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AN EXPLORATION OF BUNDLING IN THE TELECOMMUNICATIONS INDUSTRY IN LATVIA

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Executive Summary

The telecommunications industry, once a pure monopoly, has gone through substantial changes because of deregulation, horizontal integration and most importantly due to disruptive innovations in several technologies that have undermined the previous telecommunications core competences and shifted away a substantial business value. At present we see that telecommunications is merging historically unmerged industries. It encourages competition, improves the functioning of the market and guarantees basic user rights. As a result, the focus on customer retention and business growth is becoming critically important, where bundling can be used as a strategy. Therefore the joint NPS and CLV analysis is the best indicator of a company's performance and growth. Thus when deciding on a marketing strategy, the usage of bundling on targeted customer segments has much deeper inner logics than that of selling products and maximizing sales.

The purpose of the present Diploma Project, therefore, is to explore bundling in the telecommunications industry in Latvia. The research specifically aims to:

1. Describe how bundling is being used in the telecommunications industry in Latvia;
2. Assess the impact of bundling on the long-term profitability of Lattelecom SIA;
3. Assess the relationship between bundling and customer loyalty (the NPS rate).

Primary and secondary data are used in order to provide answers to the research questions. Primary data include the data gathered from Lattelecom SIA systems. Secondary data are used for the Latvian telecommunication industry data analysis.

The analysis shows that the key individual products that are available in the Latvian market are: the Voice, Internet and pay TV services. There are a few hundred companies that operate at the national level providing at least one of the individual products, however only a few of them provide services at the national level – Lattelecom SIA, Baltcom (together with IZZI), Balticom and Viasat. Two bundling practices can be observed in Latvia – a mixed price bundling, where each component can be bought separately or as a bundle, and a pure price bundling where only one of the products can be bought separately. A quadruple-play bundle, where the mobile voice is added to the triple-play bundle, is not yet present in Latvia.

The analysis of the pricing strategy indicates that a great tactical difference exists. As we look into each proposal the difference is obvious, Lattelecom SIA offers are diversified at two levels – first, each product is provided either as a single product or within a bundle. The second dimension diversifies products between their detailed product groups, e.g. the Internet is diversified by speed and extra value provided. However offers of other companies in the market are less diversified – usually only providing the first level.

Main conclusions on the bundling strategy and its relation to the CLV and NPS metric application are:

- The triple-play product bundling, regardless of whether mixed or pure, have a positive effect on the NPS rate, i.e. negative NPS rates could turn positive if at least one product of the bundle has a positive NPS rate on its own. The NPS rate of a bundle is between min and max values of the product NPS rates which means that the bundle has a tendency to increase the NPS rate;
- The NPS increase does not mean an increase in the business growth – increase in revenues, as the NPS increase does not mean an increase in the number of customers;
- NPS has an indicative nature for customer loyalty but it should not be related to any financial aspects or the analysis of the company performance – it is a customer loyalty indicator at a given point of time;
- It is critical to analyse the NPS spread before drawing any conclusions, as the NPS rate alone could be misleading. Financial aspects are well indicated by CLV. Ideally, CLV and NPS should correlate positively, i.e. both – the company and the customer would benefit;
- Bundling can have a significant impact on holding the churn rates unchanged for the individual products in the bundle;
- More valuable bundles have greater ARPU than individual products;
- Irrespective of the NPS and ARPU rates, CLV may eventually have a substantially higher value in the bundle rather than individual components;
- Long-term and short-term aspects seem to be disappearing in the Latvian telecommunications industry, i.e. the product bundling and price bundling strategies are melting together.

The Diploma Project provides limitations and suggestions for further research thus drawing exact border between scope of the Diploma Project and possible directions to extend the research.

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1. Introduction

Bundling, known as the selling of more than one product as a combined product at a single price, is a common marketing strategy in many industries, including software, cable television, and fast food industries to name but a few. It is not uncommon that firms operating in telecommunications, financial services, health care, and information industries offer products in bundles.

