TALLINN UNIVERSITY OF TECHNOLOGY

School of Business and Governance

Department of Business Administration

Aditi Sureka

ATTRIBUTES THAT AFFECT THE CHOICE OF RETAIL STORES FOR FOREIGN STUDENTS IN ESTONIA

Master's thesis

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Supervisor: Iivi Riivits-Arkonsuo, PhD

Co- supervisor: Jelena Hartšenko, MSc

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I hereby declare that I have compiled the paper independently

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has been properly referenced and the same paper

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Aditi Sureka ……………………………

(Signature, date)

Student code: 201658TVTM

Student e-mail address: aditisureka91@gmail.com

Supervisor: Iivi Riivits-Arkonsuo, PhD:

The paper conforms to requirements in force

……………………………………………

(Signature, date)

Co-supervisor: Jelena Hartšenko, MSc:

The paper conforms to requirements in force

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(Signature, date)

Chairman of the Defence Committee:

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ABSTRACT

This study aims to explore attributes that affect the choice of retail stores for foreign students, especially the supermarket stores in Estonia and examines the influence of the store loyalty program on students' shopping behaviour.

The research is based on the Stimulus-Response-Organism model and adapted a quantitative research method based on positivism philosophy. An online survey was conducted among 104 respondents. Principal factor analysis was used to identify the store attributes and extract the high factor loadings. Binary regression analysis was performed to find out the significance of the factors on store choice. The results suggest that the most important criteria that foreign students consider when choosing a retail store are store location followed by store price and the least important criteria are the store loyalty program. Also, the results indicated that store service quality does not play a significant role in influencing their store choices. Additionally, the findings of the research also uncovered that Rimi was the most preferred supermarket in Estonia by foreign students.

The adjusted research model was tested for multicollinearity in regression analysis by variance inflation factor and tolerance. The collinearity statistics depicted no issues of multicollinearity among independent variables and hence the model was proven satisfactory.

The final chapter of the research provides a conclusion including recommendations to retail and store managers and directions for future research.

Keywords: Retail store chain, Foreign students, Store loyalty program, Supermarket stores in Estonia, Shopping behaviour, Store choice, Store location, Store service quality.

INTRODUCTION

Every company faces challenges in the path of its breakthrough growth. The foundation of most companies is based on three core businesses namely product innovation, customer relationship management and infrastructure management. To create, capture and deliver value, companies these days are keenly formulating a business model canvas to structure their business for future expansion and growth. To build a successful business model, businesses need to understand the underpinnings of their niche market or customer segment. The customer segment is the heart of a business model (Osterwalder & Pigneur, 2010). A deeper understanding of the potential target market is one of the success factors for businesses. This study emphasises the retail business which is a type of customer relationship management business. The research targets on providing an insight into what matters to the target market (in this case foreign students) in the context of retail store selection.

In today's era, retail stores are playing a major role in uncovering brands to a larger audience and have become critically important to the supply chain, however, retailers are facing challenges in finding the right balance to provide customers with a rich shopping experience. On one hand, they fear the 'paradox of choice' while on the other hand, they try their best to offer customers a wide range of choices to become their first and only choice. In the race to provide a positive and long-lasting store experience, retailers are looking into numerous ways to understand what motivates their shoppers. They are trying to understand the buyer's decision-making process to have a great advantage over their competitors. Due to the availability of alternatives, buyers have become more sensitive in exercising their options. Taking note of the same, it is important to study how consumers choose retail stores and what store attributes influence their choice.

The student market is typically the more desired target market for retail businesses that are looking into creating long-term customers. Foreign students serve as an attractive market due to their high spending power. So, this research aims to examine the attributes affecting foreign students' retail store choices. As many prospective students are finding out their way of living

abroad, it is vital to have a multi-national understanding of their choices, preferences, and expectations while they are away from home. Differences exist in the determinants of international student mobility between developed and developing countries. As per Perkins & Neumayer (2014) distance, common language, colonial linkages, and pre-existing migrant stocks exert a substantively large impact on spatial patterns of international student mobilities. In addition to the challenges of adapting to a new culture, habit, language, and community there are also challenges like getting accustomed to the food habits and lifestyle. At times, shopping can be a pain for students who have just moved abroad as they might struggle to find all necessities at the right time and place. However, research has proven that retail therapy can make people happier and fight their lingering sadness (Rick *et al* 2014). Having stores where students can easily find maximum things at a cheaper price can help them save time and money.

Selection of a store involves a comparison process whereby consumers try to evaluate various store attributes leading them either to select or reject a store (Cornelius *et al* 2010). There have been many pieces of research on students in the past including the research by Makgopa (2018) where the author evaluated the importance of store attributes on university students. However, the focus of this research was limited to university students and clothing retail stores and not all types of retail store chains in general. Hence, to fill the gap in the literature, this research focuses on finding out the attributes affecting the choice of retail store chains in the context of foreign students in Estonia. Additionally, the research will also examine the impact of store loyalty programs on international students' shopping behaviour. The research is attempted to answer two research questions:

- What are the store attributes influencing retail store choice of foreign students in Estonia?
- Does a store loyalty program influence foreign students' shopping behaviour?

The objectives of this research will be to evaluate the store attributes namely store location, store prices, store environment, store assortments, and store service quality affecting the store choices of foreign students in Estonia and to analyse the impact of store loyalty programs on foreign students' shopping behaviour.

The research adopts the quantitative research method where data is collected via an online survey. The sample is derived from international students in Estonia. The study is limited to one

format of store i.e., supermarkets.

The thesis is divided into four sections as follows: The first section provides a theoretical overview, which includes literature reviews followed by the next section which covers the conceptual framework and hypothesis development. The third section discusses the research methodology, results, findings, and discussion. The last section provides the conclusion including some suggestions for future research.

According to the Market orientation concept, value is created by understanding one's expectations. Therefore, understanding the core value and the way one chooses to interact with their environment is crucial for businesses. Thus, this research aims to help both business professionals in creating a competitive business model as well as marketing managers in formulating effective marketing strategies and designing interventions to engage their customers. Further, the study also suggests a few recommendations to retail and store managers facing dilemmas based on the research results and findings. The thesis also contributes to the growing literature on understanding foreign students' behaviours in the retail context.

1. THEORETICAL BACKGROUND

This chapter defines the theoretical basis of the study by presenting literature from previous studies on the subject. Foreign students are influenced by many store attributes when deciding whether they should buy from a particular store or not. To evaluate the same, this section discusses the literature on store choice followed by the various attributes driving their store selection choice and thereafter examines the influence of store loyalty programs on international students' shopping behaviour.

1.1. Store choice

Store-choice is recognised as a cognitive process that is more like an information processing behaviour (Sinha & Banerjee, 2004). The emergence of a variety of retail formats, offering a diverse mix of offerings to the consumers, adds further confusion to the domain of store choice (Tripathi & Sinha, 2008). Fotheringham (1988) defined store choice as a process where information on various alternatives is pre-evaluated by the consumers even before they select one of them. In order words, when making a store choice all the possible alternatives are evaluated in terms of utility or benefit by an individual and the alternative which yields maximum utility is selected. Another author described store choice as a dynamic decision that can be conceptualised as a problem of deciding when and where to shop (Leszczyc *et al* 2000). Consumers' perception of store choice criteria is derived from the combination of factors like quality of produce and staff, the occurrence of low prices and the frequency of special promotions (Hutcheson & Moutinho, 1998).

Researchers have investigated and identified several factors influencing store decisions (Goodman & Remaud, 2015). Arnold, Oum, & Tigert (1983) stated that store characteristics like store size, store price, location, service level, quality and assortments, and merchandising display techniques were the attributes determining retail patronage. The results of their study showcased

locational conveniences and low prices as the top-ranked determinant variables. While findings of the study by (Dickson & Sawyer, 1990) suggested otherwise. The results suggested that supermarket shoppers spend only a short time making their selection. He further mentioned that some shoppers don't even check the prices of their selected items and more than half of them purchasing the item at a special price are unaware of the price drop. Hence, the high price factor is only said to be relevant at the point of choice and quickly drops as the customers progress to consider their next purchase. Also, Bezez (2015) considered factors like price and sales promotions as extrinsic – contributing mainly to the product choice; while other factors such as accessibility, the range of merchandise and reputation as intrinsic – contributing largely to the store choice.

Some studies suggested that the store choice behaviour of shoppers is found to be identical to the brand choice. The only difference is the influence of the location factor in the case of store selection which was found to be irrelevant for brand choice since it is not location bound (Sinha, & Banerjee, 2004). Store choice is said to have a dependency on the duration of shopping trips whether they were short fill-in trips to small local stores or regular trips to larger stores (Kahn and Schmittlein, 1989). In another study of store choice behaviour amongst audio equipment purchasers, the author suggested that in addition to concentrating on major brands, the department store should promote the availability of courteous product selection assistance, the financial convenience of its credit programs, free trial, and/or money-back guarantees (Dash *et al* 1976). When comparing departmental stores with speciality stores, the speciality store's customers were found to have more self-confidence and were more serious about their product selection and perceived less risk. Hence the author suggested that the focus of departmental stores should attempt to reduce their shopper's perceived risk and build their self-confidence by giving attention to the fact that they carry major brands (Dash *et al* 1976). Other research found store environment, merchandise quality and service quality as key variables influencing a store's image (Baker & Parasuraman, 1994). Regarding the store loyalty program, the author (Meyer & Benavent, 2006) found that loyalty programmes do not lead to increased penetration. They have little effect on recruiting new customers and mainly influence the repeat purchase behaviour of existing consumers. While in another study the author Meyer (2008) found that loyalty program membership has a significant impact on customers' purchasing behaviour.

Due to the inseparability of products and services offered in retail outlets, purchase decision-making has become complex. Therefore, the factors identified would be of use to retailers in designing their outlets with store attributes that would meet the expectations of shoppers and thus motivate them toward store patronage decisions (Ghosh *et al* 2010).

1.2. Store attributes affecting students' choice of retail stores

Store is defined in the shopper's mind partly by its functional factors like location, price ranges, and merchandise offerings and partly by an aura of psychological attributes. Each segment of the market has a different outlook. Where on the one hand, low-income earners look more toward functional factors, on the other hand, the high-income earners are inclined towards thinking about whether a store reflects their status and lifestyle (Pierre, 1958).

Factors like price and quality of product, quality of service, store environment, satisfaction levels, and the confirmation or disconfirmation of expectations are part of a complex interacting system that shapes customers' expectations, satisfaction, inferences about product and store quality, and ultimately plays a crucial role in determining supermarket patronage and buying patterns (Hutcheson *&* Moutinho, 1998).

This research has completely based the store choice on store attributes. Hence, the author discusses the present literature from various studies on the following attributes namely: store location, store prices, store environment, store assortments, store service quality and store loyalty programs to evaluate their influence on foreign students' choice of retail store chains.

1.2.1. Store location

The location strategy has two components; the distance a store is located from its consumers and its location relative to other competing or non-competing stores (Leszczyc *et al* 2004). Location selection plays a very prominent role in retailing due to its high and long-term investments (Kuo *et al* 2002). Brown (1989) said good locations allow easy access and attract many customers which increases the potential sales of the retail outlets. Craig (1984) had similar views that location provides a strategic advantage that competitors may find difficult to overcome. He further stated that store locations represent long-term investment and can be changed only at a

considerable cost. Therefore, store location is a critical element of any retailer's strategic plan. The results of the research conducted by Bhatti *et al* (2015) demonstrated that consumers' store choice behaviour is significantly related to store location. However, Hansen & Solgaard (2004) argued that the distance of the store may be less influential for customers who make the most out of the store i.e., who spend a large percentage of their budget in a particular store. They explained that in this way their relative use of resource units to cover the distance will be less than it would have otherwise been if consumers spent only a small portion of their shopping needs on that store. Their findings further suggested that the importance of distance will be greater if store choice behaviour is measured on the frequency of store visits rather than the percentage of budget spent at the store. Behara & Mishra (2017) advocated that while considering the visibility of the store, looking at the location from the customer's viewpoint is very important. As convenience goods require easy access for customers to quickly purchase goods, factors like the availability of public transport, access to the parking lot, adequate parking facility, and distance should be considered. The results from his research also supported his views about the significance of store layout and location in impacting consumers' purchase decisions in retail. The recent research by (Zhao, *et al* 2018) illustrates the effectiveness of the retailing store location selection system. The study suggested that shop diversification, shop competition, shop interaction and traffic flow as the main factors affecting store location choice.

To find out how the store location is relevant to the foreign students in making store selection, the author has chosen store location as a predictor of store choice.

1.2.2. Store price

According to Trappey and Lai (1997), young customers are attracted by promotions and prices. Price and sales promotions are considered the most important reasons why supermarket shoppers shop there. Consumers prefer hypermarkets over traditional retailers due to their low prices and convenient one-stop shopping (Farhangmehr *et al.* 2000). However, shoppers at traditional markets enjoy bargaining rights and take advantage of the competitive prices which remain fixed in modern retail outlets (Chamhuri & Batt 2009). As per Sinha & Banerjee (2004), the range of merchandise, in terms of product and price, attracts shoppers to a store. The study by Bell & Lattin (1998) showcased how fixed cost is essential for large basket customer's store preference and store loyalty. The authors' mentioned that large basket shoppers are less responsive to price

in their individual category purchase incidence decisions, which makes them more responsive to the expected basket price in their store choice decisions. Therefore, (Grewal *et al.* 2012) suggest that retailers should compete through pricing tactics and provide deals that offer the maximum value to customers. Another study showcased that price has a positive effect on perceived quality but a negative effect on perceived value and willingness to buy (Dodds *et al.*1991). However, the study by Hampl & Loock (2013) found that price is not of paramount importance when it comes to making store choices and that a low store price level, therefore, signals inferior product quality. In the research by Grewal *et al.* (1998), the results indicated that it's not the high knowledge consumers who are influenced by price discounts rather it's the low knowledge customers. A study by Tsai & Chang (2010) also indicated that loyal customers are less price-sensitive and more willing to recommend the store to other people. The authors Cakici & Tekeli (2021), stated that consumers' purchasing decisions depend on the emotions evoked by their price perceptions rather than the actual price of the products or services. The outcome of their research shows that perceived cheapness and expensiveness can affect positive emotions toward supermarket consumers, but only perceived expensiveness influences negative emotions towards supermarkets.

Considering the mixed views, the author has chosen store price as another predictor of store choice to find its relevance to foreign students in the context of retail store selection.

