio and

Fisher's Exact Test p-value is below 0.05. Continuity Correction shows 0.056 which is slightly above 0.05 significance level.

Table 8. Chi-square test: association between questions 7 and 11

	Value	df	Asymptotic significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.562	1	0.033	-	-
Continuity Correction	3.640	1	0.056	-	-
Likelihood Ratio	4.949	1	0.026	-	-
Fisher's Exact Test	-	-	-	0.041	0.025
N of valid cases	112	-	-	-	-

Source: compiled by the author based on the survey results

Based on survey results, which can be seen in Figure 15, a bit more than one third, 26 out of 77 respondents who have used product eco-system before claimed that they have felt limited by the number of devices in a product eco-system. Only 14% or 5 out of 35 people who have not used product eco-system said that they have felt limited.

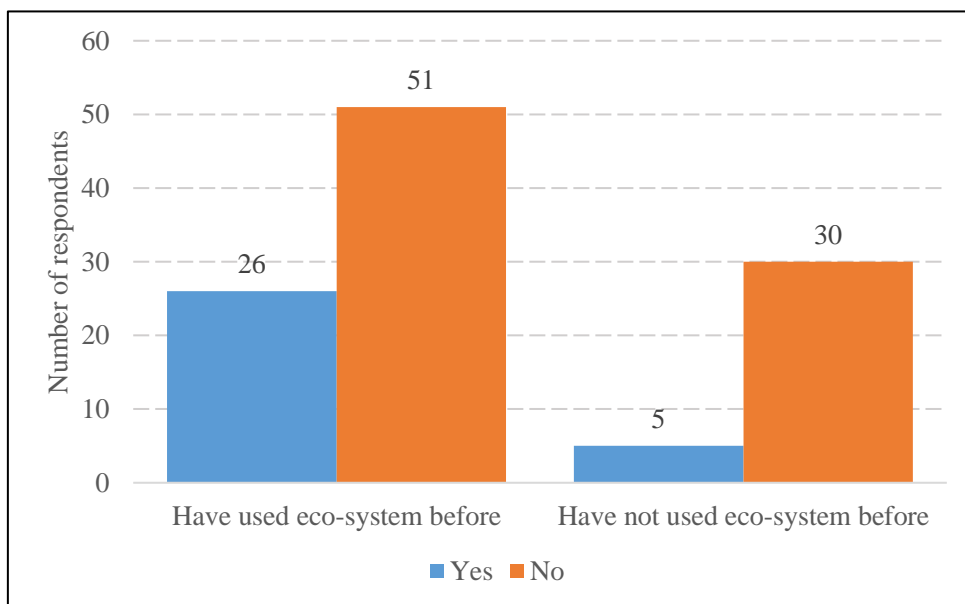Figure 15. Respondents feeling limited by the number of devices in an eco-system, n=112
Source: Compiled by the author based on the survey results

As visible in Table 9, Pearson Chi-Square Test and Likelihood ratio showed that there is statistically significant association between questions 7 and 12. However, Continuity Correction did not back this up, which might require some further investigation.

Table 9. Chi-square test: association between questions 7 and 12

	Value	df	Asymptotic significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.851	1	0.050	-	-
Continuity Correction	3.093	1	0.079	-	-
Likelihood Ratio	3.882	1	0.049	-	-
Fisher's Exact Test	-	-	-	0.067	0.039
N of valid cases	112	-	-	-	-

Source: compiled by the author based on the survey results

Figure 16 shows that 44 out of 77 people (57%) who have used product eco-system before said they would be ready to pay more for a product if it was a part of a larger eco-system. On the contrary, only 37% (13 out of 35) respondents who have not used product eco-system before would be ready to pay more for such products.
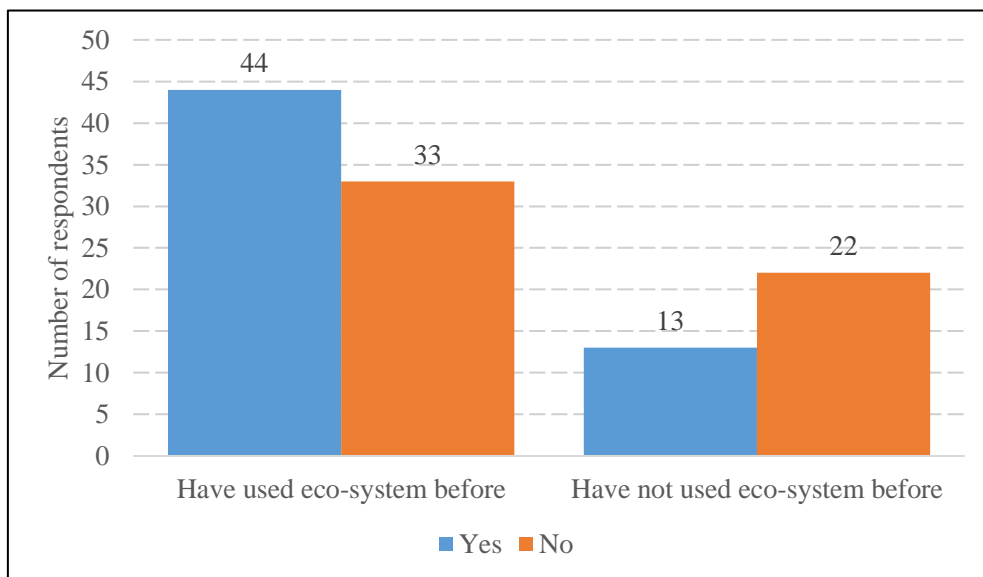
Figure 16. Willingness to pay more for products within a larger eco-system, n=112
Source: Compiled by the author based on the survey results

Next, author analysed questions 13 to 18, which were respondents needed to evaluate importance of different aspects while using product eco-system via 5-point Likert scale. Key descriptive statistics measures, such as mean, median, mode, standard deviation, variance, range are visible in Table 10. In question 13 respondents needed to indicate how important compatibility with other devices in their decision to purchase laptop. The mean score for this question was 3.61, showing that on average respondents considered compatibility to be moderately important. Median score of 4.00 and Mode score of 4 further support this result. The standard deviation of 0.924 and

variance of 0.853 show that there is some variation in the respondents' answers, and the range 4 shows that all 5 points of Likert scale were used when answering the question.