Even though bundling has been used for several decades, the theory of bundling is still under development as business, products & services and technologies supporting production are constantly developing. At present, intangible product bundling, which involves also high-margin products that can be produced and sold at almost no cost, has come into play. Integration of the previously hard to imagine product sets is possible due to technological innovations. New product development can happen in a very short time span due to different materials and techniques available, like, composite materials, 3D printing, modular products, etc.

Our observations show that there are opposite views among telecommunications operators in respect of the bundling strategy. Some of them offer various kinds of product bundles, some – only individual products. According to the Harvard Business School research done by professor Vineet Kumar, product bundling is often successful only if the consumer is given the option of buying the same products separately (Gerdeman, 2012). We, however, argue that it is important not only to consider the price as a main objective but also analyse the background data, like Customer Lifetime Value (CLV) that could be a crucial indicator for decision-making on bundling. Research on how consumers view bundles in telecommunications industries has been scarce and not directly related to the advanced but relatively simple metrics. They are mostly related to customer satisfaction surveys that are criticized by many scholars.

The telecommunications industry, once a pure monopoly, has gone through substantial changes because of deregulation, horizontal integration and most importantly due to disruptive innovations in several technologies that have undermined the previous telecommunications core competences and shifted away a substantial business value. It has become easy to copy business models and challenge existing products that lead to tense competition and shrinking margins. We see a continuous expansion of the boundaries of the telecommunications industry via horizontal integration. In recent years TV has become an integral part of telecommunications industry. At present we see that telecommunications is merging historically unmerged industries. It encourages competition, improves the functioning of the market and guarantees basic user rights. The EU through regulations also intervenes in other industries, such as utilities, foreseeing digital metering of utility metering that means that telecommunications companies

may expand their business quite rapidly. As a result, the focus on customer retention and business growth is becoming critically important, where bundling can be used as a strategy. According to our knowledge, currently there is no common framework in place that could be applied to telecommunications industry companies in order to analyse the strategic marketing aspects.

The purpose of this Diploma Project, therefore, was to explore bundling in the telecommunications industry in Latvia. The research specifically aimed to:

1. Describe how bundling is being used in the telecommunications industry in Latvia;
2. Assess the impact of bundling on the long-term profitability of Lattelecom SIA;
3. Assess the bundling and customer loyalty (the NPS rate) relation.

To achieve the above, the authors:

1. Mapped the practice of bundling in the telecommunications industry in Latvia;
2. Measured the revenue generation of bundled and unbundled products based on Lattelecom SIA data;
3. Analysed NPS impacts and correlation with ARPU, churn and CLV rates.

We believe that the correlation between customer behaviour and mixed bundling or pure bundling products is not linear. The joint NPS and CLV analysis is the best indicator of a company's performance and growth. Thus when deciding on a marketing strategy, the usage of bundling on targeted customer segments has much deeper inner logics than that of selling products and maximizing sales. Aspects such as retention, churn, gains and marketing must be taken into account when deciding on a marketing strategy.

The primary data obtained from Lattelecom SIA retail operation (private segment) were used for the purposes of the present Diploma Project. To provide answers to the research questions, sales and survey data were gathered. In the analysis the NPS, ARPU and churn rates were calculated by using survey data, financial data and data on subscriptions, etc. that was gathered from Lattelecom SIA for 2001 - 2013. Data on the telecommunication industry were gathered from a customer survey as well as the publicly available information of the telecommunications company.

The research has been structured in several chapters. The literature review identified main theories and research done before, including the work performed by some recognized academics. The chapter also provides a brief theoretical background of the CLV and NPS calculations as well as uncovering the underlying logics for joining them together.