1.2.3. Store environment

Store-environment includes the physical surroundings of a store which are made up of many elements, including music, lighting, layout, directional signage, and human elements, and can also be divided into the external environment and internal environment (Shun Yin Lam, 2001). Baker (1986) proposed that environmental theory can be divided into ambient factors, design factors and social factors. Kotler (1973) introduced the concept of atmospherics to describe the four environmental dimensions i.e., virtual perceptions (colour, size, shape, brightness), aural perceptions (pitch, volume), and olfactory perceptions (scent, freshness) and tactical perceptions (softness, smoothness, temperature). He acknowledged that atmospherics is a highly relevant marketing tool for retailers than it is for manufacturers or wholesalers, as retailing establishments are where final goods are bought. This could affect consumers' purchasing behaviour in three ways i.e., attention-creating medium, message creating medium and affect creating medium.

Robert & John (1982) suggested that store atmosphere is represented physiologically in the form of two emotional states i.e., pleasure and arousal which are significant mediators for intended shopping behaviours within the store. Baker (1992) and Baker *et al.* (2002) suggested that along with merchandise, the store environment triggered an affective reaction among shoppers and that it also contributes to creating strong patronage intentions. Another study had similar views, they suggested that the pleasantness of the in-store environment can significantly impact customers' decision to spend more time and money than they originally planned (Donovan *et al.* 1994). Although Kaltcheva & Weitz (2006) advocated that a consumer's motivational orientation moderates the effect of the arousal produced by a store environment on the pleasantness of the environment. They further mentioned that customers with task-oriented motivation find the store environment to be unpleasant as they believe high energy is required to cope with such a high-arousal environment to complete their shopping activity whereas customers with recreational motivation find the store environment to be pleasant as they sought to derive intrinsic satisfaction from their shopping activity itself. According to Yalch and Spangenberg (1990), the right use of colour, lighting, sound, and furnishing stimulates perceptually and emotional responses within consumers, which eventually affects their behaviour. In the study by McKenzie (2006), the author stated that looks and store layout are deemed relevant for Estonian shoppers however, the research found that Estonian customers expect retailers to give them the freedom to exert their shopping capabilities and provide them with self-service tools and information (McKenzie, 2006).

Based on the above, to find out the relevance of store environment on foreign students' store selection, the author has chosen store atmosphere as a predictor of store choice.

1.2.4. Store assortments

Assortment is defined as the number of product categories offered and the variations in products serving a single consumer's need (Toporowski & Lademann, 2014).

Farhangmehr *et al.* (2000) validated in this study that Portuguese consumers prefer shopping at modern retail outlets because of the possibility to buy everything under one roof. In another study by (Leszczyc *et al.* 2004), a similar concept was showcased that the success of supercenters lies in their ability to provide shoppers with the opportunity to make single-stop

multi-purpose shopping trips. Studies also indicate that supermarket managers view the importance of assortment differently from their customers. For customers, it's more about product and service assortment (Hansen, 2003). The research by Briesch *et al.* (2009) found that several brands offered in retail assortments have a positive effect on store choice and that there was more heterogeneity in response to assortment than to factors like convenience or price. Also, they advocated that optional assortment depends on the preferences of a retailer's shoppers. The important findings from the study by Hansen and Solgaard (2004) based on the Danish grocery retailing industry indicated that product assortment is the single most influential variable affecting the choice of format across three formats: discount stores, hypermarkets, and conventional supermarkets. However, research by Chernev (2006) indicated that consumers often are less confident in choices made from larger assortments than from smaller assortments. Customers fail to predict the need for variety. The research results showcased that the salience of the product-choice task is likely to influence consumers choice among assortments, leading to a decrease in the share of the larger assortment in cases when the complexity of the product-choice task is salient to consumers. This contradictory view was also supported in another study where authors stated that consumers who experience divergent reactions to the reduction in sizes were also the ones who uniformly welcome the elimination of clutter brought on by the reduction in redundant items. These customers were seen to be loyal to a single brand, size or brand-size combination that was eliminated, and almost half of them were seen making continued purchases within the category (Boatwright & Nunes, 2001).

Based on these mixed views, the author has chosen store assortments as another predictor of store choice to find its relevance to foreign students' store selection choices.

1.2.5. Store service quality

In 1960, American Marketing Association (AMA) defined service as "activities, benefits or satisfactions which are offered for sale or are provided in connection with the sale of goods". The difference between expected services and provided services is called service quality (Arslan & Zaman, 2015). The findings of the study by Dagger & Sweeney (2007) indicated that the different service attributes were salient depending on whether the customer was a novice or a longer-term service patron. As per Desai, & Phadtare (2017), customer service is considered a vital factor that enhances the reliability of the store and includes hassle-free payment processes,

and convenient shopping hours with an easy return or replacement policy in case of defective/damaged products. Research by Kim (2013) showcased that many distribution enterprises provided services to attract more customers to their stores as they believe customer services directly influence a customer's store selection with how they felt about the services after purchasing or visiting the stores. Also, Sinha & Banerjee (2004) found that store convenience and customer service were the important reasons why shoppers choose their store. The findings from another research advocated that consumers are found to have a more favourable attitude toward merchandise and service quality and feel more aroused or pleased with a store where more social cues were present (Hu & Jasper, 2006). The study conducted on shopper's perceptions of service quality in the case of Kenyan supermarkets also considered attributes namely reliability, responsiveness, empathy, and tangibles as the four main factors of service quality for supermarket customers (Kimani *et al*. 2012). Another research by Chen & Hu (2010) found a significant relationship between determinant attributes of service quality and perceived value and suggested that to win customers in a highly competitive environment, the strategies should be designed such that they enhance customers' perceptions of the service value. In the Estonian retail service quality context, retail service quality is perceived to be of importance to Estonian consumers as suggested by (McKenzie, 2006). His study results suggested that the increased confidence and identification of unknown retail service quality variables could aid the development of Estonian specific retail service quality. The research also found that consumers expect the selling staff to be authoritative and show them politeness and courtesy.

To find out how Store service quality is relevant to foreign students in making store selection, the author has chosen Store service quality as a predictor of store choice.

1.2.6. Store loyalty program

Loyalty programs have emerged as a separate retail strategy, often managed externally by the retailer or by a separate functional area internal to the retailer (Bridson *et al*. 2008). A loyalty program is also recognised as a marketing program that is designed to build customer loyalty by providing incentives to profitable customers (Yi & Jeon, 2003). Loyalty programs lead to the creation of a relationship that is based on interactivity and individualisation. According to Allaway, Berkowitz, and D-Souza (2003), retail loyalty programs involve a concentrated effort to build store traffic, increase basket size, and increase frequency, which creates deeper

relationship ties with its customer base. The objective of the loyalty card program is to increase the customer's propensity to choose one retail chain outlet over competitive alternatives. (Allaway *et al*. 2007) mentioned that when a consumer joins a loyalty program, to accumulate rewards more quickly, they are likely to concentrate their purchases on one firm, such as booking all flights through one airline. This could mean that the members of the loyalty reward program overlook or discount negative evaluations of the company (Bolton *et al*. 2000). The findings from another study show that there is a significant impact of loyalty programme membership on customers' purchasing behaviour (Meyer, 2008). Research by Meyer (2007) advocated that loyalty schemes have positive effects on customer lifetimes and share of consumer expenditures. However, research by Liu (2007) suggested that a loyalty program could influence different consumers' loyalty levels differently. When comparing light buyers with heavy buyers, light buyers were found not to be motivated to become more loyal as loyalty programs were not highly attractive to them whereas, for heavy buyers it was found to be attractive as they could enjoy frequent rewards. The study by Demoulin & Zidda (2008) also questioned the effectiveness of loyalty programs and found that loyalty cards are effective only when customers value the rewards associated with them. The results of another research showcased that even though participants of loyalty programs show more behavioural and affective loyalty compared to the non-members, they do not change their purchase behaviour after joining the loyalty program (Gomez *et al*. 2006). A recent study shows that store loyalty programs impact store loyalty and store relations which are mediated by both store satisfaction and love (Sreejesh *et al*. 2016).

In the light of the mixed views on store loyalty programs, the author has chosen store loyalty programs as a predictor of store choice to find its relevance in the context of foreign students' shopping behaviour.

2. CONCEPTUAL FRAMEWORK

Based on the previous knowledge from the other researchers' point of view, in this chapter, the author provides an insight into the research background followed by the formation of a model reference for the study and hypothesis development.

2.1. Retail store chains and international students in Estonia

The retail sector is one of the significant contributors to Estonia's transformation from being a former republic in the Soviet Union, to a free-market economy, and a member of the European Union (McKenzie, 2006).

Estonia has become one of the regions with the most rapidly growing store-based grocery retailing (Popluga et al. 2014). As per Statistica (2021), there are 14 retail chains by sector in Estonia as of 2021 with fashion and clothing being the leading sector followed by food and consumer electronics. The retail market in Estonia includes supermarkets, hypermarkets, convenience stores, discounters, and forecourt retailers (Popluga et al. 2014). As per Estonica (2003), supermarkets were launched in Estonia during the second half of the 1990s and were quite popular in the cities whereas traditional grocery retailers remain significant in the rural areas with a small population where modern retailers were not profitable to place their store networks (Popluga et al. 2014).

Being one of Europe's start-up hotspots (Forbes, 2014), Estonia is also regarded as one of the safest countries in the world welcoming a growing number of foreign students each year who come here to build their careers and future. As per statistics Estonia, in the year 2020, 45,259 students acquired higher education in Estonia (professional higher education and bachelor's study, Master's study, Doctoral study) out of which 5235 were foreign students coming from countries of Africa, Asia, Europe (excl. Estonia), Northern America, Oceania, Latin America & the Caribbean and some unknown territory. The students' market accounted for around 29% of the total Estonian population (1,326,535 as of 2020) out of which the percentage of international students reached 11,6% as of 2020. As per Economics (2017), students create economical

contributions through their income spending which in turn helps businesses employ more staff and create a multiplier effect on the local economy. Therefore, it would be ideal for retailers to tap this unexplored population group as students spend a considerably good amount of money in making retail purchases in their everyday lives. Since international students account for a good percentage of the Estonian population it will be a good opportunity for retailers to understand what concerns their choices and what factors influence their choices when it comes to the selection of retail stores.

Students coming from different countries face many challenges like language barriers, homesickness, culture shocks, financial shortcomings, housing, socialising, time management and so on. Unlike other customer segments, they also use business products or services to mitigate these problems or barriers. Many mediums can boost students' experience abroad, but in the context of retailing, there are three such mediums: offline shopping, online shopping, and mobile shopping. In the case of Brick-and-mortar stores, store attributes may affect students' behavioural orientations. The factors like location, price, environment, assortments, service quality and loyalty program as discussed in this section have been found to influence foreign students due to the following reasons:

- Location: Generally, the closer customers are to a store, the more are the chances of purchasing from that store. The location of the store plays an important factor for students as they often opt for stores that are located near their university areas, dorms, work location or stores that have good connectivity of transportation. Shopping from a store whose location is far away might not make them go there every day to get the necessities as time is a limited source for them. Therefore, having location accessibility can certainly help them in making frequent visits to a store and choosing it over others.

- Pricing: As time is a limited source for students, so is money. Stores selling expensive products are less favoured than those selling products at a lower price. Expensive products are not much welcomed by students as they are generally on a budget. Therefore, high store prices can make them switch to stores where products are available at a lower or reasonable price.

- Environment: environmental factors include music, lighting, layout, directional signage, and human elements. These can help create a relaxing atmosphere for stressed and young people to enlighten their mood and buy things that can make them feel better.

- Assortments: As mentioned earlier time is a critical factor in a student's life. A store offering multiple varieties of products is any day better to visit than a store with just a few products or assortments. Therefore, choosing one-stop shopping stores is highly likely where everything is available under one roof.

- Service quality: Good and friendly customer service is very vital as it generates positive energy and motivates young people. When students are new to a store, they might need help in finding a product, understanding product specifications if it is displayed in the local language, encountering problems with self-checkout systems, not understanding cashiers as they only understand the local language and so on. In such cases, good customer service can come to their rescue.

- Loyalty programs: Having a special student loyalty program can attract students from coming to a store where they can avail themselves of the discount offers and save money. Store Loyalty programs can help stores build strong patronage amongst students.

In the light of the above, this research examines all these attributes to find their influence on international students' choices of retail stores. Diving deep into finding what influences their customer segment's choice can indeed help businesses in formulating effective models for long-term growth and sustainability. To serve the student market segment and tap new opportunities herein, retailers need to reassess their operating models to best serve these business segments. Instead of designing one-size-fit, retailers can focus on redesigning their business models as per the needs of their changing market as the traditional way of building a business model is no longer sufficient because a well-developed operating model for brick-and-mortar formats may not always work for all business segments unless redesigned to include changes to the part which do not meet the needs of the new market segment.

2.2. Model reference for the study

According to Mehrabian and Russell (1974), the retail environment contains stimuli (S) that affect an individual's internal state i.e., the organisms (O) which results in approach or avoidance response (R) behaviours toward the store and behaviours like store searching, intention to purchase, and repurchase intention.