In response to question 14, participants were asked to rate how important it is to them that the technology they use is compatible with other devices. This aspect was believed to be quite important by respondents on average, as indicated by the mean score of 4.04 for this issue. The mode score of 4 and the median score of 4 strengthens this conclusion. The range of 3 shows that not all of the Likert scale's response options were used, and the standard deviation of 0.832 and variance of 0.692 suggest that there is some variation in the respondents' responses.

Respondents were also asked to rate the importance of being able to control many devices from a single interface in response to question 15. The median score of 3.96 indicates that respondents placed some value on this feature. This conclusion is supported by the median and mode scores, which are both 4. The range of 3 indicates that answers spanned from "Little value" to "Very valuable", and the standard deviation of 0.832 and variance of 0.692 reflect some variation in the replies.

For question 16, respondents were asked to rate how highly they value being able to transfer data and files between devices within a product eco-system. The mean score of 4.56 indicates that respondents regard this feature very highly generally. The results are further supported by the mode and median scores of 5. The range of 3 indicates that not all of the Likert scale's response options were used as nobody indicated that there is no value in that. The standard deviation of 0.655 and variance of 0.428 suggest that there is less diversity in the respondents' responses.

Question 17 asked respondents how much they value having a unified login and authentication across devices within a product eco-system. The mean score of 4.29 shows that on average, respondents though that this feature is quite valuable. The median and mode scores, both equal to 5, further support this observation. The standard deviation of 0.877 and variance of 0.768 show some variation in the responses, and the range of 3 shows that answers to this question spanned from "Little value" to "Very valuable".

For question 18, respondents were asked to what extent they believe having a product eco-system improves convenience in using technology. According to the mean score of 4.13, most respondents seem to agree that a product eco-system improves convenience. The mode score of 4 and the

median score of 4 support this claim. The range of 3 indicates that not all of the Likert scale's response options were utilized, and the standard deviation of 0.777 and variance of 0.604 reflect some variation in the respondents' responses.

Table 10. Key descriptive statistics measures for questions 13 – 18, n=112

	Question 13	Question 14	Question 15	Question 16	Question 17	Question 18
Mean	3.61	4.04	3.96	4.56	4.29	4.13
Median	4.00	4.00	4.00	5.00	5.00	4.00
Mode	3	4	4	5	5	4
Standard deviation	0.924	0.832	0.832	0.655	0.877	0.777
Variance	0.853	0.692	0.692	0.428	0.768	0.604
Range	4	3	3	3	3	3
Minimum	1	2	2	2	2	2
Maximum	5	5	5	5	5	5

Source: compiled by the author based on the survey results

In addition, author also performed correlation analysis to assess the relationship between questions 13 to 18. Before conducting the analysis, author checked linearity, normality, homoscedasticity, as well as outliers for the given variables. Both Kolmogorov-Smirnov and Shapiro-Wilk tests had p-values of 0.000 which is less than typical significance level of 0.05, which suggests that the data for all 6 questions is not normally distributed, thus Pearson correlation coefficient could not be used, as it assumes normality of the variables. Instead, author went with Spearman rank correlation coefficient, as it does not assume normality and based on scatterplot of all 6 variables monotonic relationship and no significant outliers were observed. In general, all correlations visible in Table 11 are statistically significant and positive. This means that there is a meaningful relationship between each pair of questions – higher scores in one question also mean higher scores in the other question. Below are the top 5 strongest correlations all of which show moderately strong correlation:

1. Question 13 (compatibility) and question 14 (seamless integration): the correlation coefficient is 0.599

2. Question 14 (seamless integration) and question 18 (product eco-system convenience): the correlation coefficient is 0.541

3. Question 15 (controlling multiple devices) and question 14 (seamless integration): the correlation coefficient is 0.521

4. Question 17 (unified login) and question 16 (data transfer): the correlation coefficient is 0.538

5. Question 18 (product eco-system convenience) and question 15 (controlling multiple devices): the correlation coefficient is 0.444.

Table 11. Spearman rank correlation coefficient for relationship between questions 13 to 18, n=112

		Question 13	Question 14	Question 15	Question 16	Question 17	Question 18
Question 13	correlation coefficient	1.000	0.599	0.266	0.346	0.340	0.262
	significance (2-tailed)	-	0.000	0.005	0.000	0.000	0.005
Question 14	correlation coefficient	0.599	1.000	0.521	0.339	0.422	0.541
	significance (2-tailed)	0.000	-	0.000	0.000	0.000	0.000
Question 15	correlation coefficient	0.266	0.521	1.000	0.406	0.382	0.444
	significance (2-tailed)	0.005	0.000	-	0.000	0.000	0.000
Question 16	correlation coefficient	0.346	0.339	0.406	1.000	0.538	0.212
	significance (2-tailed)	0.000	0.000	0.000	-	0.000	0.025
Question 17	correlation coefficient	0.340	0.422	0.382	0.538	1.000	0.445
	significance (2-tailed)	0.000	0.000	0.000	0.000	-	0.000
Question 18	correlation coefficient	0.262	0.541	0.444	0.212	0.445	1.000
	significance (2-tailed)	0.005	0.000	0.000	0.025	0.000	-

Source: compiled by the author based on the survey results

Survey questions 19 to 32 set out to understand the differences between the surveyed Samsung and other product users, in order to gain insights that would help to answer research question 2: Why focusing on eco-system could be beneficial for Samsung when launching a new product. For following questions, answers will be compared between different groups, which have been defined based on respondent's feedback to question 4 – what smartphone brand they use. In total 3 groups were identified – Samsung smartphone users, Apple smartphone users, Other smartphone users. Kruskal-Wallis test will be used to determine whether there statistically significant difference between aforementioned groups, as this test is more appropriate for dealing with smaller sample sizes, as Other smartphone users consist of 6 people. Author chose not to exclude this group as this group could potentially behave and act in a unique way to Samsung or Apple users, therefore excluding could limit possibility to generalize research results to broader population.