The chapter on research methodology presents the main methods used in data gathering, sources of those data as well as the frequency at which the data were gathered. The key objective

of the chapter was to set certain boundaries to the research by describing the data sets that were used, as well as to allow anybody to look into the methods used in the research thus allowing a constructive critique of the research done for the present Diploma Project. The chapters on research results and discussion of findings present answers to research questions by providing a detailed analysis of the telecommunications industry in Latvia, identifying the key revenue drivers, customer behaviour in response to pricing and bundling strategies, and suggest a framework for using bundling as a marketing strategy for telecommunications companies. The present Diploma Project includes many appendices containing the data used for the research.

2. Literature Review

The chapter on literature review uncovers the theoretical background of bundling and maps strategic aspects behind the theory. Customer lifetime value (CLV) and Net promoter score (NPS) can be used to estimate customer value and customer segmentation in the NPS spread. These metrics are closely interrelated as any changes in these metrics mean changes in the company's growth indicators. Thus it is important to understand what data is used to calculate these metrics – what are the main influencers, and how it is possible to interact in order to achieve target results.

2.1. Defining Bundling

Bundling is a marketing strategy where two or more separate products or services are priced as a package. It is a form of non-linear pricing (Wilson 1993), multi-part tariff is another form of non-linear pricing. Many authors have attempted to define bundling, however, they kept to a broader definition. The definition clearly consists of several terms, like 'separate products', 'price', 'package' and others, that require an additional explanation and research. The term 'separate products' has a huge impact on understanding the concept of bundling. A separate product is a product for which separate markets exists, because there are buyers who want to buy products separately (Stremersch & Tellis, 2002, January, p.56). According to Kotler & Armstrong (2001, p.320), the objectives of pricing are market survival, sales growth, profitability, competitive pricing, quality and image enhancement.

Stremersch & Tellis (2002, January, p.56) divide bundling into two major groups: (1) price bundling – separate products bundled together and sold with a discount, and (2) product bundling – integration and sale of two or more products or service at any price, like, interconnectivity or integrated telecom calling plans in telecommunication business. Price bundling is a pricing and promotional tool, while product bundling has a strategic aspect as it brings added value to the customer. Thus the strategic aspects of bundling are related to long-term and short-term business interests where product bundling represents long-term goals, but price bundling – short-term goals. We argue that the long-term and short-term aspects of bundling may disappear in industries where products and services are intangible and reorientation of the production process is not required.

There are three alternative bundling forms: (1) pure components, (2) pure bundling and (3) mixed bundling (Adams & Yellen, 1976, August). Under the pure components (or unbundling) strategy, the seller offers the products separately (but not as a bundle). Although

pure components and unbundling are essentially the same, Venkatesh & Rabikar (2006, p. 22) note that unbundling represents "the strategic uncoupling of a composite product (e.g., a news magazine) into its components". Pure components are then the slight contrast of offering two naturally separate products in their standalone form. Under a pure bundling, the seller offers the bundle alone; conversely, under a mixed bundling, the seller offers the bundle as well as the individual items (Schmalensee, 1984, p.220). The seller's decision involves choosing the particular strategy and the corresponding price(s) that maximize one's objective function. Bundling is significant in both monopolistic and competitive situations, and the guidelines often differ.

Term	Definition	Examples
Bundling	Bundling is the sale of two or more separate products in one package.	Opera season tickets, multimedia PC
Price bundling	Price bundling is the sale of two or more separate products as a package at a discount, without any integration of the products.	Luggage sets, variety pack of cereals
Product bundling	Product bundling is the integration and sale of two or more separate products at any price.	Multimedia PC, sound system
Pure bundling	Pure bundling is a strategy in which a firm sells only the bundle and not (all) the products separately.	IBM's bundling of tabulating machines and cards
Mixed bundling	Mixed bundling is a strategy in which a firm sells both the bundle and (all) the products separately.	Telecom bundles

Figure 1 Bundling terms by Stremersch & Tellis (2002, January, p.57)

Recent findings show that consumers tend to become more selective and in many cases bundling itself does not drive sales for products. Bundled products and pure components must be showcase at the same time in order to make sales happen (Derdenger & Kumar, 2012). The theory on the nature of synergies shows that there should be still plenty of research done in order to evaluate the negative synergy effects on bundles leading to questions like: whether the introduction of bundles can increase revenue if customers are willing to pay less for the bundle than for the individual unbundled products.