In the study by Behera & Mishra (2017), the Stimuli-Organism-Response model was used to identify attributes of store location and layout on customers' purchasing behaviour. Based on the literature review, this research uses the Stimuli-Organism-Response model developed by Mehrabian & Russell (1974) to identify whether store attribute related stimuli trigger foreign students' choice of selecting a retail store.
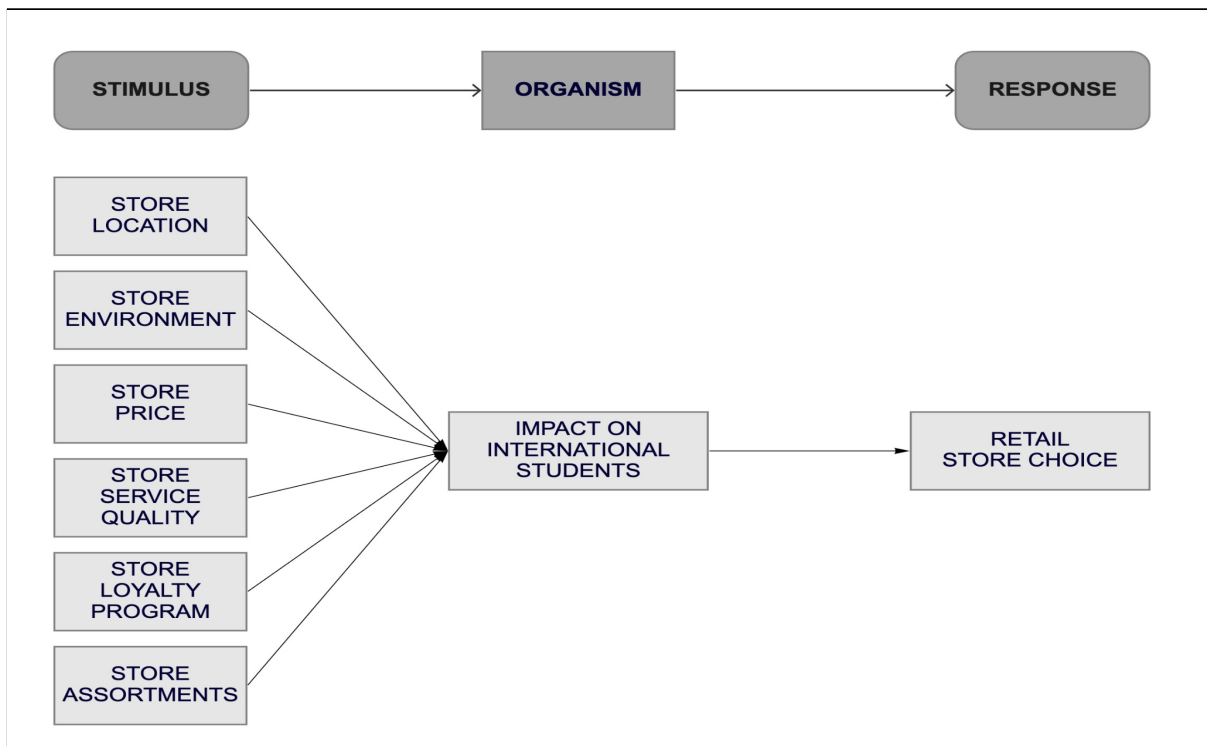
Figure 1. Stimulus-Organism-Response Model
Source: Based on the literature review (Behera & Mishra, 2017), formed by the author

The Stimulus-Organism-Response model (as shown in figure 1) is composed of three constructs i.e. stimulus, organism, and response which decide the behavioural outcome of an event. Stimulus is the independent variable, the organism is a mediator and response the dependent variable. Therefore, this study aims to analyse the impact of store location, store prices, store environment, store service quality, store assortments and store loyalty programs (Stimuli) on foreign students' (Organism) further impacting their store selection choice (Response).

2.3. Hypotheses development

The research aims to investigate the store attributes affecting retail store choices of international students in Estonia. Based on the review of the literature by authors namely Bhatti *et al* (2015), Sinha & Banerjee (2004), Baker (1992), Baker *et al.* (2002), Briesch *et al.* (2009), Kim (2013), (Allaway *et al.* 2007), the research proposes the following hypotheses:

H1: Store location has an influence on international students' store choices
H2: Store prices have an influence on international students' store choices
H3: Store environment has an influence on international students' store choices
H4: Store assortments have an influence on international students' store choices
H5: Store service quality has an influence on international students' store choices
H6: Store loyalty program has an influence on international students' shopping behaviour

Table 1. Stimuli factors considered for store location, store prices, store environment, store service quality, store assortments and store loyalty program

STATEMENTS IN QUESTIONNAIRE	STIMULI
Store location Vis-À-Vis store access and transport network	Store Location
Store location Vis-À-Vis visit frequency	Store Location
Store price Vis-À-Vis lower pricing than competitors	Store price
Store price Vis-À-Vis product value at par with quality	Store price
Store environment Vis-À-Vis atmosphere & decor	Store environment
Store environment Vis-À-Vis clean and tidy	Store environment
Store service quality Vis-À-Vis friendly employees	Store service quality
Store service quality Vis-À-Vis knowledgeable employees	Store service quality
Store assortments Vis-À-Vis good assortment with space	Store assortments
Store assortments Vis-À-Vis multi-brands & variety	Store assortments
Store loyalty program Vis-À-Vis loyalty card offering	Store loyalty program
Store loyalty program Vis-À-Vis frequent shopping	Store loyalty program
Store loyalty program Vis-À-Vis no card offerings	Store loyalty program
Store loyalty program Vis-À-Vis change of stores	Store loyalty program

Source: Based on the above-mentioned literature review, formed by the author

The next discusses the research methodology and methods of data analysis followed by the results of the analysis.

3. RESEARCH METHODOLOGY

The following chapter outlines the research methodology used to achieve the research results including the research design & philosophy, data collection method, sampling technique and methods of data analysis.

3.1. Research design and philosophy

Store selection involves making choices from several possible options. To analyse the store attributes affecting an individual's choice, data was collected from international students visiting such retail stores based on a quantitative research method. This research applied the quantitative research method using the primary data collection technique and corresponding quantitative analytical procedure (Mono method quantitative study).

According to Saunders, Lewis & Thornhill (2015), quantitative data analysis enables comparisons, by establishing statistical relationships between variables. Since the data set in this research included categorical and numerical data and involved testing of theories and building of a research model, the quantitative method was best suited for the analysis. Past Studies by Desai, & Phadtare (2017), Makgopa (2018), Behara & Mishra (2017) and others also opted for a quantitative research method on a similar research subject and suggested important findings. This research was designed to fulfil evaluative purposes and is based on positivist research philosophy. The positivist philosophy focuses on a strictly scientific empiricist method designed to yield pure data and facts uninfluenced by human interpretation or bias (Saunders, Lewis & Thornhill, 2015).

To avoid any influence on the responses that may be present in telephone or in-person surveys, an online survey method was chosen. The survey strategy (sub-type: ad-hoc survey) was used with a deductive research approach to collect data where questionnaires were distributed to international students in Estonia via various online platforms. Surveys allow the collection of

standardised data for comparison, are easily understandable and enable finding out the characteristics of the sample. Moreover, the data collected via surveys suggests possible reasons for relationships between variables and helps in producing models of these relationships (Saunders, Lewis & Thornhill, 2015). Hence, the survey method was used for collecting data. The statements in the survey were derived from the literature survey by Makgopa (2018). Through the survey questionnaire, respondents were asked to indicate their level of agreement with the statements on a 5-point Likert scale as it is a widely used tool for collecting data and measuring opinions or attitudes (Zaman et al., 2020).

Based on the study model, retail store choice was taken as the dependent variable and the store attributes namely store location, store price, store environment, store service quality, store assortments and store loyalty program as the independent variables.

The analysis determines which attributes affect foreign students' store choices. Hence, it was possible to know what Store attributes drive their store choice to select retail stores in Estonia.

3.2. Data collection

The current research aims to study and analyse the store attributes influencing foreign students' retail store choices. Through extensive literature review, the survey questionnaire was prepared to receive responses from the sample. The questionnaire was distributed via google forms through various online platforms including the personal social media account of the author. The language of the questionnaire was English and there was a total of 22 questions. The two-part questionnaire was developed where Part 1 consisted of demographic information and a few other general pieces of information from respondents. Part 2 consisted of 14 attributes relating to store attributes namely store location, store prices, store environment, store service quality, store assortments and store loyalty program. The data collected was treated with high confidentiality and used solely for this research.

3.2.1. Sample technique and size

Non-probability sample technique was used in the study. The sample selected was based on the target market stated in the research in alignment with the research questions and objectives. The

unit of analysis for the study was international students in Estonia coming from 40 different countries. The data indicated that most respondents were from Non-EU countries out of which the maximum no. of respondents were from India followed by Russia and Nepal.

To analyse the attributes influencing foreign students' retail store choice, responses were measured by a 5-point Likert type scale ranging as follows:

- 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
- 1 = Very unlikely, 2 = Unlikely, 3 = Not Likely, 4 = Likely, 5 = Very Likely.
- 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always.

14 Close-ended questions were formed to gain specific answers from respondents with clear results. A total of 110 responses were received by the respondents out of which 6 of them were ineligible and thus rejected from the analysis. The final sample size was 104 respondents. All the respondents were made aware that their responses will be strictly used for academic purposes and will maintain a high level of confidentiality. The survey questions are presented in Appendix 1 followed by which are the survey answers submitted by respondents in Appendix 2.

3.2.2. Characteristics of Sample

The sample comprises the 104 respondents (see Appendix 3) belonging to both genders where there were more female respondents (54%) as compared male respondents (45%). The minimum age of the respondent was recorded as 18 years and the maximum was 42 years. Most of the responses belonged to students between the age group of 24 to 29 years. In terms of occupation, full time working students (32%) were four times more than part-time (9%). Appendix 3 also presents the no. of years spent by the international students in Estonia and the data showcases that maximum respondents have either spent less than a year or a maximum of one year in Estonia. The respondents were questioned "which supermarket(s) do they shop at?" and according to the collected data, the response includes store names like Rimi, Prisma, Maxima, Coop, Selver, Lidl, Kaubamaja, Promo, Solaris, ViruMedium, Solaris, Toidumaailm, Ilma pood, Akadeemia shop, Stockmann and other small shops in town.

The research further presented the most preferred stores chosen by the respondents (see appendix 4). Out of 104 respondents, 40% of the respondents chose Rimi, 21% chose Prisma, 20% of them chose Maxima and the rest chose Coop (8%), Selver (7%) and Lidl (4%) respectively.

Favouritism towards Lidl was the least because it is the newest supermarket in Estonia amongst all.

The top three drivers of store choices were store location chosen by 77 respondents, followed by store price by 72 respondents and then store assortments by 59 respondents. Apart from the six attributes, 9 respondents also mentioned other drivers like the range of products, 24/7 opening hours, salad bar, quality of food, organic food options, lunch options, availability of finished products, language and easy self-service options affecting their choice of store selection.

3.3. Method of data analysis

As per Saunders, Lewis & Thornhill (2015), descriptive and inferential statistics can be used for surveys. The research used the IBM SPSS Statistics 22.0 software package for data analysis. Since the data set contained 14 variables it was necessary to classify these variables and reduce data to keep the focus on key factors rather than considering too many variables, so, Factor Analysis research method was applied here. Before extraction of the factors, Kaiser-Meyer-Olkin (KMO) and Bartlett tests were performed to test sampling adequacy for each variable in the model.

Normally in Factor Analysis variables are re-grouped into a limited set of clusters based on shared variance (Yong & Pearce 2013). Since all the assumptions for factor analysis were met, Exploratory Factor Analysis was used to discover the number of factors influencing variables and to examine which variables go together. From the factors extracted via Factor Analysis, Binary Regression Analysis was conducted to examine the relationship between dependent and independent variables. Followed by it was a multicollinearity test to examine the regression model.

3.3.1. Factor Analysis

Factor analysis was performed to study and examine the impact of store attributes namely store location, store prices, store environment, store service quality, store assortments and store loyalty programs on foreign students' choice of the retail store chain. To extract the factors in

Exploratory Factor Analysis, the Principal Components Analysis method was used. Out of the 14 variables, Principal Components Analysis initially extracted 14 factors or components.

In line with the overall objectives of the research, the below-mentioned variables were analysed during the data analysis to decide on the influence of store attributes on store choice. All these variables had communalities above 0,40 so none of them was excluded for Principal Components Analysis.

- I am influenced by the store's atmosphere and the decor.
- I prefer to shop in the store as it has an overall lower price than its competitors.
- I prefer to shop in the store as the price is reasonable for the value of the product and is at par with quality.
- I prefer to shop in the store as the employees are friendly and pleasant.
- I prefer to shop in the store as the employees have good product knowledge.
- I prefer to shop in the store as the merchandise is displayed and the assortment is good with enough space between display areas.
- I prefer to shop in the stores as it keeps multi-brands and product variety.
- I prefer to shop in the store as it is easy to make frequent visits to the store.
- I prefer to shop in the store as the store is clean and tidy.
- I prefer to shop in the store as the location of the store is easily accessible with a good network of transportation.
- I prefer to use store loyalty card offers in the store.
- How likely do you agree with this statement? Having a loyalty card makes me want to shop in the store more frequently.
- How likely would you shop in any store that suits you regardless of whether they have a loyalty program?
- How likely are you to change the supermarket for the sake of a loyalty scheme?

The above variables were extracted according to the Cumulative Percentage of variance and Eigenvalue > 1 rule. According to Kaiser (1974), Eigenvalues is a good criterion for determining a factor and to consider a strong factor, their quality score or Eigenvalue should be greater than 1. Therefore, variables with an Eigenvalue above 1,0 were extracted.

The Component matrix shows the correlations between the component's variables. As per Tutorials, S. P. S. S. (2020), if a variable has more than one substantial factor loading, it should be further redistributed via SPSS using the rotation method. Rotation maximises high item loadings and minimises low item loadings, therefore producing a more interpretable and simplified solution (Williams *et al*. 2010). Therefore, the Varimax rotation technique was applied to factors with Eigenvalue above 1,0 to maximise high factor loadings. The rotated factor matrix variables with a factor loading less than 0,30 were rejected and the total extracted variance was greater than 50%. As per (Forina *et al.* 1989), the goal of the rotation is achieved by rotating the factors around the origin under which each factor is maximally collinear with a distinct cluster of variables. Therefore, factors were rotated until each variable measured one factor which was idle for understanding the factors.

3.3.2. Regression Analysis

Regression Analysis was used to investigate the relationship between dependent and independent variables. To analyse the relationship between these variables, data were tested for Linear Regression Analysis but the assumptions for such analysis were not met resulting in the author being routed towards Binary Regression Analysis. According to Statistics, L. (2015), Binary Regression analysis can be conducted if the dependent variable in the study is a categorical variable being measured on a dichotomous scale and the independent variables are continuous (interval variable). Since store choice is a dichotomous variable and store attributes are the continuous variables, Binary regression analysis was appropriate for this study.

For the analysis, store choice was considered as the dependent variable and store attributes as the independent variable. Store choices were the 'supermarkets where students go shopping' namely Rimi, Prisma, Maxima and Other stores (including Selver, Coop and Lidl). Since respondents from stores like Selver, Coop and Lidl were few, these stores were clubbed as one store and named 'other stores'. Therefore, to determine the level of statistical significance and for hypothesis testing, only the top three preferred stores namely Rimi, Prisma and Maxima (see Appendix 6-8) were taken as dependent variables as the results of other stores (Selver, Coop and Lidl) were held insignificant (see Appendix 9). The mean score of factors extracted from Factor Analysis namely store location, store environment + assortment, store price and store loyalty program were considered as the store attributes.

The impact of control variables like age and gender were also tested in the study to examine whether there is any influence of such variables on foreign students' store choices (see Appendix 10).

To measure the statistical significance of the observed data, the P-value was taken as 0,10 which means a 90% confidence level. As per Dahiru (2008), one can make the "significant test" more stringent by moving to 0,01 (1%) or less stringent by moving the borderline to 0,10 (10%). Hence, keeping in mind the sample size of the data, the level of significance was taken as 0,10 to validate the hypotheses.