Question 19 asked respondents how likely they are to purchase a product from a company with a well-established eco-system. As seen in Figure 17, 3% of Samsung and 5% of Apple users do not value eco-system aspect when purchasing devices, while 17% of Samsung, 23% of Apple and 33% of other brand users are neutral. For all 3 groups of respondents majority would most likely purchase a product from well-established eco-systems. Such answers were given by 80% of Samsung users, 73% of Apple users and 67% of other smartphone brand users. For Samsung users mean was 4.09, median 4.00 and standard deviation 0.779 which suggests that data is close to the mean. For Apple users mean is 3.80 and median 4.00 with standard deviation of 0.723. Other brand users mean, and median was 4.00, and standard deviation 0.894. Kruskal-Wallis test p-value was 0.146, therefore based on significance level of 0.05 it can be concluded that there is no statistically significant difference between the 3 groups.
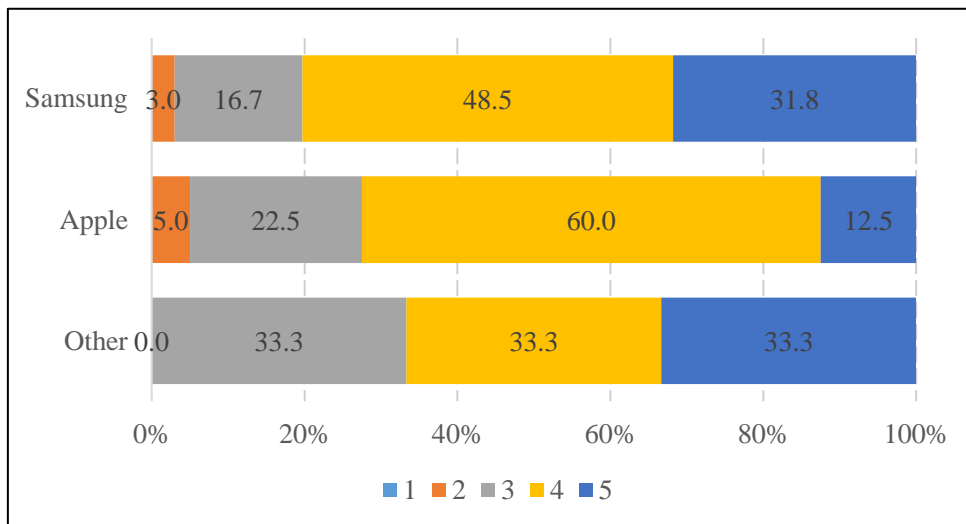

Figure 17. Percentage of likelihood to buy a product from a company with a well-established eco-system (1 = Not likely at all, 5 = Definitely would purchase) by smartphone brand, n=112
Source: Compiled by the author based on the survey results

In question 20 respondents needed to indicate what Samsung devices they own, if any. Kruskal-Wallis test returned p-value of 0.000, which was less than significance level 0.05, thus indicates that there is a statistically significant difference in the number of Samsung devices owned between different smartphone brand users. As shown in Table 12, Samsung users own on average 4.92 Samsung devices more than both Apple users (mean = 0.75) and other brand users (mean = 1.33). Additionally, compared to customers of Apple and other brands, Samsung users have far greater variation in the number of devices they own. Users of Samsung phones have a standard deviation

of 2.753 and a variance of 7.579, those of Apple phones are 0.776 and a variation of 0.603, while those of users of other brands are 0.516 and a variance of 0.267. This suggests that Samsung consumers have a greater diversity of device ownership patterns, which may represent their various demands and preferences. When looking into frequency distribution, we can see that 45% of Apple users do not have any Samsung devices and 35% have one device. For other brands 67% own one device and 33% one device. Among all the respondents 84% own at least one Samsung device.

Table 12. Descriptive statistics for question 20 based on smartphone brand owned, n=112

		Samsung	Apple	Other
N		66	40	6
Mean		4.92	0.75	1.33
Median		5.00	1.00	1.00
Mode		2	0	1
Standard deviation		2.753	0.776	0.516
Variance		7.579	0.603	0.267
Frequency distribution%	0	-	45%	-
	1	11%	35%	67%
	2	15%	20%	33%
	3	9%	-	-
	4	14%	-	-
	5	12%	-	-
	6	9%	-	-
	7	6%	-	-
	8	12%	-	-
	9	6%	-	-
	10	6%	-	-

Source: compiled by the author based on the survey results

For question 21, Respondents were asked if they had ever bought a Samsung product just because it was a part of their eco-system. There is a statistically significant difference in the replies among users of various smartphone brands, according to the Kruskal-Wallis test, which gave a p-value of 0.000, which is less than the significance level of 0.05. Figure 18 shows that Samsung customers are more likely to have bought a Samsung product as a result of its eco-system, with 47% of them answering "Yes," compared to only 5% of Apple customers and 0% of customers of other brands.
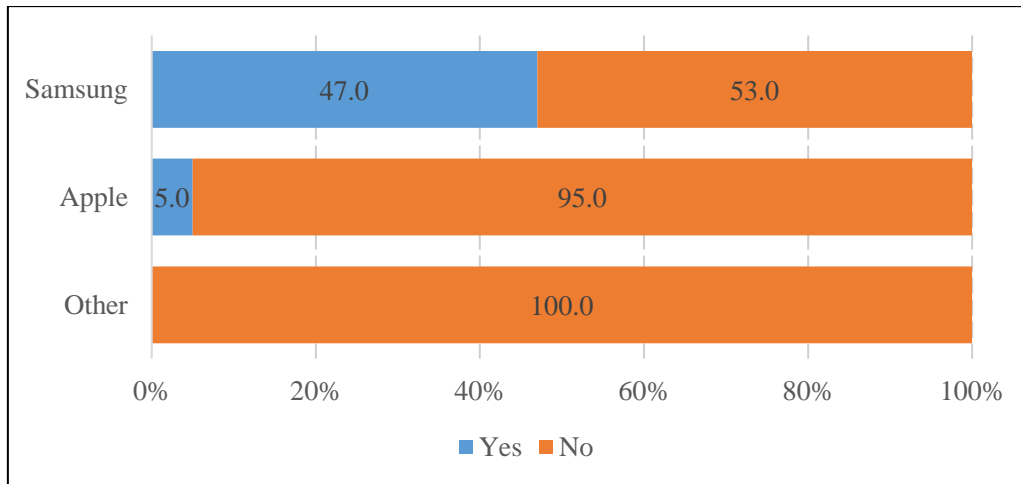
Figure 18. Percentage of respondents who have purchased Samsung product because it comes from their eco-system by smartphone brand, n=112
Source: Compiled by the author based on the survey results