Dynamic customer segmentation is an approach that is still under development due to the technological developments that allow companies to produce products at a cost that is close to zero and bundle them with more marginal products, like, hardware. Those who are more price-sensitive choose the bundle, and those consumers are separated from the people who are willing to pay more for just the hardware alone (Derdenger & Kumar, 2012).

2.2. Bundling Strategies

Bundling strategies can be classified into two groups: (1) focus of bundling – price or product, and (2) form of bundling – pure or mixed (Stremersch & Tellis, 2002, January, p.57).

Using such classification it is easier to identify what strategies are applicable in each case (see Figure 2 A Classification of bundling strategies).

Mixed bundling is likely to be more profitable when the products to be bundled are sufficiently asymmetric in terms of their production cost as well as network effects, whereas more similarity between products makes pure bundling or pure components profitable, argues Derdenger & Kumar (2012). Stremersch & Tellis (2002, January, p.62-66) suggest several propositions on price and product bundling strategies based on the idea of customer heterogeneity.

	Price	**Product**
Unbundling	Sale of separate products	
Pure Bundling	Price Bundle	Product Bundle
Mixed Bundling	Price Bundle, Sale of separate products	Product Bundle, Sale of separate products

Figure 2 A Classification of bundling strategies

A price bundling strategy (either pure or mixed) yields higher revenues than that of unbundling if conditional reservation prices (the highest price that a buyer is willing to pay) are asymmetric. Mixed price bundling yields higher revenues than pure price bundling only when reservation prices for the bundle vary across consumers. In all other cases, pure price bundling yields at least the same level revenues. Mixed product bundling can yield higher revenues than pure product bundling only when reservation prices for the bundle vary. Pure product bundling yields equal or higher revenues than mixed product bundling when reservation prices do not vary.

Combining a product with a price bundling strategy is superior to more-products bundling if consumers' conditional reservation prices (a) for the separate product and (b) for the price bundle and the product bundle are asymmetric. When a firm's goal is to maximize its market penetration first and profits second, pure price bundling either is the best strategy or is no worse than any other strategy.

In competitive markets, a mixed price bundling strategy dominates a pure price bundling strategy. In competitive markets, if a supplier is able to introduce a product bundle, mixed product bundling strategies dominate unbundling and pure product bundling strategies. For price information, it is optimal for companies to (a) integrate all price information in a single bundle price rather than present it in a list of separate product prices and (b) separate the bundle discount in multiple savings rather than present it as a single saving.

Even though customer heterogeneity ideas are popular amongst many authors, Derdenger & Kumar (2012) do not completely agree to this idea, and have argued that mixed

bundling is much more effective than pure bundling under a wide range of parameters, even having only the component products with no bundling is better than pure bundling. In each and every case positive and negative synergies should be taken into the account in order to evaluate if switching from mixed bundling to pure bundling is warranted. Even more, it seems that bundling strategies vary by industry. The ability of customers to choose different products or services is limited to certain aspects and usually involves barriers, inertia, financial and other aspects.

2.3. Measuring and Evaluating Bundling Success

It seems quite obvious that any strategy should be evaluated in order to understand if it reaches the expected goals. There are several metrics in place to do that. Since early years many authors have researched bundling and tried to uncover the best possible bundling strategies by employing statistic formulas and powerful data processing tools. Others have argued that it is important to have the customer opinion heard and merely base bundling decisions and evaluation on customer satisfaction. Whichever is the case, we argue that any method used should be evaluated using understandable and business related routinely used metrics, for example, CLV and NPS calculations.