3.3.3. Multicollinearity in regression analysis

Multicollinearity test was conducted to examine whether two or more independent variables in the research model were correlated or not. As per Daoud (2017), in regression analysis, it is obvious to correlate with the response and predictor(s), but correlating predictors is something undesired. Hence, to determine whether there exists a similarity between the independent variables in the research model, a multicollinearity test was performed. If there are no multicollinearity issues, it means that the research model is satisfactory and can be accepted. Therefore, to detect Multicollinearity, the tolerance and Variance inflation factor for each independent variable were calculated.

According to Senaviratna & Cooray (2019), a lower level of tolerance indicates the presence of Multicollinearity. They state that if the tolerance is close to 1 then there is little multicollinearity, whereas a tolerance value close to zero suggests that multicollinearity may be a threat. As per Shrestha (2020), the Variance inflation factor is used to measure the overall variance of the estimated regression coefficient.

Daoud (2017), stated that if the Variance inflation factor =1, it indicates that the independent variables are not correlated to each other, if the value of the Variance Inflation factor is 1< Variance Inflation factor < 5, it specifies that the variables are moderately correlated to each other and a value between 5 to 10 specifies the highly correlated variables. Variance Inflation factor value > 10 indicates the presence of multicollinearity. However, (Coumarbatch, *et al*. 2010) stated in their study that in weaker models, any value above 2,5 is also concerning.

Based on the above research methods, the results were arrived at and are discussed in the next section.

3.4. Results

This section discusses the outcomes of the study. The data was collected on a quantitative approach. The results achieved through the study have given a broader understanding of attributes influencing foreign students' choice of store chains.

3.4.1. Factor Analysis

To arrive at the results, firstly the sample and data adequacy were tested using the KMO and Bartlett's Test as displayed in the table below.

Table 2. KMO and Bartlett's Test

KAISER-MEYER-OLKIN MEASURE OF SAMPLING ADEQUACY		0,749
BARTLETT'S TEST OF SPHERICITY	Approx. Chi-Square	485,691
	df	91
	Sig.	0,000

Source: Author's calculation based on collected data

As shown in Table 2. above, the KMO value was calculated as 0,749. According to Kaiser (1974), 0,50 is the borderline of acceptability. Hence, the KMO value validated the data to be useful for factor analysis. As per Bartlett's Test of Sphericity Approx. Chi-Square was calculated as 485,691with the P-value being 0,000 indicating a high level of significance. Hence, the results from the two tests indicated the suitability of the data and sample for factor analysis.

Next, Factor Analysis was conducted to reduce many variables into fewer factors. To extract factors from the collected data, Principal Components Analysis was conducted. Since factor loadings help in quantifying the extent to which the variables are related to a given factor, the loadings above 0.5 were extracted and as a result, four factors were identified. As the rotation matrix makes it more reliable to understand the output, the Varimax rotation (orthogonal

rotation) was used to clarify the relationship among factors and to associate each variable with one factor. All the factors with strong positive factor loadings were considered, the negative loadings were removed, and cross-loadings were substantially loaded on one factor only.

To display the extracted factors, the rotated component matrix and analysis of total variance tables were formed as displayed below.

Table 3. Rotated Component Matrix

	COMPONENTS			
	1	2	3	4
I prefer to shop in the store as the merchandise is displayed and the assortment is good with enough space between display areas.	0,788			
I prefer to shop in the store as the store is clean and tidy.	0,780			
I am influenced by the store's atmosphere and the decor.	0,712			
I prefer to shop in the stores as it keeps multi-brands and product variety.	0,687			
I prefer to shop in the store as it has an overall lower price than its competitors.		0,837		
I prefer to shop in the store as the price is reasonable for the value of the product and is at par with quality.		0,836		
I prefer to use store loyalty card offers in the store.			0,881	
How likely do you agree with this statement? Having a loyalty card makes me want to shop in the store more frequently.			0,847	
I prefer to shop in the store as it is easy to make frequent visits to the store.				0,863
I prefer to shop in the store as the location of the store is easily accessible with a good network of transportation.				0,811
Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalisation a. Rotation converged in 5 iterations				

Source: Author's calculation based on collected data

As shown in Table 3. above, the rotated component matrix displays all the factor loadings were between 0,7 and 0,8. Variables relating to store assortments (0,788 and 0,687) and store environment (0,780 and 0,712) were substantially loaded under one factor i.e., Component1 while those relating to store prices (0,837 and 0,836) were loaded under the second factor i.e., Component2. Store loyalty program (0,881 and 0,847) variables were loaded under the third factor i.e., Component3 and finally, Store location (0,863 and 0,811) were loaded as the fourth factor i.e., Component4.

The Total variance of the factors having Eigenvalue > 1 stood at 73,245% as shown below.

Table 4. Total Variance Explained

COMPO NENT	INITIAL EIGENVA LUES		EXTRACTION SUMS OF SQUARED LOADINGS			ROTATION SUMS OF SQUARED LOADINGS			
	Total	% Of Variance	Total	% Of Variance	Cumul ative %	Total	% Of Variance	Cumul ative %	Cumul ative %
1	3,261	32,609	32,609	3,261	32,609	32,609	2,364	23,642	23,642
2	1,668	16,679	49,288	1,668	16,679	49,288	1,699	16,989	40,631
3	1,393	13,932	63,22	1,393	13,932	63,22	1,697	16,971	57,603
4	1,003	10,026	73,245	1,003	10,026	73,245	1,564	15,643	73,245
5	0,726	7,261	80,506						
6	0,529	5,294	85,8						
7	0,442	4,422	90,222						
8	0,361	3,608	93,83						
9	0,328	3,278	97,108						
10	0,289	2,892	100						
Extraction Method: Principal Component Analysis.									

Source: Author's calculation based on collected data

As shown in Table 4. above, The Extracted sums of squared loadings were considered for analysis of Eigenvalues. The first factor had 32,609% of the total variance, the second factor had 16,679% of the total variance, the third factor had 13,932% of the total variance and the fourth factor had 10,026% of the total variance. The factors having an Eigenvalue below 1,0 were not considered significant underlying factors. After using the rotation method and analysing the total variance, four factors were extracted.

The transformation of initial factors into new ones as shown below helped in easy interpretation of research results.

Table 5. Factors Extracted

FACTOR		NAME	VARIABLES
	1	Store environment & assortments	I prefer to shop in the store as the merchandise is displayed and the assortment is good with enough space between display areas. I prefer to shop in the store as the store is clean and tidy. I am influenced by the store's atmosphere and the decor. I prefer to shop in the stores as it keeps multi-brands and product variety.
	2	Store price	I prefer to shop in the store as it has an overall lower price than its competitors I prefer to shop in the store as the price is reasonable for the value of the product and is at par with quality.
	3	Store loyalty program	I prefer to use store loyalty card offers in the store. How likely do you agree with this statement? Having a loyalty card makes me want to shop in the store more frequently
	4	Store location	I prefer to shop in the store as it is easy to make frequent visits to the store. I prefer to shop in the store as the location of the store is easily accessible with a good network of transportation.

Source: Author's calculation based on collected data

As shown in Table 5. above, The four extracted factors were Factor 1: store environment & assortments; Factor 2: store price; Factor 3: store loyalty program; Factor 4: store location.

Factor scores are the drivers in regression analysis. According to Tutorials, S. P. S. S. (2020), computing factor scores are useful for regression analysis. Therefore, factor scores were computed as means over variables measuring similar factors. After similarly interpreting all components, the study arrived at the following descriptions:

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- Mean factor 1: Store environment & assortments
- Mean factor 2: Store price
- Mean factor 3: Store loyalty program
- Mean factor 4: Store location

Next, the reliability or internal consistency of these factors were tested via Cronbach's alpha reliability statistics test. Cronbach Alpha is a measure of scale reliability that ensures the internal consistency of factors. As per Perry, R. H., Charlotte, B., Isabella, M., & Bob, C. (2004), a Cronbach Alpha with a value of 0,563 reflects moderate reliability. After testing the reliability of the arrived factors, Descriptive Statistics were used to interpret these factors. The scales of the variables were between 1-5 as a 5-point Likert scale was used in the questionnaire.

Table 6. Descriptive Statistics (for all stores)

FACTORS	N	MINIMUM	MAXIMUM	MEAN	STD. DEVIATION
Factor 1 Store environment & store assortments	104	1,5	5	3,8774	0,79744
Factor1StorePrice	104	1	5	4,0096	0,83602
Factor1StoreLoyalty Program	104	1	5	3,3894	1,20468
Factor1StoreLocation	104	2	5	4,3365	0,74535

Source: Author's calculation based on collected data

As shown in Table 6. above, the Descriptives show how the factors are interpreted, and it could be concluded that:

- Store location is rated the most influential store attribute with a mean = 4,34 (approx.)
- Store loyalty program is rated the least influential store attribute with a mean = 3,39 (approx.)

Also, the mean factors of the most preferred Store choice were calculated as below to understand the influence of each store attribute on an individual store. The Store choices in the study were the six most preferred supermarkets by International Students in Estonia namely, Lidl, Maxima, Coop, Prisma, Rimi and Selver.

Table 7. Mean factors for variables Store-wise

STORE CHOICES	ENVIRONMENT +ASSORTMENTS	PRICE	LOYALTY	LOCATION
Lidl	3,25	4,5	2,75	3,875
Maxima	3,68	4,3095	3,619	4,2143
Coop	3,69	4	3,875	4,75
Prisma	3,91	3,5	2,7955	4,0682
Rimi	3,98	4,119	3,5119	4,5238
Selver	4,32	3,7857	3,6429	4,2143

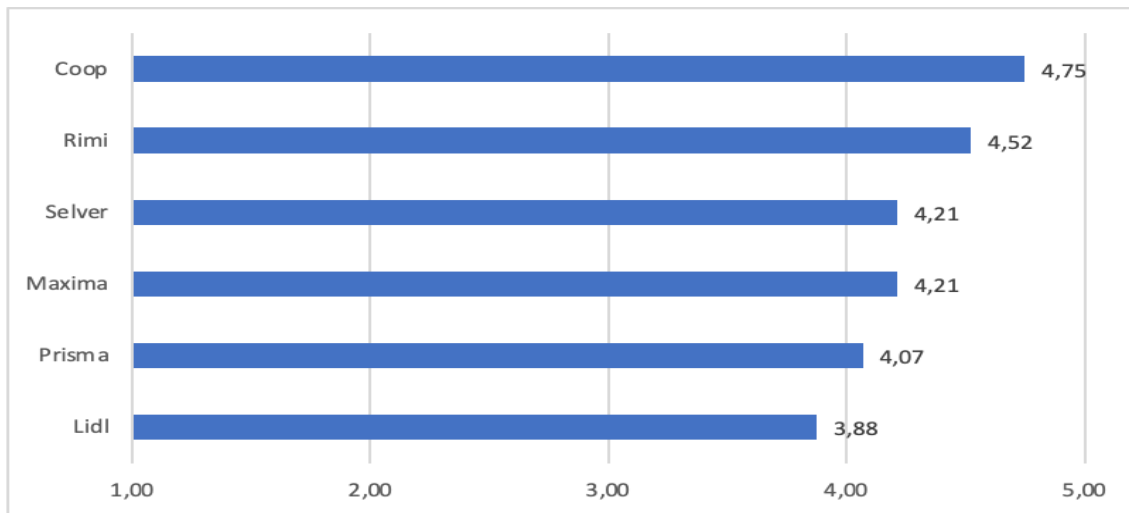Source: Author's calculation based on data presented in Appendix 5

Figure 2. Store location
Source: Author's calculation based on Table 7

As shown in Figure 2. above, derived from Table 7, store location is the top-ranked Store attribute among international students with the highest mean score.
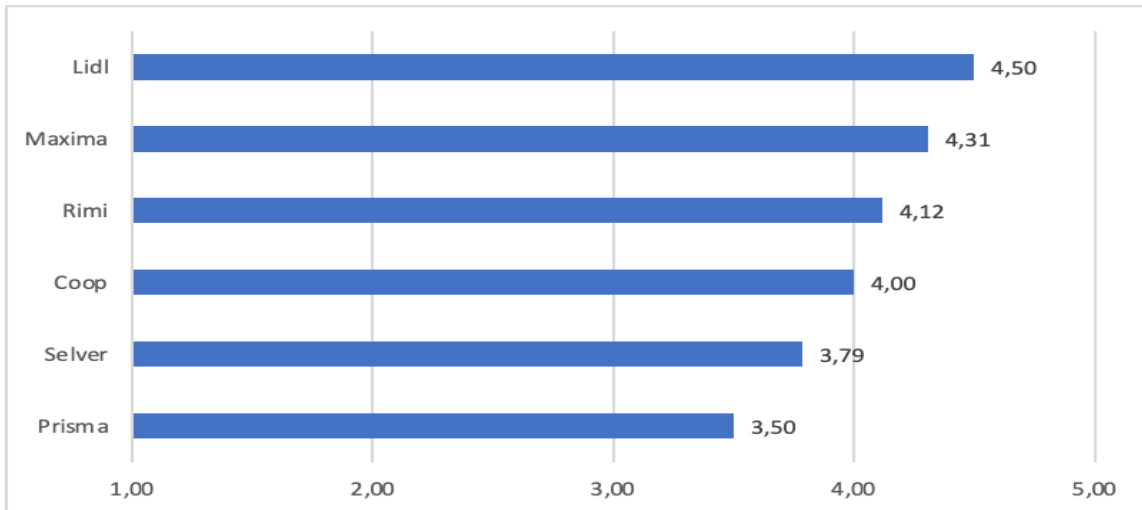
Figure 3. Store price
Source: Author's calculation based on Table 7

As shown in Figure 3. above, derived from Table 7, store price is the second most influential Store attribute for retail store chain choice among international students.