Question 22 was an open-ended question and optional to answer. Respondents were asked if they have ever switched to a Samsung product from a competitor brand and if yes, then why. Out of those who had switched to Samsung and were using it as their phone at the time of the survey, 19 respondents provided clear answer why they had changed their devices. Most popular reason for switching to Samsung device was superior specifications. Tied for second place, were the fact that Samsung is work device and price. Also, one user mentioned compatibility issue transferring data between iPhone and laptop (current brand = Acer).

In general, respondents believe that Samsung eco-system is competitive vs. other brands. Out of 112 respondents to question 23, 92 agreed with this statement, while 20 thought that it is not competitive. There was no statistically significant difference among 3 groups of respondents based on their smartphone brand, as Kruskal-Wallis test returned p-value of 0.491.

For question 25, respondents if they would buy Samsung product if it was a part of a larger eco-system. Based on Kruskal-Willis test there was statistically significant difference between 3 groups as p-value was 0.000, below 0.05 significance level. The results, as displayed in Figure 19, show that Samsung users are more likely to purchase Samsung product, if it was part of a larger eco-system, with 55 (83%) giving a positive response. In comparison only 35% of Apple users and 67% other brand users responded positively to the same question.
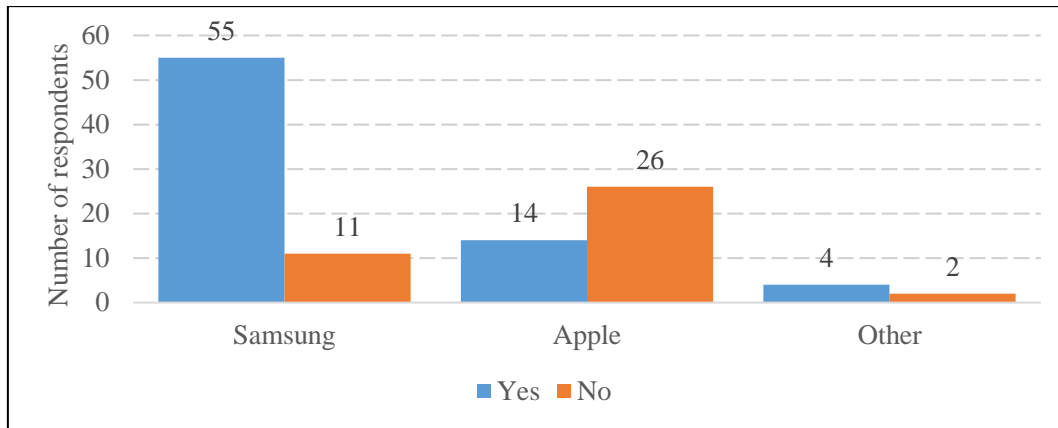
Figure 19. Influence of Samsung's eco-system on purchase likelihood, n=112
Source: Compiled by the author based on the survey results

Respondents were asked on their level of agreement with the claim that Samsung's eco-system is well-integrated and simple to use in question 24. A statistically significant difference between the three respondent groups was identified using the Kruskal-Wallis test (p-value=0.000). According to Table 13, users of Samsung brand were more likely to agree with the statement (mean=3.78, median=4.00) than users of Apple and other brands (mean=2.95, median=3.00). The standard deviation for Samsung users was 0.775, which is slightly higher than for Apple users (0.749) and lower than for other brand users (0.894).

In question 26, respondents were asked if they would consider buying a Samsung laptop as their next purchase if Samsung released one. The Kruskal-Wallis test revealed a statistically significant difference (p-value=0.000) between the three groups. Samsung customers (mean=3.62, median=4.00) were more likely than Apple (mean=2.35, median=2.00) and other brand users (mean=2.67, median=2.00) to consider purchasing a Samsung laptop. The standard deviation for Samsung users was 1.004, which is lower than that for Apple users (1.075) and other brand users (1.862), indicating more consistent opinions among Samsung users.

Question 27 questioned respondents how much they believe Samsung's product eco-system improves task productivity and efficiency. The Kruskal-Wallis test revealed a statistically significant difference between the groups (p-value=0.000). Samsung smartphone users stated that the eco-system improved productivity and efficiency more than Apple (mean=2.95, median=3.00) and other brand users (mean=3.33, median=3.00). The standard deviation for Samsung users was 0.575, which was lower than the standard deviation for Apple users (1.131) and other brand users (0.516), indicating that Samsung customers had more consistent responses.

Respondents were asked how much they appreciate the ability to effortlessly connect and use Samsung devices together in question 28. The Kruskal-Wallis test found a statistically significant difference (p-value=0.000) between the three groups. According to respondents, Samsung users valued seamless connectivity higher than Apple (mean=3.28, median=4.00) and other brand users (mean=3.67, median=4.00). The standard deviation for Samsung users was 0.832, which was lower than the standard deviation for Apple users (1.132) and other brand users (1.366), showing that Samsung customers have more consistent attitudes.

In Question 29, respondents were asked how vital it is for them to have a variety of Samsung goods that operate well together. The Kruskal-Wallis test found a significant difference (p-value=0.000) between the three groups. Samsung consumers valued having a variety of Samsung goods that function well together more than Apple (mean=2.80, median=3.00) and other brand users (mean=2.00, median=1.00). The standard deviation for Samsung users was 0.983, showing that their replies varied less than those of Apple users (1.137) and other brand users (1.549).