It is common knowledge that there are customers that do not bring profits with their initial purchases, the margins from their future expected transactions do. So it is logical to track the costs related to initial acquisitions and compare the profits generated over the expected lifespan as a customer. This kind of understanding allows businesses to evaluate which customers to target, what are the necessary changes to the promotional mix (as a function of past and recent transactions), or even which customers are less profitable so should not be retained. There is a view that marketing is rapidly becoming "the science and art of finding, retaining, and growing profitable customers" (Kotler & Armstrong, 2001, p.294).

At the same time bundled products and pure components must be showcase in order to make sales happen (Derdenger & Kumar, 2012). In other words, a discount should be given to trigger/facilitate the sale of a bundle. Certain surveys on customer behaviour have proved that 41% of respondents see savings as a benefit in order to choose a bundle (Sekino et. al., 2011, p.189). If the seller is prepared to provide a discount, clearly there should be some benefit in doing that. One of the key bundling characteristics is that it locks in the customer within the company and thus generates revenues for a certain period. It works, as it increases switching costs and creates burden for the customer to change the service provider for each pure

component (Sekino et. al., 2011, p.190). Therefore, product bundling potentially reduces customer migration or churn, so the company benefits from this kind of bundling.

From the company's perspective the attractiveness of the bundling strategy depends also on the variable costs of pure components (Sekino et. al., 2011, p.191). A more attractive bundling strategy is for products with insignificant variable costs.

Deciding on a pure component or bundling strategy really depends on the financial aspects. If, by giving an initial discount for the bundle the company sees a clear pattern how it will be paid back and the return on this strategy is higher than that on a pure component strategy, then surely bundling is the preferred strategy. The financial viability of each strategy can be calculated by applying CLV.

2.3.1. Customer Lifetime Value

Customer Lifetime Value (CLV) also referred as Lifetime Value (LTV) of an Acquired Customer or expected future profit, hereinafter referred as CLV, is the net present value of the profit that you will make on the average new customer during a given number of years (Hughes, 2000, p.58).

CLV has an important strategic aspect, as it is a practical technique for determining the effectiveness of various marketing strategies. Calculating CLV does not necessarily mean the success of the business; it is used as an indicator to measure if a particular marketing strategy can be a success.

According to Aulet (2013, p.183) the CLV calculations help evaluate whether the business is sustainable and attractive from a microeconomic standpoint. Also CLV serves as the most fundamental checkpoint both to determine how viable the business is, and to make sure what the main sustainability and profitability drivers of the business are.

In order to calculate CLV it is important to understand the main risks that are involved in driving the value or, in other words, the key inputs that could increase CLV over time. According to the research several different formulas can be used to calculate CLV, however, all of them produce a single outcome – CLV is the future net profits computed in today's money using the net present value (NPV) calculation method. Key inputs are not strictly defined, as there are several ideas on the methodology that should be used in order to calculate CLV.

Most recent studies show that in order to calculate CLV the following key inputs should be taken into account: (1) one-time revenue stream – for example, an up-front charge, (2) recurring revenue streams – for example, subscription and maintenance fees or repeated purchases, (3) additional revenue opportunities, for example, up-sales, (4) gross margin for each

of your revenue streams, (5) a retention rate – the percentage of customers who continue to pay the recurring fee for the product the opposite would be a churn rate, (6) life of product, (7) next product purchase rate, and (8) the cost of capital rate for the business (Aulet, 2013, p.184).

$$CLV_n = \sum_{t=1}^{T} \frac{\pi(Purchases_{nt}) - \pi(OperatingCosts_{nt}) - Marketing_{nt}}{(1+r)^t}$$

where
CLV_n = CLV of customer n,
$\pi(Purchases_{nt})$ = Profit lost from operating costs of customer n in time t,
$\pi(OperatingCosts_{nt})$ = Profit lost from operating costs of customer n in time t,
$Marketing_{nt}$ = Marketing costs for customer n in time t,
T = Time horizon of the predictions, and
r = Discount rate (in months).