Figure 4. Store environment and assortments
Source: Author's calculation based on Table 7

As shown in Figure 4. above, derived from Table 7, store environment & assortment are the third most influential Store attribute for retail store chain choice among international students.
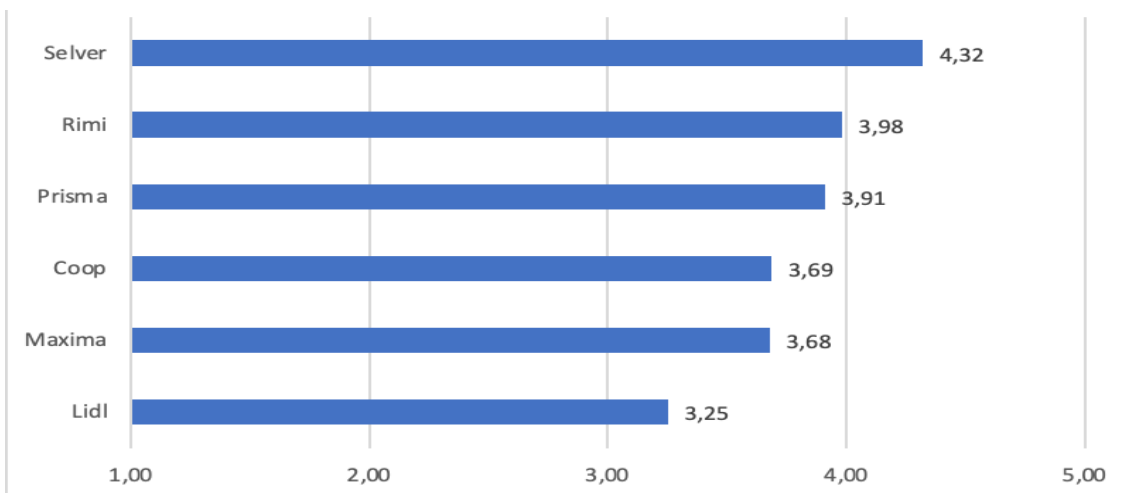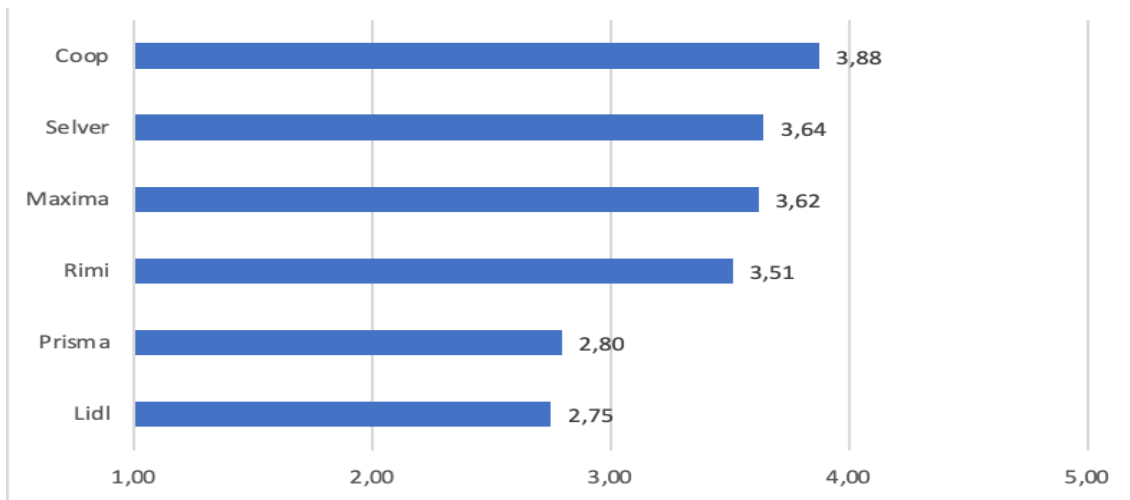
Figure 5. Store loyalty program
Source: Author's calculation based on Table 7

As shown in Figure 5. above, derived from Table 7, the store loyalty program has the least influence on students' shopping behaviour.

Based on the output of factor analysis, the mean factor scores arrived were further used in Binary regression analysis.

3.4.2. Regression Analysis

To establish the relationship between the dependent and independent variables in the study, Regression analysis was conducted.

For the analysis, the confidence level is set to 90% which means if $P < 0,10$, the result was statistically significant. On the contrary, if P-value $> 0,10$, the results were considered to have no statistical significance.

Binary Regression Analysis was conducted to estimate the relationship between Store Choice (the dependent variable) and Store location, Store price, Store environment & Store Assortments, Store Service Quality and Store loyalty Program (the independent variables) as mentioned earlier. Appendix (6-9) displays the results of Binary Regression Analysis when store choices were Rimi, Prisma, Maxima and Other stores (Coop, Lidl, Selver).

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Further, two control variables were also included in the analysis as independent variables to examine their relationship with Store choice. The results in Appendix 10 display that there was no significant influence of these control variables on Store choice.

Hypotheses (H1, H2, H3, H4&H5, H6) were developed from the study model and were tested on the Regression Coefficients in the Binary Regression Model to display the following results:

H1: Store location has an influence on international students' store choices.
The results from binary regression analysis show that there was a significant relationship between store location and store choice (Rimi). Since the P-value was then alpha level < 0,10 (i.e., 0,070), it can be stated that the hypothesis was accepted.

H2: Store prices have an influence on international students' store choices.
The results from binary regression analysis show that there was a significant relationship between store price and store choice (Prisma and Maxima). Since the P-value was then alpha level < 0,10 (i.e., 0,042 and 0,039 respectively), it can be stated that the hypothesis was accepted.

H3 & H4: Store environment has an influence on international students' store choice & Store assortments has an influence on international students' store choices.
The results from binary regression analysis show that there was a significant relationship between store environment + Store assortments and store choice (Maxima). Since the P-value was then alpha level < 0,10 (i.e., 0,062), it can be stated that the hypothesis was accepted. Since the variables for environment and assortment were combined the research model can be adjusted to a new variable instead of the two.

H5: Store service quality has an influence on international students' store choices.
The results from binary regression analysis show that there was no significant relationship between store service quality and store choice. Therefore, the null hypothesis was accepted. Since H5 is rejected, Store service quality will be excluded from the research model.

H6: Store loyalty programs have an influence on international students' shopping behaviour.

The results from binary regression analysis show that there was a significant relationship between a store loyalty program and store choice (Prisma). Since the P-value was then alpha level < 0,10 (i.e., 0.073), it can be stated that the hypothesis was accepted.

3.4.3. Multicollinearity in Regression Analysis

To assess the presence of multicollinearity, the same variables from binary regression analysis were taken as dependent in linear regression. As the collinearity diagnostic is based on independent variables, the choice of the dependent variable was not vital. Multicollinearity was measured by Variance Inflation factors and tolerance for each variable. As earlier stated by Daoud (2017), Variance inflation factor $1<$ Variance Inflation factor < 5, specifies that the variables are moderately correlated to each other and Variance Inflation factor > 10 indicates the presence of multicollinearity. Therefore, the analysis further shows the following results on Multicollinearity as indicated in Table 8 below (also see Appendix 11).

Table 8. Multicollinearity (Coefficients)

	MODEL	UNSTANDARDIZED COEFFICIENTS	COEFFICIENTS	STANDARDISED COEFFICIENTS			90.0% CONFIDENCE	INTERVAL FOR B		
		B	STD. ERROR	BETA	T	SIG.	LOWER BOUND	UPPER BOUND	COLLINEARITY TOLERANCE	VIF
1	(CONSTANT)	3.529	1.083		3.26	0.002	1.732	5.327		
	Factor1 Store environment assortments	-0.217	0.19	-0.121	-1.145	0.255	-0.532	0.098	0.877	1.14
	Factor1 Store Price	0.153	0.189	0.089	0.807	0.421	-0.162	0.468	0.801	1.248
	Factor1 Store Loyalty Program	0.046	0.131	0.039	0.354	0.724	-0.171	0.264	0.804	1.243
	Factor1 Store Location	-0.265	0.198	-0.138	-1.342	0.183	-0.593	0.063	0.926	1.08
a. Dependent Variable: Preferred Supermarket coded										

Source: Author's calculation based on collected data

As shown in Table 8. above, the collinearity statistics show that the Variance Inflation factors for all independent variables were below 10 and have high tolerance values. Hence, the research model was proven to be satisfactory as there was no multicollinearity phenomenon.

All in all, the results make it clear that store attributes affect foreign students' store choices and that the formed research model is accepted.

The next section provides the author's findings, discussion and conclusion on the research findings followed by future recommendations to the researchers.

4. FINDINGS AND DISCUSSION

Through this research, a good insight was developed into store attributes foreign students consider important. This study provides an understanding of the attributes affecting their choice of retail store chains in Estonia, an area that has received relatively little attention thus far. Most hypotheses are supported by the data, which provides evidence in support of the theoretical framework built. More specifically, it was found that out of the six attributes examined, there were five attributes which influenced international students' choice of retail store chains. These were store location, store price, store environment + assortments, and store loyalty programs.

The key finding in the study was that store location was the top chosen attribute meaning it was the most important factor that influenced foreign students followed by store price. The study by Arnold, Oum, & Tigert (1983) also examined these attributes except for Store Loyalty Program and found similar results.

The study further provides greater insight into the influence of store location on international students as the results suggest that attributes relating to store location like having stores where making frequent visits are easier and stores that are easily accessible with a good network of transportation are important for foreign students when choosing retail stores. Also, having lower prices than competitors and quality products are considered vital in selecting where to shop. In addition to these, having a variety of merchandise with a good display of products and environmental cleanliness also drives them. However, by statistical examination via the factor analysis method, this research found that the attributes of store environment and store assortments can be considered as one factor instead of two.

Amongst all attributes, the influence of the Store loyalty program was found to be the least important to foreign students. However, the results indicate that foreign students prefer stores with loyalty programs and the presence of such schemes makes them shop frequently which indicates their influence on shopping behaviour. However, results also suggest that international students would shop at any store regardless of whether the store has loyalty programs or not. Also, their patronage towards loyalty programs was seen to be low in comparison to the other attributes as they are not likely to change supermarkets just for the sake of loyalty schemes.

This study also suggested that there was no significant association of store service quality with store choices which indicates that foreign students will select stores even if they don't have friendly employees with good product knowledge, unlike Estonian customers who find retail service quality is an important factor (McKenzie, 2006).

The statistical tests further confirmed that the above-mentioned attributes except for store service quality have a significant association with store choices. Based on the research findings, the author proposes adjustments to the existing research model (see figure 1). The proposed research model with five attributes was tested for multicollinearity. The results indicated no issues of multicollinearity meaning that the adjusted model is satisfactory.

The research also analysed reasons for store selection amongst international students and found that respondents preferred Coop stores because of their location and store loyalty program (see figures 3 & 6), Lidl because of its prices (see figure 3) and Selver because of its environment + assortments (see figure 4). In other words, store location and loyalty programs were important criteria for Coop users in comparison to store environment + assortments and store price. Similarly, for Rimi users, store location and store environment + assortments were more vital than store prices or store loyalty programs. Criteria for Rimi users were just opposite from Maxima users as they were found more driven by store price and store loyalty program than store location and store environment + assortments.

From the analysis, it can also be concluded that store loyalty programs influence different consumers' loyalty levels differently which is similar to the findings of Liu (2007). For Lidl users, Store price was found as the only crucial factor. Another interesting finding was that foreign students' store choices were not affected by their age and/or gender (see Appendix 10). The author also determined the significance level of controlling variables like gender & age with the store choices but found no significant association between them which means that gender & age of foreign students in Estonia have no association with the store choices they make.

The last section provides the conclusion generated from the findings and future recommendations.

CONCLUSION

The retail industry has become more dynamic than ever. Retailers need to keep up with the pace and evolve to succeed. Providing customers with an enriching shopping experience has become a bigger challenge due to the availability of numerous options. Retailers are looking into several ways how they can motivate their customers to win over their contenders. Understanding what drives customers' buying decisions is vital for a business's success and long-term growth. A customer's buying decision is influenced by several factors which provide the maximum benefits. In the context of retailing, store selection plays a vital role in inducing customers to make purchases. Making store choices involves evaluation of various store attributes which leads to either selection or rejection of a store. So, this research has been based on the topic of store attributes influencing store choices.

The thesis aims to find store attributes that affect foreign students' when making store selections in Estonia and thereafter analyse the influence of store loyalty programs on their shopping behaviour. The idea is to understand what store attributes are important to foreign students while making store selections. The research has focused on foreign students as this customer segment has remained unexplored and has received very little attention so far. With the increase in student mobility in Estonia, there was a need to research international students to understand what influences their choices in the retailing context. Also, about store attributes, there is limited research on foreign students, so, this study will help fill in the gap in the literature.

Businesses adopt universal models for their success and sustainability, but it is important to note that what works for one segment may not be feasible for others. To be successful, businesses need to establish business models that take into consideration the preferences and needs of their target market or customer segment. A deeper understanding of the potential target market is one of their success mantras for businesses. Therefore, this study examines what influences the foreign students' store choices who are the target customer segment for this research.

The first part of the study presents existing literature on the subject, followed by a conceptual framework, research methodology analysis of data and results. In the literature review section, concepts relating to store choice and store attributes affecting foreign students' choices were

discussed followed by the conceptual framework where various concepts/ topics relevant to the research were explored. Based on the literature from past studies, a research model was formed followed by hypothesis testing. The Stimulus-Organism-Response model was developed which is composed of three constructs i.e., stimulus, organism, and response where the stimulus is the independent variable, the organism is a mediator and response is the dependent variable. To find the influence of store attributes namely store location, store prices, store environment, store services, store assortments and store loyalty programs (Stimuli) on international students' (Organism) store selection choice (Response) six different hypotheses were formulated.

The quantitative research method was used to analyse the data collected for the research. The data was collected through a survey strategy via an online questionnaire. IBM SPSS Software and Microsoft Excel were used as tools for analysing data. Statistical tests were performed to measure the association of store attributes with store choice. As per the outcome of the analysis, the current research model was adjusted and tested for acceptance. The test proved the model to be satisfactory.

The research enabled the author to analyse the attributes that affect foreign students' store choice decisions. Significant association of attributes like store location, store price, store environment + assortments and store loyalty program were found with store choices. Also, the influence was drawn between store loyalty programs and shopping behaviour. The results indicate that students give utmost importance to store location followed by store price when deciding where to shop. Attributes like store service quality were found to have no impact on their retail store selection. Therefore, the author proposed to remove this attribute from the research model and make the following adjustment.

As per the outcome of data analysis, the location of the store is found to be the major consideration for foreign students especially if it is accessible with a good network of transport and it is easier to make frequent visits to the stores. Stores built in well-connected areas, closer to universities, and student dorms are preferable as it enables students to make frequent visits and easily access them. Store price was considered as the next important attribute for store selection as they value lower prices and quality products. It was clear that students will choose a store which offers the products at a lower price in comparison to others. In addition to location and

price other attributes like store environment and assortments also influence their selection. They were found driven by the environment being clean and tidy, having a good atmosphere and decor can enlighten their mood, numerous product varieties and multi-brands can satisfy them with multiple options, good display of merchandise and assortments can help them find what they are looking for. This research further adds to the literature by indicating that foreign students also consider store loyalty programs in selecting where to shop. Loyalty programs make students shop more frequently at stores and significantly affect their shopping behaviour. From choosing between a store with or without a loyalty program foreign students favour going with the former option. Interestingly this research also found that foreign students were loyal customers as they wouldn't shift to other stores just for the sake of loyalty schemes. However, no influence was found on service quality attributes which include determinants like the presence of friendly employees and employees having good product knowledge.