Respondents were asked in Question 30 how much they regard Samsung's ability to offer a diverse choice of items inside their eco-system. The Kruskal-Wallis test revealed a statistically significant difference between the three groups (p-value=0.000). Samsung consumers place a higher importance on Samsung's capacity to provide a diverse selection of items within their eco-system (mean=4.08, median=4.00) than Apple (mean=2.78, median=3.00) and other brand users (mean=3.00, median=2.00). The standard deviation for Samsung users was 0.917, which was lower than the standard deviation for Apple users (0.947) and other brand users (1.549), indicating that Samsung customers have more consistent opinions on this topic.

Question 31 asked respondents whether they are likely to continue purchasing Samsung products in the future, taking into account their eco-system. The Kruskal-Wallis test revealed a statistically significant difference between the groups (p-value=0.000). Samsung users were more likely than Apple (mean=2.35, median=2.50) and other brand users (mean=3.00, median=2.00) to continue purchasing Samsung items (mean=4.09, median=4.00). The standard deviation for Samsung users was 0.673, which was significantly lower than the standard deviation for Apple users (0.864) and other brand users (1.549), indicating more consistent responses among Samsung users.

Respondents were asked in question 32 how essential the brand of their current devices is when acquiring a new one. The Kruskal-Wallis test found no statistically significant difference between the three groups (p=0.260). When acquiring a new device, the importance of the current device's brand was very equal for Samsung (mean =4.02, median=4.00), Apple (mean=3.78, median=4.00), and other brand users (mean=3.00, median=3.00). However, the standard deviation for Samsung users was 0.936, which was lower than the standard deviation for Apple users (1.121) and other brand users (1.789), indicating a reduced range in responses among Samsung users. This suggests that brand loyalty and the value of current device brand are not significantly different across users of other smartphone brands, although Samsung users exhibit more consistent brand loyalty.

Table 13. Descriptive statistics for questions 24 and 26 to 32 based on smartphone brand owned, n=112

	Samsung			Apple			Other			Kruskal-Wallis test p-value
	mean	median	standard deviation	mean	median	standard deviation	mean	median	standard deviation	
Q24	3.79	4.00	0.775	2.95	3.00	0.749	3.00	3.00	0.894	0.000
Q26	3.63	4.00	1.004	2.35	2.00	1.075	2.67	2.00	1.862	0.000
Q27	3.91	4.00	0.575	2.95	3.00	1.131	3.33	3.00	0.516	0.000
Q28	4.21	4.00	0.832	3.28	4.00	1.132	3.67	4.00	1.366	0.000
Q29	4.05	4.00	0.983	2.80	3.00	1.187	2.00	1.00	1.549	0.000
Q30	4.08	4.00	0.917	2.78	3.00	0.947	3.00	2.00	1.549	0.000
Q31	4.09	4.00	0.673	2.35	2.50	0.864	3.00	2.00	1.549	0.000
Q32	4.02	4.00	0.936	3.78	4.00	1.121	3.00	1.00	1.789	0.260

Source: compiled by the author based on the survey results

Author also performed correlation analysis The author conducted a correlation analysis to assess the relationships between questions 24 and 26-32, ensuring the necessary assumptions were met beforehand. Spearman rank correlation coefficient was used, as it does not assume normality and the scatterplot revealed monotonic relationships with no significant outliers. The analysis, shown in Table 14, demonstrates statistically significant positive correlations among all question pairs. Higher scores in one question correspond with higher scores in the other. The five strongest correlations, exhibiting moderately strong relationships, are as follows:

1. Question 24 (eco-system integration) and question 28 (seamless connectivity): correlation coefficient of 0.767

2. Question 27 (enhancement of productivity) and question 31 (likelihood of future Samsung purchases): correlation coefficient of 0.712

3. Question 26 (likelihood of considering Samsung laptop) and question 31 (likelihood of future Samsung purchases): correlation coefficient of 0.716

4. Question 28 (seamless connectivity) and question 30 (value of wide range of products): correlation coefficient of 0.703

Question 29 (importance of well-integrated products) and question 30 (value of wide range of products): correlation coefficient of 0.701.

Table 14. Spearman rank correlation coefficient for relationship between questions 24 and 26 to 32, n=112

		Q24	Q26	Q27	Q28	Q29	Q30	Q31	Q32
Question 24	correlation coefficient	1.000	0.531	0.662	0.767	0.571	0.617	0.695	0.325
	significance (2-tailed)	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Question 26	correlation coefficient	0.531	1.000	0.674	0.575	0.685	0.613	0.716	0.209
	significance (2-tailed)	0.000	-	0.000	0.000	0.000	0.000	0.000	0.027
Question 27	correlation coefficient	0.662	0.674	1.000	0.672	0.570	0.608	0.712	0.200
	significance (2-tailed)	0.000	0.000	-	0.000	0.000	0.000	0.000	0.034
Question 28	correlation coefficient	0.767	0.575	0.672	1.000	0.587	0.703	0.662	0.413
	significance (2-tailed)	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000
Question 29	correlation coefficient	0.571	0.685	0.570	0.587	1.000	0.701	0.697	0.283
	significance (2-tailed)	0.000	0.000	0.000	0.000	-	0.000	0.000	0.002
Question 30	correlation coefficient	0.617	0.613	0.608	0.703	0.701	1.000	0.789	0.491
	significance (2-tailed)	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000
Question 31	correlation coefficient	0.695	0.716	0.712	0.662	0.697	0.789	1.000	0.358
	significance (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000
Question 32	correlation coefficient	0.325	0.209	0.200	0.413	0.283	0.491	0.358	1.000
	significance (2-tailed)	0.000	0.027	0.034	0.000	0.002	0.000	0.000	-

Source: compiled by the author based on the survey results

In summary, the key findings of this sub-chapter show that Samsung's eco-system gives a competitive advantage by being well-integrated, user-friendly, and successful in improving

productivity and user experience. When compared to other companies, Samsung users display more brand loyalty, a higher likelihood of future purchases, and a greater emphasis on seamless connectivity and product interconnectivity. Differences in the number of Samsung devices owned and the likelihood of purchasing from a well-established eco-system among Samsung, Apple, and other brand users highlight Samsung's eco-system strength even further.