Figure 3 CLV equation according to Kumar et al. (2013, p.73)

CLV can also be calculated per customer (see Figure 3). According to Kumar et al. (2013, p.73), CLV for each new customer is a function of three factors: (1) the profit from purchases, (2) the operating profit, and (3) the marketing costs to retain the customer. It means, that the profit from purchases will include the contribution margin from purchases aggregated monthly. However, the marketing costs include the costs of any marketing efforts the firm spends on the customer, aggregated on monthly bases.

2.3.2. Net-Promoter Score Metrics

After evaluating CLV it is possible to link it to other metrics that directly correlate with growth. Net-Promoter Score (NPS), first described by Frederick Reichheld in a Harvard Business Review in 2003, is a 'likely to recommend' metric, that, according to Frederick Reichheld, can be used as a single indicator that company has to track. NPS is defined as the percentage of customers who are promoters of a brand or company minus the percentage who are detractors. The issues addressed by Reichheld's NPS is that many companies invest vast amounts of time and money in customer satisfaction measurement by employing complex systems, data sets, surveys and confidential methods that not necessarily show correct situation and cannot be checked for flaws. Thus these activities do not link to correct customer loyalty indicators and growth of profits at the end (Reichheld, 2003, p.46). Companies that have the highest NPS are more likely to capture larger share of the industry growth.

In essence, NPS is a positive or negative number that indicates what customers tell their friends about you as a company or brand. In order to find it out, customers are surveyed and a single question is asked: "How likely is it that you would recommend the company / product / service to a friend or colleague?" Answers should be given in a scale from zero to ten, where zero means "not at all likely", five means "neutral", and ten means "extremely likely". This gives statistics about the likeliness that the customers will make the recommendation; and these customers can be divided into three groups – promoters, detractors and passives (Reichheld, 2003, p.54). Reichheld (2003, p.51) has also listed several other questions that could be used for certain industries but are not generally applicable, like: "If you were selecting a similar provider for the first time, how likely is it that you would you choose [the company / product / service]?" As proved by research, the number of customers who promote a brand, product or a company to a friend or a colleague correlates directly with the differences in growth rates among competitors. The NPS metrics is closely related to customer loyalty and satisfaction, as well as the growth of the company but does not directly correlate with retention rates (Reichheld, 2003, p.47-50). It is true that growth is driven not only by loyalty and customer satisfaction, but also by economic and industry factors. So the question asked to measure NPS has a predictive nature in terms of measuring growth and does not necessarily mean certain growth in all cases.

There are several aspects that should be taken into account in order to measure and increase NPS. All of these aspects relate to the logics of turning customers into promoters rather than detractors.

Promoters are customers who have responded with 9 or 10. The percentage of promoters show how many of customers are loyal to the company or brand, do repurchases and would make a recommendation if asked. Promoters account for more than 80% or referrals and are the source of the most of positive word of mouth. The objective of any company would be to grow the number of promoters, however a bare number of promoters is not an indicator of NPS (Reichheld, 2006, p.73).

Passively satisfied or passive customers are customers who have responded with 7 to 8 and these customers should be withdrawn from further calculations, focusing only on promoters and detractors. These customers have a potential to be converted into promoters, however, if not taken care of, can turn into detractors. This is regarded as a neutral position, probably first-time customers, with lower repurchase and referral rates than those of promoters, often by 50% or more (Reichheld, 2006, p.73).

Detractors are customers who have responded with 0 to 6. These customers are not loyal and are not satisfied with the company. The ultimate goal would be to convert these customers

into passively satisfied customers or not to retain them at all, as detractors usually cause the greatest share of retention costs and are accountable for more than 80% of negative word-of-mouth. The question of customer retention is a tricky one – if NPS is negative, not retaining your detractors would mean scaling down your business at large (Reichheld, 2006, p.73).