Based on the above research findings, the retailers and store managers are recommended to incorporate the above-found store attributes into their marketing strategies and design an effective business model keeping in mind the needs of their target market. To enhance students' shopping experiences, they can focus on having stores that provide good accessibility and connectivity with transport networks so that students can make frequent visits, have product prices lower than their competitors without compromising on quality, and have a clean and tidy environment with a pleasant atmosphere and decor. The focus can also extend to provide special offerings on store loyalty programs for students to increase their repurchase intentions and win their long-term loyalty.

As for future research, the researchers can include Estonian students in the data sample to see if the research results vary for local students and foreign students. For extension of the study, future studies can be conducted in other Baltic states or countries. Factors like perceptions, cultural impact, religious beliefs, and income level of international students alongside store attributes can be examined for a wider context and understanding of students' purchasing behaviour. Also, it can be interesting to research traditional stores and different store formats other than supermarkets to find if the same attributes are considered important for foreign students across all store formats.

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APPENDICES

Appendix 1. Survey questionnaire

Gender

○ Male

○ Female

○ Prefer not to say

Age *

Date

dd.mm.yyyy

What is your country of origin? *

Your answer

How many years have you lived in Estonia ? *

Your answer

Please select what applies to you. *

○ Student

○ Student and working part time

○ Student and working full time

○ Former student

Which supermarket(s) do you shop at? (Please select all that apply) *

☐ Rimi

☐ Prisma

☐ Maxima

☐ Selver

☐ Coop

☐ Lidl

☐ Other: _____

Which is your most preferred supermarket ? *

○ Rimi

○ Prisma

○ Maxima

○ Selver

○ Coop

○ Lidl

Thinking about your preferred supermarket, please answer the following: -

What are the factors that affect your choice? (Please select all that apply) *

- ☐ Price
- ☐ Assortments
- ☐ Location
- ☐ Environment
- ☐ Service quality
- ☐ Store Loyalty program
- ☐ Other: _____

Please indicate your level of agreement with the following statements.
1 = Strongly disagree , 2 = Disagree 3 = Neutral, 4 = Agree, 5 = Strongly agree

I am influenced by the store's atmosphere and the decor. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as it has an overall lower price than its competitors. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as the merchandise is displayed and the assortment is good with enough space between display areas. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as the employees are friendly and pleasant. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as the price is reasonable for the value of the product and is at par with quality. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as the location of the store is easily accessible with a good network of transportation. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the stores as it keeps multi-brands and product variety. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as it is easy to make frequent visits to the store. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as the store is clean and tidy. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to shop in the store as the employees have good product knowledge. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I prefer to use store loyalty card offers in the store. *

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always

Please indicate likelihood.
1 = Very unlikely , 2 = Unlikely 3 = Not Likely, 4 = Likely, 5 = Very Likely

How likely do you agree with this statement? Having a loyalty card makes me want to shop in the store more frequently: *

	1	2	3	4	5	
Very unlikely	○	○	○	○	○	Very likely

How likely would you shop in any store that suits you regardless of whether they have a loyalty program? *

	1	2	3	4	5	
Very unlikely	○	○	○	○	○	Very likely

How likely are you to change the supermarket for the sake of a loyalty scheme? *

	1	2	3	4	5	
Very unlikely	○	○	○	○	○	Very likely

Thank you !

Appendix 2. Survey responses

Gender
110 responses
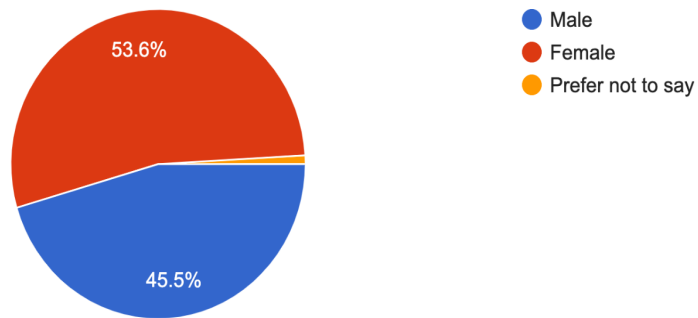
Age Groups
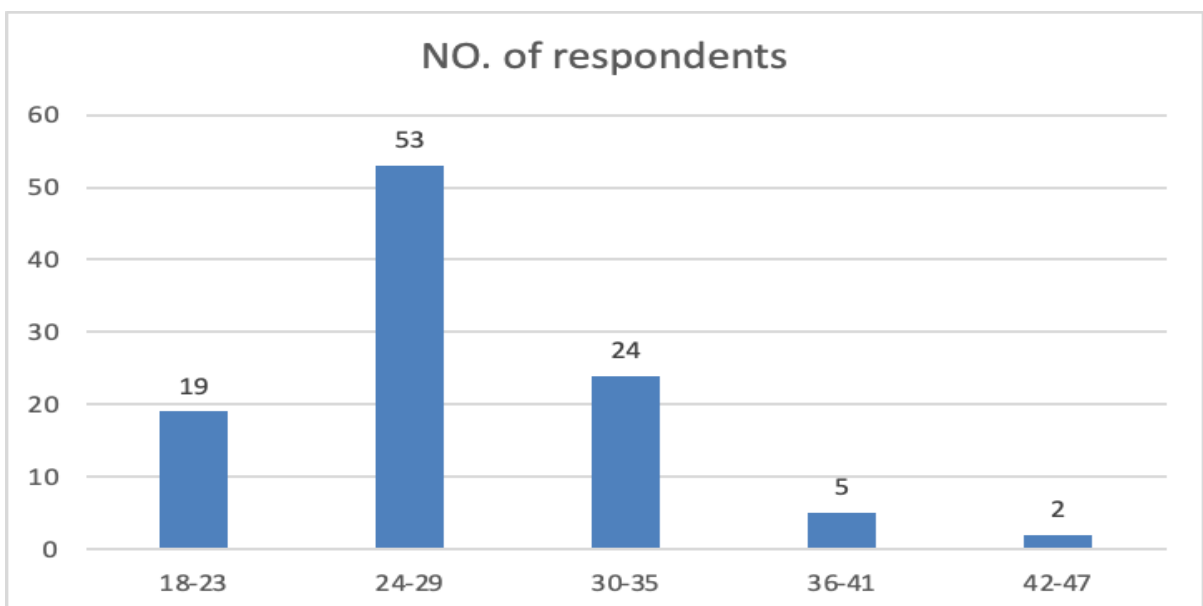
Country of origin
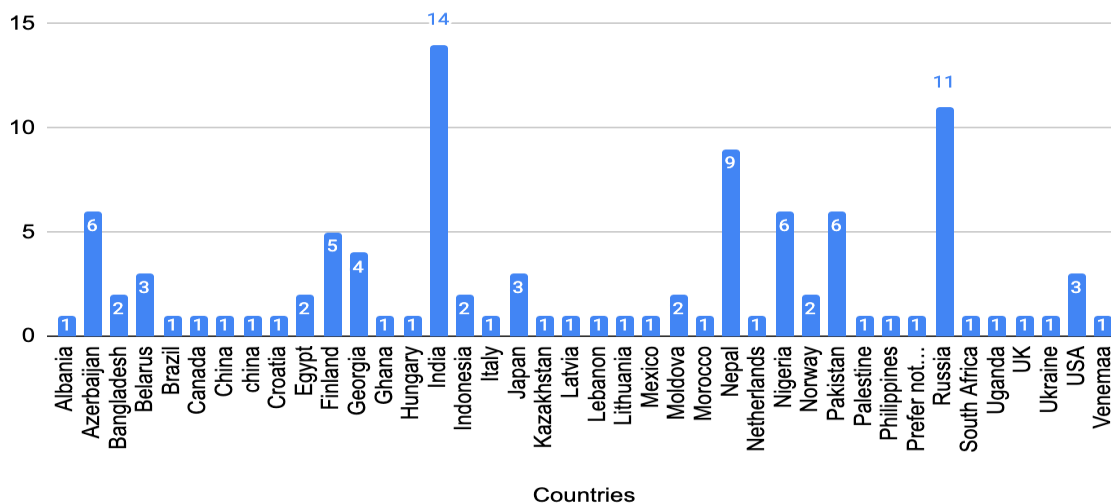
Please select what applies to you.
110 responses

- Student
- Student and working part time
- Student and working full time
- Former student

30%
33.6%
10%
26.4%
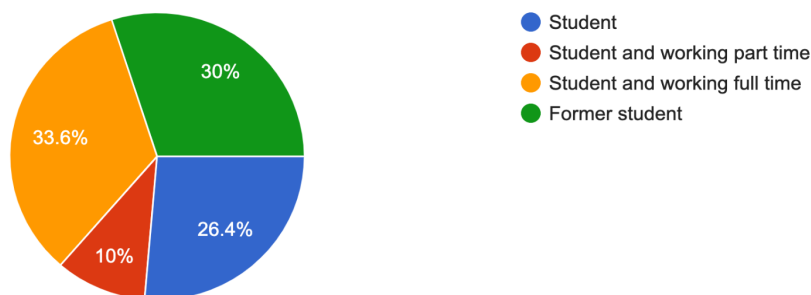
Which supermarket(s) do you shop at? (Please select all that apply)
110 responses

Supermarket	Responses
Rimi	95 (86.4%)
Prisma	71 (64.5%)
Maxima	66 (60%)
Selver	59 (53.6%)
Coop	33 (30%)
Lidl	32 (29.1%)
Kaubamaja	2 (1.8%)
Promo, Solaris, Viru	1 (0.9%)
Medium and small shops as…	1 (0.9%)
Solaris	1 (0.9%)
Kaubamaja Toidumaailm	1 (0.9%)
Ilma pood	1 (0.9%)
Akadeemia shop	1 (0.9%)
Stockmann	1 (0.9%)
Various small shops in town…	1 (0.9%)
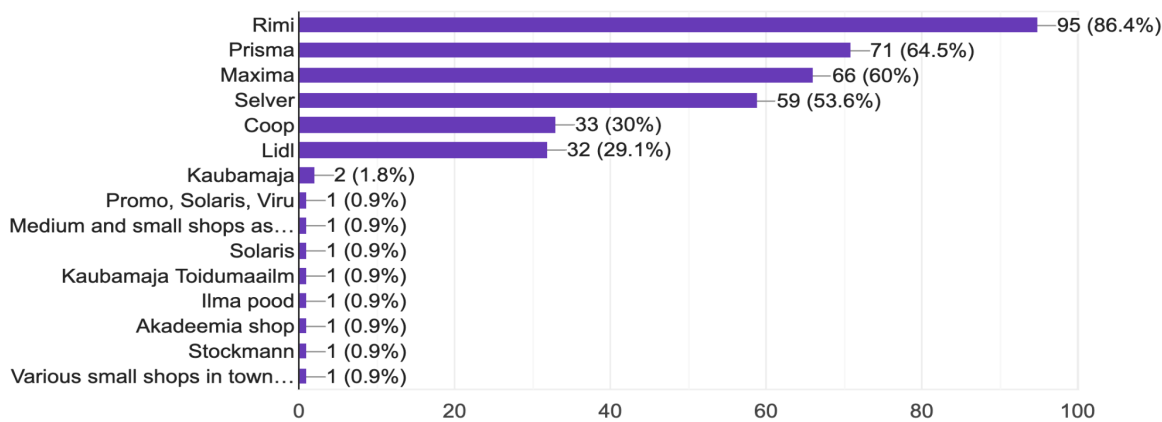
Which is your most preferred supermarket ?
110 responses

- Rimi
- Prisma
- Maxima
- Selver
- Coop
- Lidl

19.1%
22.7%
40.9%
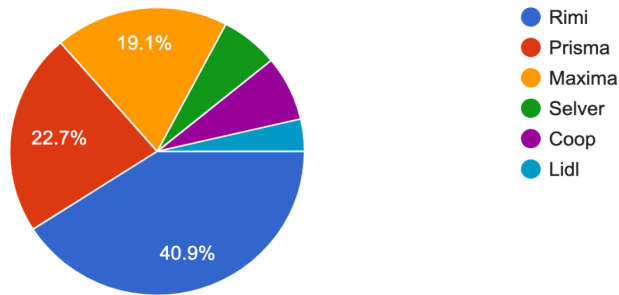
I am influenced by the store's atmosphere and the decor.
110 responses
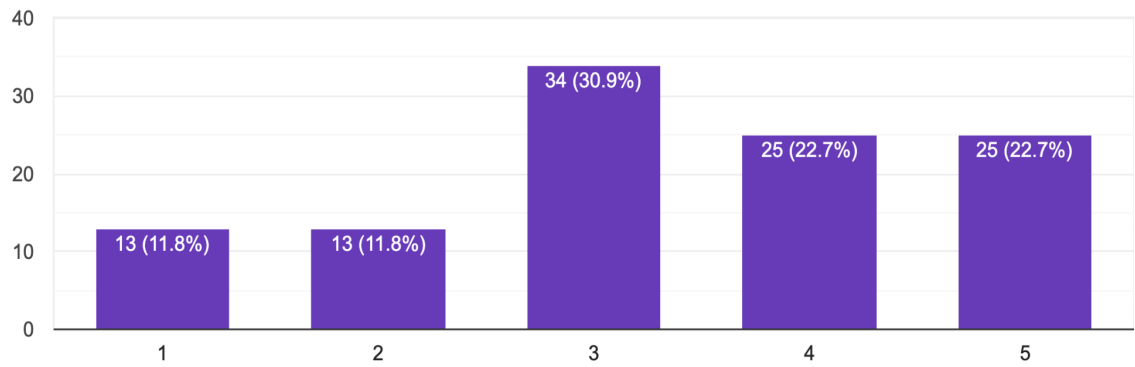
	1	2	3	4	5
	13 (11.8%)	13 (11.8%)	34 (30.9%)	25 (22.7%)	25 (22.7%)

I prefer to shop in the store as the merchandise is displayed and the assortment is good with enough space between display areas.
110 responses

	1	2	3	4	5
	5 (4.5%)	13 (11.8%)	17 (15.5%)	45 (40.9%)	30 (27.3%)
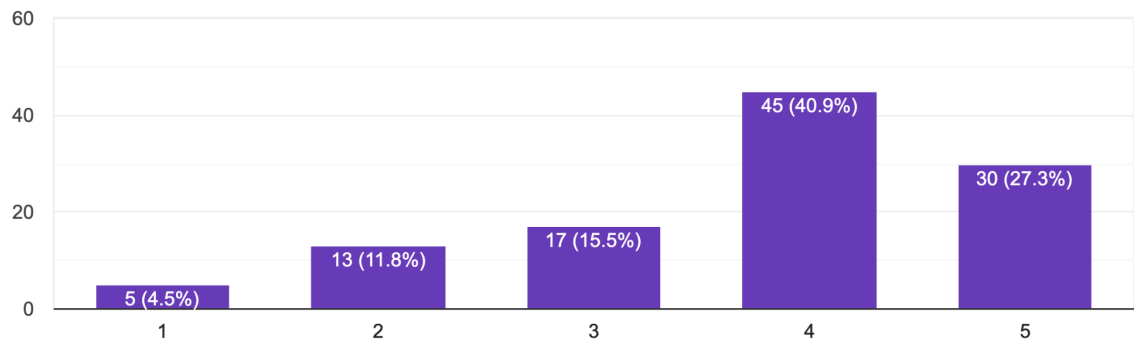
I prefer to shop in the store as it has an overall lower price than its competitors.