These takeaways set the tone for the next sub-chapter, in which the findings will be interpreted and analysed in greater depth, shining light on their significance for Samsung's strategies and potential areas for development to strengthen its position and linking the findings to the theory.

3.3. Conclusions and recommendations

After finalizing the research on the gains of having a product eco-system and Samsung advantages and competitiveness in the Baltic region, this sub-chapter aims to draw conclusions to research questions and give recommendations for a successful launch of the laptop category as a part of Samsung eco-system in the Baltics.

First research question set to find out how expert users perceive the benefit of a product based eco-system in the tech industry, so following paragraphs draw conclusions and recommendations related to this.

Research shows, that majority of the surveyed people (96%, as seen in Figure 12) believe that using multiple products from the same brand that work together can improve their user experience, even if they do not have such prior experience. Such aspects as easy data transfer (question 16, mean=4.56), unified login and authentication (question 17, mean 4.29), product eco-system convenience (question 18, mean 4.13), seamless integration (question 14, mean=4.04), controlling multiple devices (question 15, mean 3.96) and compatibility (question 13 = 3.61) were all highly valued among survey respondents. All of these aspects can be considered as gains from having a product eco-system. From laptop launch perspective author suggests using design thinking approve to further improve user experience in a customer-centric way and tap full into eco-system potential (Nakata & Hwang, 2020). Correlation analysis between answers to questions 13-18 (Table 11) indicated that there is statistically significant positive correlation between all of them,

which means increasing customer satisfaction with one can help to increase other, so from marketing communication perspective it can be proposed to focus on selected few with focus on digital channels to maximize return on investment (Rompis *et al.*, 2021).

Another insight from research shows that out of those surveyed customers who have used product eco-system, more than half (57%) are willing to pay more for a product, if it was a part of a larger eco-system. Based on the theory which author explored in the first chapter of this thesis, marketing plan should be developed with a specific target audience in mind (Cooper, 2019). As this customer base is ready to potentially spend more, pricing can be higher. Instead of price offer, author suggests leveraging based on potential customer preferences, as in tech sector this tool works great (Bustinza *et al.*, 2019). Also, to relieve the financial pressure, rental options would be recommended to add, as recently sharing economy has increased rapidly (Liu *et al.*, 2019). Based on previously done research, which was covered in chapter 1 of this thesis, to further emphasis eco-system aspect improving packaging can be helpful and positively influence launch performance (D'Attoma & Ieva, 2020). Same goes for picking right distribution channels (Hoskins, 2020). The author suggests developing a way to show eco-system capabilities on the box of the laptop (e.g., potential device pairing, use scenarios, etc.), as well as showcasing the capabilities also at the point of sales, both retail and online. It can help to further sell the eco-system message and increase the likelihood of people spending more on the product.

Another set of the questions, in the survey conducted by the author looked into prior experience and expectations of the respondents for connecting different devices within eco-system. Based on answers to question 9, 69% of the surveyed people who have used product eco-system before having bought a product based on its compatibility with other products in an eco-system. Answers to question 10, show that 77% of the survey respondents have had difficulties to connect products from different manufacturers. Based on this, author concludes that currently there are gaps in how different products are used together, and this is an area where communication at all stages of customer decision journey can be beneficial. Especially, considering the fact that customer decision journey is not linear, and they can move across different stages back and forth multiple times. (Grewal & Roggeveen, 2020).

Several questions of the survey inquired about respondents' attitude towards number of devices in the eco-system. Based on answers to question 11, 34% of the surveyed people who have used product eco-system and before and 14% of the people who have not used product eco-system

before felt limited by the number of devices in product eco-system. Author concludes that those who have used product eco-system wants to connect even more devices, while those who have not used it, does not entirely understand the benefit of having multiple devices connected, therefore do not have the feeling that they would miss something.

Second research question aimed to understand why focusing on eco-system could be beneficial for Samsung when launching new eco-system, so following conclusions and recommendations focused towards understanding differences between surveyed Samsung, Apple, other smartphone brand users and potential advantages for Samsung.

Responses to question 19, show that 80% of surveyed Samsung smartphone users, 73% of respondents who use Apple and 67% of surveyed other smartphone users would purchase a product from well-established eco-system. 83% of surveyed Samsung smartphone users and also 35% of respondents who use Apple, and 67% of surveyed other brand users claimed that they would be more likely to purchase a Samsung product, if it was a part of a larger eco-system, as shown in Figure 19. Overall, the results of question 25 highlight the potential of Samsung's eco-system in the market. By enhancing and expanding their eco-system with laptop category and utilizing full range of products – phones, tablets, watches, earphones, washing machines, refrigerators, monitors, etc. - Samsung could not only increase customer loyalty among their existing user base but also attract new users who value a seamless and well-integrated product experience. Apple currently has the first mover advantage as they were first who were able to connect their tech eco-system devices in a seamless way, but it is not a permanent state (Cusumano *et al.*, 2020). Author suggests for Samsung to capitalize more on the full range and full eco-system of products by being first to the market with such proposition and gaining lasting advantage (Hesmondhalgh & Meier, 2018). Breadth of the portfolio can be then considered as one of Samsung's competitive edges vs. other market players.

To further support the conclusion of previous paragraph, in question 20 of the survey users needed to mark what Samsung products they own. Based on answers to this question, surveyed Samsung smartphone users own on average 4.92, surveyed Apple smartphone users 0.75, surveyed other brand smartphone users 1.33 different Samsung devices. 84% of the respondents own at least one Samsung device. Surveyed users of Apple and other brands using at least one Samsung device might be considered as a positive indication for Samsung as it shows that their products have appeal outside of their main customer base. This shows that specific characteristics or properties

of Samsung devices are interesting customers from various eco-systems. Additionally, it shows that Samsung has the ability to connect with a larger audience, and those customers could be more likely to look into other Samsung goods in the future. Samsung has the chance to convert customers by skilfully presenting the advantages and distinctive selling factors of their product eco-system, which would help in the purchase stage of the customer decision journey to emphasis product's long-term value (Nolle & Wisselink, 2019).