If the number of detractors is larger than the number of promoters then NPS turns negative. It means that the company will not be able to achieve any business growth but will suffer from churn rates if a competitor comes up with a better proposal to the customer. What is more interesting, in the described situation, any response, like cutting the prices or providing other incentives to a leaving customer will not be effective and will not increase true loyalty. In the end these situations evolve into a reputation loss of the company that means that the company will have to create tremendously appealing incentives that will persuade sceptical customers to try a product or service, of course these kind of incentives drive up the already significant customer acquisition costs (Reichheld, 2003, p.53, 54). The NPS ratio varies by industry, but according to Reichheld (2003, p.54) the average score could be around 16% and it should be considered as good. NPS allows experimentation. A company that produces the NPS data regularly and with sufficient granularity can track and assess its strategic and tactical moves monthly.

The NPS concept has been challenged by many scholars, for example, Keiningham et al. (2008, July 1, p.55) argued that the recommended intention is clearly not the ultimate question for gauging loyalty thus undermining the idea of NPS correlation with growth. An opposite view to Reichheld's original idea on NPS is expressed regarding the number of questions that should be asked in order to measure loyalty and NPS. Keiningham argues that the models containing multiple variables outperform the models that are based on a single question in the NPS model.

2.3.3. Net-Promoter Score versus Loyalty, Satisfaction and Retention

In order to have a positive NPS number, the company has to have more promoters than detractors and this is a point where loyalty, customer satisfaction as well as retention of customers comes into play, as NPS is closely related to these aspects. As defined by Reichheld (2003, p.48): "Loyalty is the willingness of someone to make and investment or personal sacrifice in order to strengthen a relationship." Loyal customers often stick to suppliers that can provide a good value in a long-term perspective, however it does not mean that they are getting the best price at every transaction. Loyal customers tend to repeat purchases but loyalty itself is much more; besides repeated purchases may also be done by a passives or detractors due to exit barriers or circumstances.

Loyalty reduces customer acquisition costs and boosts growth just by not losing the customer. Loyal customers tend to consume more of the same or same brand products and if the income level of the customers increases, they will probably be less reluctant to spend more on the same brand products. Positive word of mouth allows company to add more customers to their client base without spending money on customer acquisition just by retaining loyal core customers. The difference between a loyal customer and a satisfied customers is that the loyal customer will tend to put his own word and reputation on line while passive customers with positive attitude towards brand will only make a promotion based on their own positive experience or price. Even though loyalty stimulates repeated purchases as the customer's income increases there could be a shift in the customer's habits and the customer may move up to a different category of products that are more expensive (Reichheld, 2003, p.50, 51). In our opinion, loyalty increases the company's ability to cross-sell products and services if the company is able to produce those so that they meet the customer needs which is only possible if the company truly understands their promoters. Loyal customers should be regarded as 'an extension of hands' of the marketing department helping reach more customers which can mean sizeable cost savings in mature markets.

Customer retention rates do not indicate the true situation regarding loyalty and NPS. Retention rates deal with a number that indicates how many customers have left but does not indicate the customer growth. Neither do retention rates include a satisfaction component that is very important in terms of understanding how many customers would switch if the current obstacles – exit barriers, circumstances, competition or increase in income and other aspects, were to change (Reichheld, 2003, p.51).

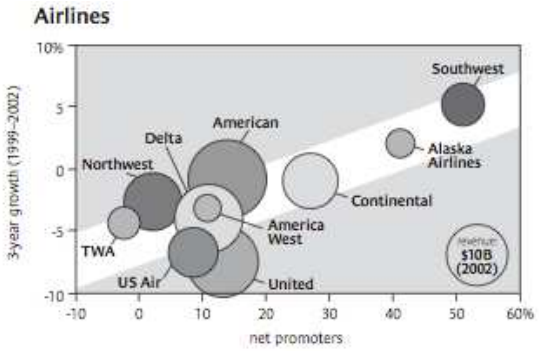

Figure 4 NPS correlation to growth

NPS directly correlates with growth rates. This logic is true if the companies compared belong to the same industry. By calculating the industry average NPS correlation against the average growth rate it is possible to calculate how growth of the company is likely to change just by increasing NPS by a couple of percentage points (Reichheld, 2003, p.52). Studies show that a twelve-point increase in NPS corresponds to a doubling of a company's growth rate if the company's business represents a highly competitive industry (Reichheld, 2006, p.73). However, a seven-point increase in NPS

correlate on average with a one-percentage point increase in growth rate (Mardsen et al., 2005, November, p.46).