110 responses
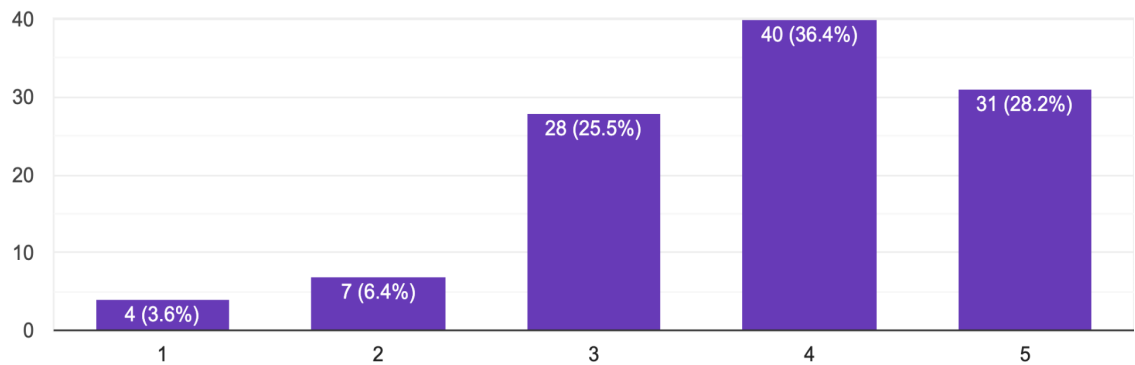
I prefer to shop in the store as the employees are friendly and pleasant.

110 responses
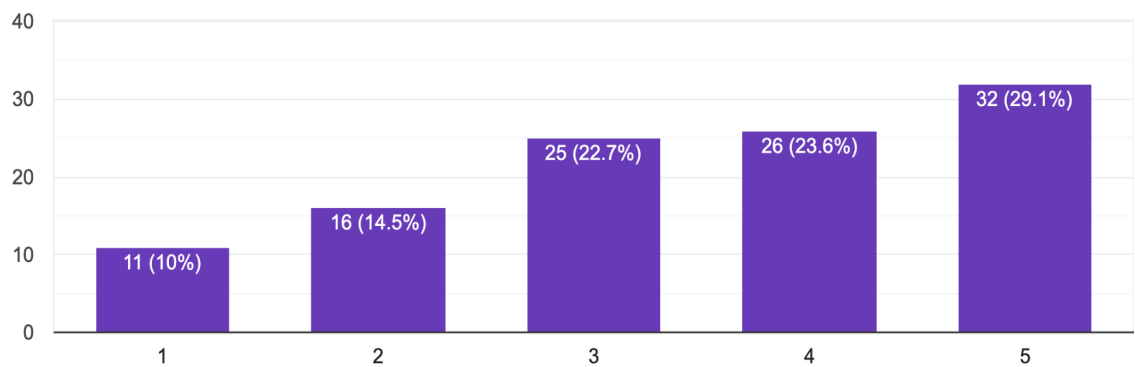
I prefer to shop in the store as the location of the store is easily accessible with a good network of transportation.

110 responses
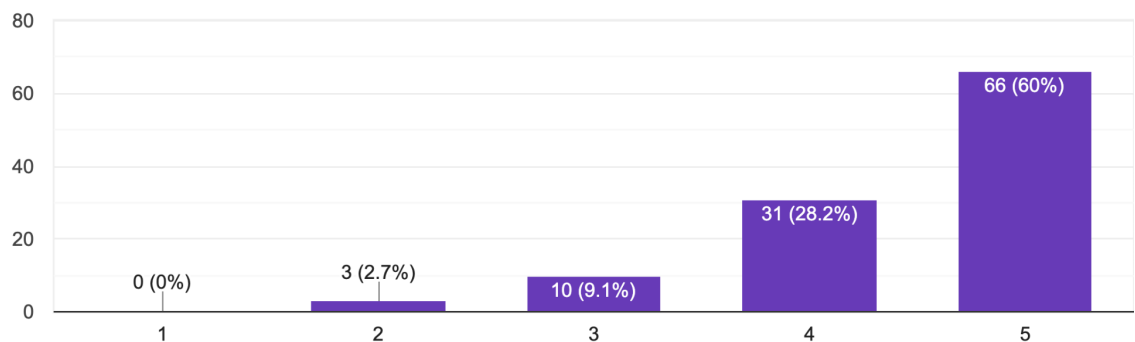
I prefer to shop in the store as the price is reasonable for the value of the product and is at par with quality.

110 responses
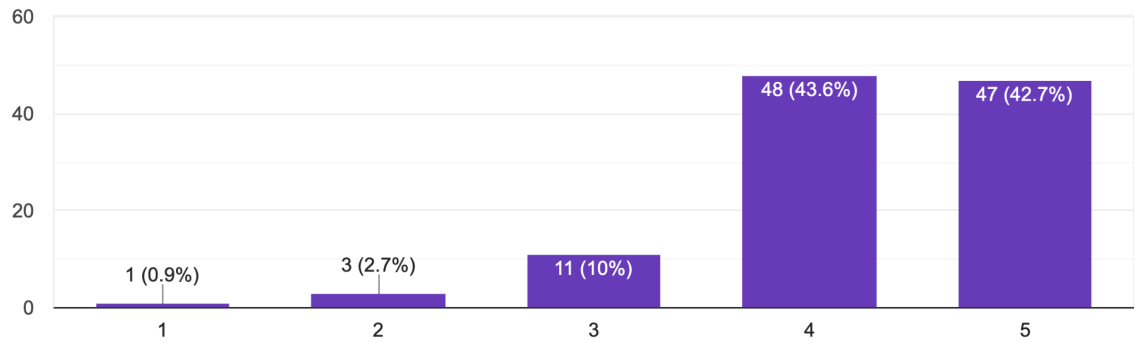
I prefer to shop in the stores as it keeps multi-brands and product variety.

110 responses
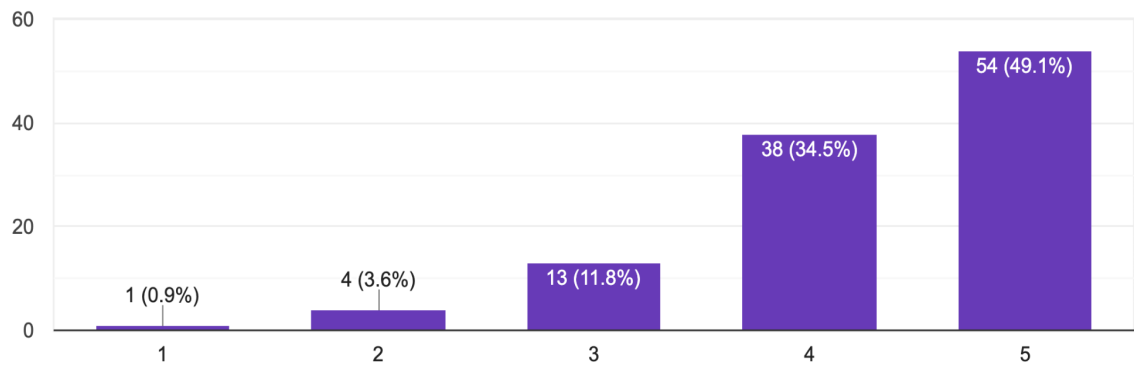
I prefer to shop in the store as it is easy to make frequent visits to the store.

110 responses
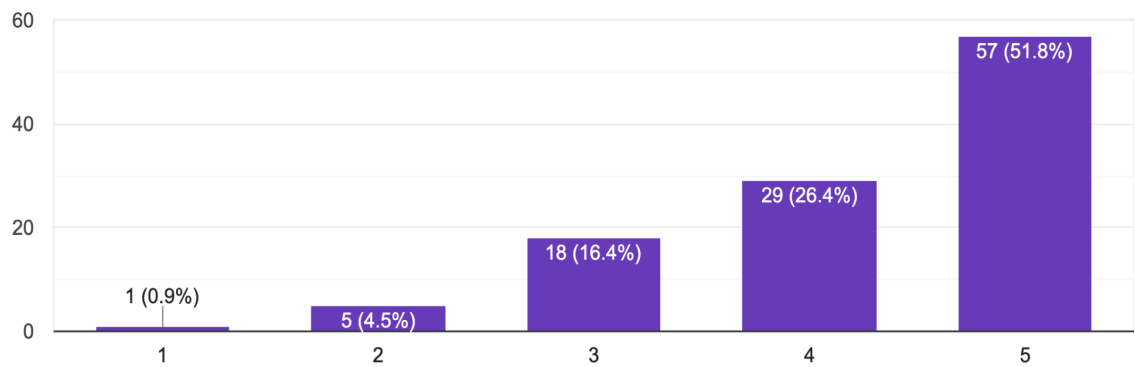
I prefer to shop in the store as the store is clean and tidy.

110 responses
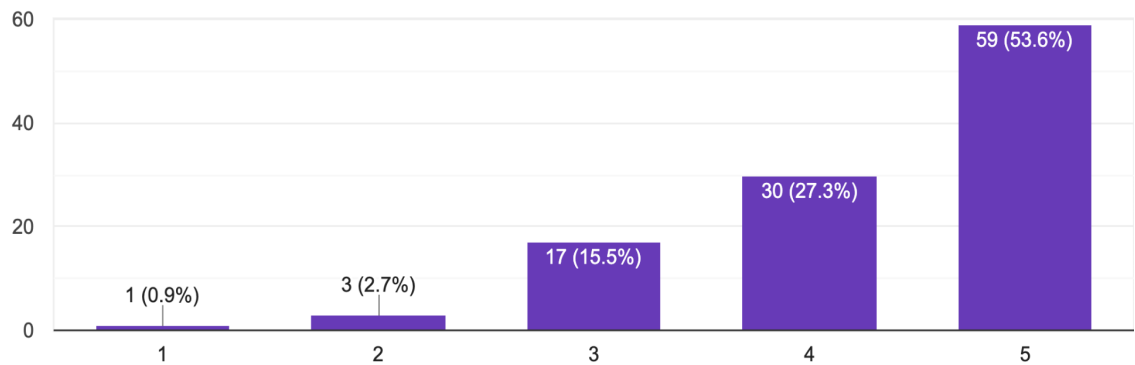
I prefer to shop in the store as the employees have good product knowledge.

110 responses
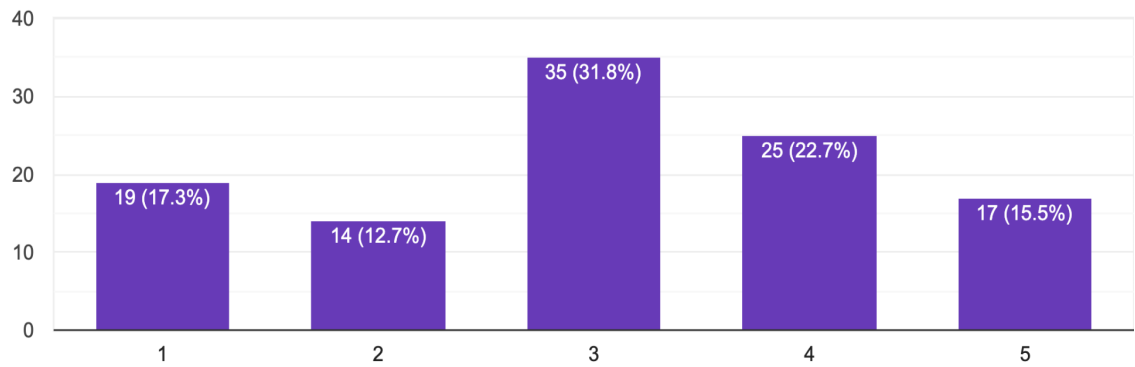
How likely do you agree with this statement? Having a loyalty card makes me want to shop in the store more frequently:

110 responses
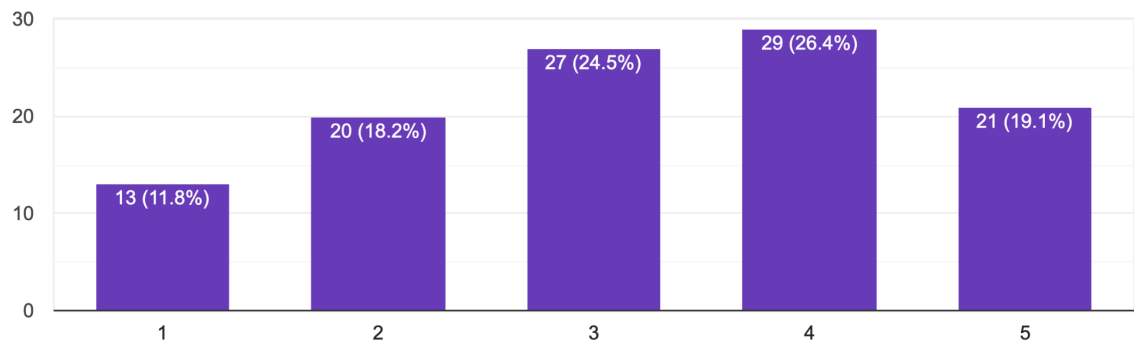
How likely would you shop in any store that suits you regardless of whether they have a loyalty program?