For question 21, survey respondents needed to say, if they have ever bought Samsung device just because it was part of their eco-system. 47% of surveyed Samsung owners said "Yes", almost half. This implies that existing customer base is a low hanging fruit, what Samsung need to use, if they launch laptop category.

Based on answers to question 22, the most popular given reason why surveyed people came to Samsung from a competitor brand was superior specifications of the device. Here the most important part is to properly showcase everything in manufacturer's site (Akalamkam & Mitra, 2018). Author's suggestion for Samsung, if they launch laptop category, would be to carefully examine what information is provided on the website and also emphasis the benefits of using laptop together with other eco-system devices. This would be help both at familiarity and consideration phases of customer decision journey (Santana *et al.*, 2020). Also, at familiarity stage social media content is recommended to be more informational than entertaining and have an activating element – it both maximizes the customer engagement, but also might attract those people who are other brand users (Demmers *et al.*, 2020).

Survey results show that the respondent base consider Samsung eco-system to be well-integrated and user-friendly in nature, as Samsung smartphone users gave mean score of 3.78 (median=4.00) when asked to evaluate if Samsung eco-system is well-integrated and simple to use. With a mean score of 3.62 (median = 4.00), existing users' strong interest in Samsung laptops implies market success in that area. The enhanced productivity and efficiency of the eco-system appeal to professionals and productivity-focused users, as evidenced by surveyed Samsung users' mean score of 3.33 (median = 3.00) on how much the eco-system boosts task productivity and efficiency. A variety of well-integrated products and seamless connectivity contribute to an improved user experience and inspire brand loyalty. Surveyed Samsung users valued smooth connectivity more, with a mean score of 3.67 (median = 4.00) and having a selection of Samsung products that work well together more, with a mean score of 4.08 (median = 4.00). As evidenced by the positive

association between seamless connectivity and the value of a wide range of products (correlation coefficient of 0.703), the vast assortment of products inside Samsung's eco-system responds to different customer needs and preferences. With a mean score of 4.09 (median=4.00) on the likelihood of continuing to purchase Samsung products, considering their eco-system, Samsung enjoys strong future purchase intentions among its users in the respondent base. Furthermore, based on survey data, when compared to Apple and other brands, Samsung users display consistent brand loyalty, as seen by a reduced standard deviation in replies evaluating the relevance of the existing device's brand while purchasing a new one (standard deviation = 0.936). Samsung can develop its eco-system, attract more customers, and build a competitive advantage in the tech industry by focusing on eco-system integration, seamless connectivity, productivity increase, and a wide, well-integrated product range. Considering the positive feedback of existing Samsung users, company could plan activity to generate product reviews in online for all eco-system products, but significant number should be gathered, as good reviews are thought to be reliable only if there are many of them (Gavilan *et al.*, 2018).

Another question in the survey inquired, if people would consider Samsung laptops for their next purchase, if Samsung would launch one. Based on 5-point Likert scale, surveyed Samsung users mean was 3.62 as they were more likely to consider the purchase than respondents who use Apple (mean=2.35) and other brand smartphones(mean=2.67). Based on this, for initial stage author would recommend for Samsung to focus on its existing customer base.

The research results show that Samsung's eco-system in the Baltic region has significant potential, especially with the addition of laptops to the product line-up. The vast majority of respondents understand the benefits of a tightly knit eco-system and are prepared to pay more for products that are a part of one. Furthermore, the findings imply that most consumers prefer to buy products from well-established eco-systems, with a sizeable portion of users of other brands expressing interest in Samsung devices. Samsung can draw new customers and increase customer loyalty by utilizing the whole spectrum of products in their eco-system and showing their competitive edge over other players in the market. The business should also take advantage of the popularity of its products to other brand users and emphasize the long-term value of their eco-system in the purchase stage of the customer decision journey. Overall, a successful launch of the laptop category in the Baltic region can contribute to the growth of Samsung's eco-system and enhance its competitive advantage in the tech industry.

CONCLUSION

The aim on this master's thesis was to create suggestions for laptop category launch plan for Samsung in Baltic region as part of their existing product eco-system, as this would help to complete their eco-system and be more competitive in the market.

The thesis began with an exploration of product launch theory, focusing on the tech industry and customer decision journey. It then provided an overview of Samsung Electronics Baltics and the tech product eco-system market in Estonia, Latvia, and Lithuania.

Quantitative research was conducted with 112 respondents, including Samsung Electronics Baltics employees, partners, and store personnel. Data analysis was performed using MS Excel and SPSS. The research investigated the benefits of a product-based eco-system in the tech industry and the potential advantages for Samsung in launching a new product in this context.

First research question set to understand how expert users perceive the benefits of a product based eco-system in the tech industry. Based on research results, it can be concluded that having a variety of items from the same brand enhances user experience. The majority of survey respondents (68.8%) reported having experience with a product eco-system. Additionally, 69% of those with eco-system experience said that they had chosen a product based on how well it worked with other eco-system products.

A significant association was found between eco-system users who felt constrained by the number of devices in the eco-system or were willing to pay more for a product within a larger eco-system, even though there was no correlation between eco-system usage and difficulties connecting products from different manufacturers. Respondents highlighted the significance of other device compatibility, smooth integration, managing many devices, and data.

Based on insights drawn from the research question 1, author provides following recommendations for laptop category launch for Samsung in the Baltic region:

1. Use design thinking to improved user experience in a customer-centric way and tap into the full potential of the eco-system.

2. Focus on marketing communication that highlights select eco-system aspects and target digital channels to maximize return on investment.

3. Set higher pricing, leveraging customer preferences, and consider possibility for rental options to benefit from the sharing economy trend.

4. Improve packaging and distribution channels by highlighting eco-system capabilities both on laptop packaging and point of sales, both online and offline.

5. Address the gaps in connecting different devices within the eco-system and communicate the benefits across all stages of the customer decision journey.

Second research question looks into reasons why focusing on eco-system could be beneficial for Samsung when launching a new product. In order to compare the opinions of surveyed Samsung, Apple, and other smartphone customers and to better understand the advantages of emphasizing eco-systems while launching new products, the Kruskal-Wallis test was used. There was not a significant variance in the likelihood of purchasing from an established eco-system among the majority of respondents across all groups. However, due to the Samsung eco-system, there were noticeable differences in the number of Samsung devices owned and the likelihood of buying a Samsung product, with Samsung users showing higher numbers in both cases.

Overall, respondents thought Samsung's eco-system was competitive, well-integrated, friendly to users, and successful at increasing productivity and satisfaction. Compared to users of other brands, Samsung customers showed better brand loyalty and a higher likelihood of making additional purchases, placing a higher importance on smooth transactions.

Based on conclusions drawn from the research question 2, author provides following recommendations for laptop category launch for Samsung in the Baltic region:

1. Capitalize on the full range of Samsung products within the eco-system to increase customer loyalty and attract new users.

2. Convert customers from other brands by emphasizing the advantages of Samsung's eco-system and its long-term value.

3. Carefully examine the information provide on Samsung official website to provide all info of specifications and emphasize eco-system benefits.

4. Use informational social media content at initial stage with an activating element to maximize customer engagement and attract users of other brands.

5. Generate a significant number of product reviews online to build credibility and reliability among potential customers.

6. Focus initially on the existing Samsung customer base when launching the laptop category, as there is already high consideration.

Due to non-probability sampling methods used results should be treated with caution and cannot be generalized to all population of technology users in Baltic countries. Due to this future research could consider having a larger sample size or using stratified sampling principles to get a more representable and accurate sample with enhanced statistical power, as well as adding qualitative analysis to capture individual experiences and other complexities related to the topic.

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APPENDICES

Appendix 1. Research questionnaire

My Name is Martins Olsteins, and I am currently studying in the Taltech Entrepreneurial Management MBA program. I am doing a survey for my Master Thesis on the topic of "Product launch as a part of an existing product eco-system."

It would be great if you could spare 5-10 minutes of your time to answer my questions. All data collected will be anonymous and used solely for my research.

If you have any questions, feel free to reach out to me at martins.olsteins@gmail.com. Thank you!

1. Where are you from? (Multiple choice: Estonia, Latvia, Lithuania, Other)

2. How old are you? (Multiple choice: 0-17, 18-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-60, 61-70, 70+)

3. What is your gender? (Multiple choice: Male, Female)

4. What brand of smartphone do you currently use? (Multiple choice: Samsung, Apple, Xiaomi, Huawei, Other)

5. Do you have a personal computer? (Multiple choice: Yes, No)

6. If you have a personal computer, what brand device do you use? (Multiple choice: Apple, Huawei, Dell, Lenovo, HP, Acer, Asus, Other)

7. Have you ever used product eco-system before (more than one product from the same brand which can be connected together)? (Multiple choice: Yes, No)

8. Do you think having a range of products from the same brand that work together well can improve overall user experience? (Multiple choice: Yes, No)

9. Have you ever purchased a product based on its compatibility with other products in an eco-system? (Multiple choice: Yes, No)

10. Have you ever encountered difficulties when trying to connect products from different manufacturers? (Multiple choice: Yes, No)

11. Have you ever felt limited by the number of devices in a product eco-system? (Multiple choice: Yes, No)

12. Would you be willing to pay more for a product if it was a part of larger eco-system? (Multiple choice: Yes, No)

13. How important is compatibility with other devices in your decision to purchase a laptop? (5-point Likert scale: 1=Not important at all, 5=Very important)

14. How important is it to you that your technology products work seamlessly together? (5-point Likert scale: 1=Not important at all, 5=Very important)

15. How much do you value the ability to control multiple devices from one interface? (5-point Likert scale: 1=No value, 5=Very valuable)

16. How much do you value the ability to easily transfer data and files between devices within a product eco-system? (5-point Likert scale: 1=No value, 5=Very valuable)

17. How much do you value having a unified login and authentication across devices within a product eco-system? (5-point Likert scale: 1=No value, 5=Very valuable)

18. To what extent do you believe having a product eco-system improves convenience in using technology? (5-point Likert scale: 1=Do not believe at all, 5=Definitely improves)

19. How likely are you to purchase a product from a company with a well-established eco-system? (5-point Likert scale: 1=Not likely at all, 5=Definitely would purchase)

20. Please mark what Samsung devices you currently own. (Multiple choice, more than one option can be selected: Phone, Tablet, Smartwatch, Wireless earphones, Speaker, TV, Fridge, Washing machine, Vacuum cleaner, Monitor, None)

21. Have you ever purchased Samsung product solely because it was part of their eco-system? (Multiple choice: Yes, No)

22. Have you ever switched to a Samsung product from a competitor brand? If yes, why? (Open-ended question)

23. Do you believe that Samsung's eco-system is competitive with other brands? (Multiple choice: Yes, No)

24. To what extent do you agree with the statement that Samsung's eco-system is well-integrated and easy to use? (5-point Likert scale: 1=Do not agree at all, 5=Absolutely agree)

25. Would you be more likely to purchase a Samsung product if it were a part of a larger eco-system? (Multiple choice: Yes, No)

26. How likely are you to consider Samsung laptop for your next purchase if they launch one? (5-point Likert scale: 1=Not likely at all, 5=Definitely would purchase)

27. How much do you believe Samsung's product eco-system enhances productivity and efficiency in completing tasks? (5-point Likert scale: 1=Do not believe at all, 5=Definitely enhances)

28. How much do you value the ability to seamlessly connect and use Samsung products together? (5-point Likert scale: 1=No value, 5=Very valuable)

29. How important is it for you to have a range of Samsung products that work together well? (5-point Likert scale: 1=Not important at all, 5=Very important)

30. How much do you value Samsung's ability to offer wide range of products within their eco-system? (5-point Likert scale: 1=No value, 5=Very valuable)

31. How likely are you to continue purchasing Samsung products in the future, considering their eco-system? (5-point Likert scale: 1=Not likely at all, 5=Definitely will purchase)

32. How important to you is brand of your current devices, when purchasing new ones? (5-point Likert scale: 1=Not important at all, 5=Very important)

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