110 responses
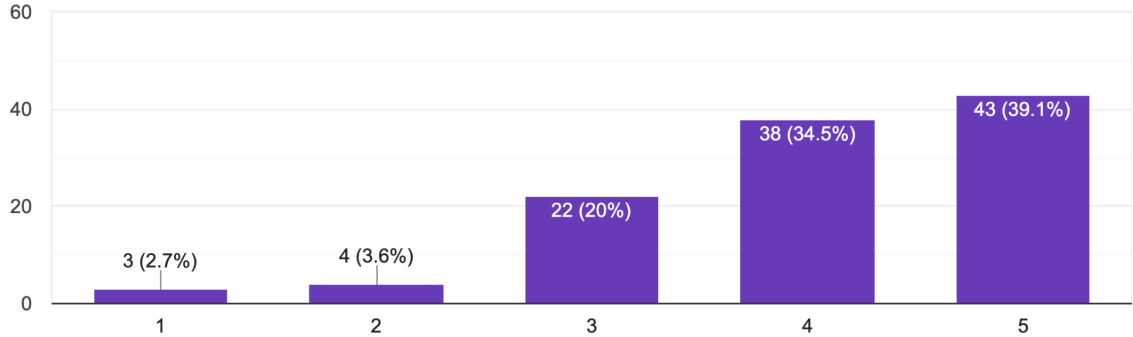
How likely are you to change the supermarket for the sake of a loyalty scheme?

110 responses
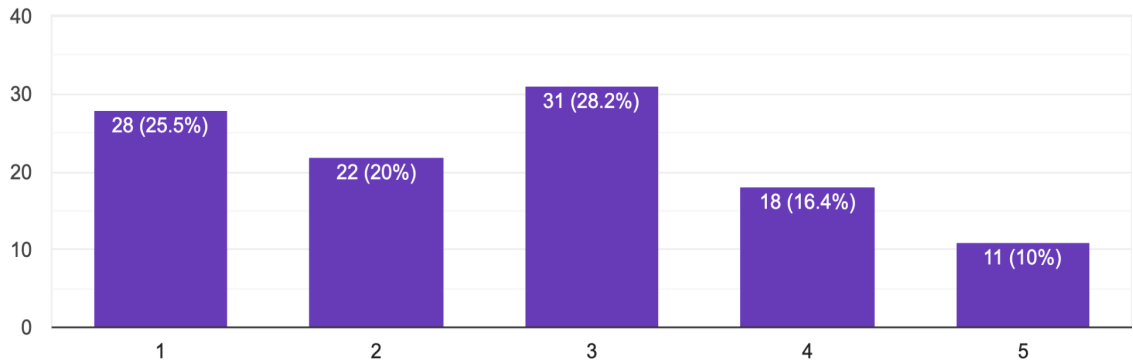
Appendix 3. **Characteristics of Respondents**

CHARACTERISTICS	NUMBER	PERCENTAGE (%)
GENDER		
Male	49	45
Female	54	54
Prefer not to say	1	1
AGE GROUPS		
18-23	19	18
24-29	53	51
30-35	24	23
36-41	5	5
42-47	2	2
Unknown	1	1
OCCUPATION		
Student	29	28
Student and working part-time	9	9
Student and working full time	33	32
Former student	33	31
YEARS LIVED IN ESTONIA	NUMBER	PERCENTAGE (%)
Less than a year	20	19
1 year	20	19
2 years	17	16
3 years	18	17
4 years	12	12
5 years and above	17	17

Source: Based on the author's data collection

Appendix 4. Characteristics of retail store chain

SUPERMARKET(S)	NUMBER	PERCENTAGE (%)
Rimi	42	40
Prisma	22	21
Maxima	21	20
Selver	7	7
Coop	8	8
Lidl	4	4

Source: Based on the author's data collection

Appendix 5. Means and Standard Deviation (store-wise)

WHICH IS YOUR MOST PREFERRED SUPERMARKET?		FACTOR1 STORE ENVIRONMENT + ASSORTMENTS	FACTOR1 STORE PRICE	FACTOR1 STORE LOYALTY PROGRAM	FACTOR1 STORE LOCATION
Coop	Mean	3,6875	4,0000	3,8750	4,7500
	N	8	8	8	8
	Std. Deviation	0,92341	0,53452	0,99103	0,46291
Lidl	Mean	3,2500	4,5000	2,7500	3,8750
	N	4	4	4	4
	Std. Deviation	0,79057	0,40825	1,50000	0,25000
Maxima	Mean	3,6786	4,3095	3,6190	4,2143
	N	21	21	21	21
	Std. Deviation	0,74642	0,58043	0,97346	0,85982
Prisma	Mean	3,9091	3,5000	2,7955	4,0682
	N	22	22	22	22
	Std. Deviation	0,75414	1,04654	1,17168	0,83517
Rimi	Mean	3,9821	4,1190	3,5119	4,5238
	N	42	42	42	42
	Std. Deviation	0,83080	0,81756	1,26630	0,68922
Selver	Mean	4,3214	3,7857	3,6429	4,2143
	N	7	7	7	7
	Std. Deviation	0,53452	0,69864	1,21499	0,39340
Total	Mean	3,8774	4,0096	3,3894	4,3365
	N	104	104	104	104
	Std. Deviation	0,79744	0,83602	1,20468	0,74535

Source: Based on the author's data collection

Appendix 6. Binary Regression Analysis with store choice: Rimi

OMNIBUS TESTS OF MODEL COEFFICIENTS				
		Chi-square	df	Sig.
Step 1	Step	5,646	4	0,227
	Block	5,646	4	0,227
	Model	5,646	4	0,227

MODEL SUMMARY			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	134,658[a]	0,053	0,071

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than 0,001

CLASSIFICATION TABLE[a]					
			Predicted		
			Rimi		Percentage Correct
Observed			.00	1.00	
Step 1	Rimi	.00	51	11	82,3
		1.00	25	17	40,5
	Overall Percentage				65,4

a. The cut value is 0,500

VARIABLES IN THE EQUATION							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Factor1 Store environment + assortments	0,179	0,281	0,405	1	0,525	1,195
	Factor1 Store Price	0,093	0,283	0,109	1	0,742	1,098
	Factor1 Store Loyalty Program	0,041	0,188	0,048	1	0,826	1,042
	Factor1 Store Location	0,564	0,312	3,283	1	**0,070**	1,758
	Constant	-4,072	1,715	5,641	1	0,018	0,017

a. Variable(s) entered on step 1: Factor1 Store environment+assortments, Factor1StorePrice, Factor1StoreLoyaltyProgram, Factor1StoreLocation

Source: Based on the author's data collection

Appendix 7. Binary Regression Analysis with store choice: Prisma

OMNIBUS TESTS OF MODEL COEFFICIENTS				
		Chi-square	df	Sig.
Step 1	Step	15,663	4	0,004
	Block	15,663	4	0,004
	Model	15,663	4	0,004

MODEL SUMMARY			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	91,662[a]	0,140	0,217

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than 0,001

CLASSIFICATION TABLE[a]					
			Predicted		
			Prisma		
Observed			.00	1.00	Percentage Correct
Step 1	Prisma	.00	80	2	97,6
		1.00	17	5	22,7
	Overall Percentage				81,7

a. The cut value is 0,500

VARIABLES IN THE EQUATION							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1a	Factor1 Store environment+assortments	0,580	0,393	2,178	1	0,140	1,787
	Factor1StorePrice	-0,689	0,338	4,140	1	**0,042**	0,502
	Factor1StoreLoyaltyProgram	-0,465	0,260	3,213	1	**0,073**	0,628
	Factor1StoreLocation	-0,382	0,357	1,147	1	0,284	0,682
	Constant	2,197	1,962	1,254	1	0,263	8,997

a. Variable(s) entered on step 1: Factor1 Store environment+assortments, Factor1StorePrice, Factor1StoreLoyaltyProgram, Factor1StoreLocation

Source: Based on the author's data collection

Appendix 8. Binary Regression Analysis with store choice: Maxima

OMNIBUS TESTS OF MODEL COEFFICIENTS		Chi-square	df	Sig.
Step 1	Step	9,299	4	0,054
	Block	9,299	4	0,054
	Model	9,299	4	0,054

MODEL SUMMARY			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	95,337[a]	0,086	0,135

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than 0,001

CLASSIFICATION TABLE[a]			Predicted		
			Maxima		Percentage Correct
Observed			.00	1.00	
Step 1	Maxima	.00	81	2	97,6
		1.00	19	2	9,5
	Overall Percentage				79,8

a. The cut value is 0,500

VARIABLES IN THE EQUATION							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ᵃ	Factor1 Store environment + assortments	-0,624	0,334	3,483	1	**0,062**	0,536
	Factor1StorePrice	0,804	0,389	4,274	1	**0,039**	2,236
	Factor1StoreLoyaltyProgram	0,223	0,236	0,893	1	0,345	1,250
	Factor1StoreLocation	-0,410	0,351	1,370	1	0,242	0,663
	Constant	-1,331	2,088	0,406	1	0,524	0,264

a. Variable(s) entered on step 1: Factor1 Store environment+assortments, Factor1StorePrice, Factor1StoreLoyaltyProgram, Factor1StoreLocation

Source: Based on the author's data collection

Appendix 9. Binary Regression Analysis with store choice: Other stores (Coop, Selver and Lidl)

OMNIBUS TESTS OF MODEL COEFFICIENTS		Chi-square	df	Sig.
Step 1	Step	0,746	4	0,946
	Block	0,746	4	0,946
	Model	0,746	4	0,946

MODEL SUMMARY			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	98,148[a]	0,007	0,012

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than 0,001

CLASSIFICATION TABLE[a]			Predicted		
			Others		Percentage Correct
Observed			.00	1.00	
Step 1	Others	.00	85	0	100,0
		1.00	19	0	0,0
	Overall Percentage				81,7

a. The cut value is 0,500

VARIABLES IN THE EQUATION							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ᵃ	Factor1 Store environment+ assortments	-0,170	0,332	0,260	1	0,610	0,844
	Factor1StorePrice	-0,039	0,349	0,013	1	0,911	0,962
	Factor1StoreLoyaltyPro gram	0,182	0,242	0,565	1	0,452	1,199
	Factor1StoreLocation	0,061	0,362	0,029	1	0,866	1,063
	Constant	-1,580	1,978	0,638	1	0,424	0,206

a. Variable(s) entered on step 1: Factor1 Store environment+assortments, Factor1StorePrice, Factor1StoreLoyaltyProgram, Factor1StoreLocation

Source: Based on the author's data collection

Appendix 10. Binary Regression Analysis including Gender and Age

VARIABLES IN THE EQUATION (RIMI)							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Factor1 Store environment+assortments	0,245	0,286	0,733	1	0,392	1,277
	Factor1StorePrice	0,097	0,295	0,109	1	0,742	1,102
	Factor1StoreLoyaltyProgram	0,061	0,190	0,104	1	0,747	1,063
	Factor1StoreLocation	0,549	0,319	2,963	1	0,085	1,732
	Gender1	-0,101	0,414	0,060	1	0,806	0,904
	Age	0,000	0,000	1,787	1	0,181	1,000
	Constant	-26,308	16,931	2,414	1	0,120	0,000

VARIABLES IN THE EQUATION (PRISMA)							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Factor1 Store environment+assortments	0,606	0,425	2,033	1	0,154	1,833
	Factor1StorePrice	-0,669	0,351	3,630	1	0,057	0,512
	Factor1StoreLoyaltyProgram	-0,488	0,269	3,278	1	0,070	0,614
	Factor1StoreLocation	-0,317	0,364	0,759	1	0,384	0,728
	Gender1	-0,559	0,534	1,099	1	0,295	0,572
	Age	0,000	0,000	0,733	1	0,392	1,000
	Constant	18,841	18,850	0,999	1	0,318	152314845,255

VARIABLES IN THE EQUATION (MAXIMA)						
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Factor1 Store environment+assortments	-0,729	0,358	4,154	1	0,042	0,482
	Factor1StorePrice	0,807	0,381	4,491	1	0,034	2,241
	Factor1StoreLoyaltyProgram	0,220	0,239	0,845	1	0,358	1,246
	Factor1StoreLocation	-0,407	0,360	1,279	1	0,258	0,665
	Gender1	0,288	0,497	0,335	1	0,563	1,333
	Age	0,000	0,000	1,073	1	0,300	1,000
	Constant	19,788	20,659	0,917	1	0,338	392539729,966

VARIABLES IN THE EQUATION(OTHER STORES)						
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Factor1 Store environment+assortments	-0,153	0,337	0,206	1	0,650	0,858
	Factor1StorePrice	-0,028	0,357	0,006	1	0,936	0,972
	Factor1StoreLoyaltyProgram	0,186	0,242	0,593	1	0,441	1,205
	Factor1StoreLocation	0,011	0,368	0,001	1	0,976	1,011
	Gender1	0,421	0,502	0,703	1	0,402	1,523
	Age	0,000	0,000	0,155	1	0,693	1,000
	Constant	-9,743	19,615	0,247	1	0,619	0,000

Source: Based on the author's data collection

Appendix 11. Multicollinearity in Regression Analysis

MODEL SUMMARY				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,184a	0,034	-0,005	1,439

a. Predictors: (Constant), Factor1StoreLocation, Factor1 Store environment + assortments, Factor1StoreLoyaltyProgram, Factor1StorePrice

ANOVAª						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7,167	4	1,792	0,865	,488b
	Residual	204,987	99	2.071		
	Total	212,154	103			

a. Dependent Variable: Preferred Supermarket coded

b. Predictors: (Constant), Factor1StoreLocation, Factor1 Store environment + assortments, Factor1StoreLoyaltyProgram, Factor1StorePrice

COEFFICIENTSª		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	90.0% Confidence Interval for B		Collinearity Statistics		
Model		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF	
1	(Constant)	3,529	1,083		3,26	0,002	1,732	5,327			
	Factor1 Store environment + assortments	-0,217	0,19	-0,121	-1,145	0,255	-0,532	0,098	0,877	1,14	
	Factor1StorePrice	0,153	0,189	0,089	0,807	0,421	-0,162	0,468	0,801	1,248	
	Factor1StoreLoyaltyProgram	0,046	0,131	0,039	0,354	0,724	-0,171	0,264	0,804	1,243	
	Factor1StoreLocation	-0,265	0,198	-0,138	-1,342	0,183	-0,593	0,063	0,926	1,08	

a. Dependent Variable: Preferred Supermarket coded

COLLINEARITY DIAGNOSTICS[a]								
					Variance Proportions			
Model	Dimension	Eigenvalue	Condition Index	(Constant)	Factor1 Store environment + assortments	Factor1 StorePrice	Factor1 StoreLoyaltyProgram	Factor1 StoreLocation
1	1	4,853	1	0	0	0	0	0
	2	0,078	7,895	0,02	0,01	0	0,89	0,04
	3	0,032	12,394	0	0,76	0,24	0	0,08
	4	0,025	13,832	0,02	0,05	0,71	0,09	0,38
	5	0,012	20,009	0,96	0,18	0,05	0,01	0,51

a. Dependent Variable: Preferred Supermarket coded

Source: Based on the author's data collection

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