2.3.4. Strategic Aspects of Net-Promoter Score

A strategic aspect of NPS hides in the economics of increasing NPS. The main question that should be asked is, if it is more cost-effective to convert detractors to passively satisfied customers or to stop retaining them. There are no clear rules for making the decision as situations vary by industry. According to Reichheld (2006, p.75) one of the ways to understand the strategic priorities would be to divide all customers according to NPS logics into promoters, passives and detractors, then evaluate each of the groups in terms of high-profit and low-profit customers based on the cost of capital creating a customer grid. The customer grid allows an understanding which strategy should be applied to each group of customers.

The customer grid can be used strategically. It can be a useful tool to determine which customer segments to focus on; it can be a helpful tool for resource allocation and proposition making. The ultimate goal should be - to create more highly profitable promoters. According to Reichheld (2006, p.75) in order to achieve that, focus should be placed on the following priorities:

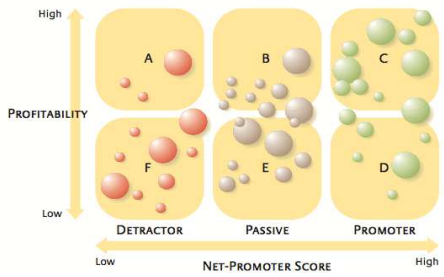

Figure 5 The Customer Grid

- Investing in the core clients. Core clients are located in the upper right corner, these clients benefit the business not only because they buy products or services continuously but also they make referrals and spread positive word of mouth. So, as a strategic priority, these clients should be taken care of.
- Addressing the detractors. Detractors in the upper left corner of the customer grid would definitely deserve being put as the second category from a strategic point of view. Each of those customers is probably quite profitable for the company, however they spread a negative word of mouth and most likely will drop out. Taking into account the profitability aspect it would be worth trying to convert them to passives or even promoters. A different approach should be applied to the category in the lower left corner, as these customers may generate too low profits that means that they diminish the shareholder value.
- Finding additional promoters is one of the objectives and strategically should come in as a third priority. The first place to look for new promoters that would fill in the space in

the upper right corner is the bottom right corner by turning them into economically more profitable promoters. The second place would be to look into the upper passive segment and try to move them to the upper right segment – economically converting them into profitable promoters. A vertical movement from less profitable promoters to more profitable can happen either by increasing prices or by cross-selling. Moving customers horizontally usually means investing and learning about these customers and trying to convert them slowly into profitable-promoters.

3. Research Methodology

3.1. Overview

The previous chapter defined bundling and the general theoretical aspects behind measuring and evaluating bundling success however, the purpose of this Diploma Project is to explore bundling in the telecommunications industry in Latvia. Research specifically aims to describe how bundling is being used in the telecommunications industry in Latvia, to assess the impact of bundling on long-term profitability in Lattelecom SIA and to assess the relationship between bundling and customer loyalty (NPS rate).

The chapter on the research methodology, firstly, provides an overview of the research methods and data used for analysis of Latvian telecommunications industry companies. Secondly, an overall explanation lays down a framework for the research limiting methods, data and technologies used to obtain data. Thirdly, the section on the Latvian telecommunications industry data particularly aims to describe data sources as well as the limits of the data that can be freely accessed thus defining the data that should be gathered specifically for the purpose of this Diploma Project. And finally, the section on Lattelecom SIA data presents a thorough description of data sources, technologies and respondent groups used for the analysis.

3.2. Latvian Telecommunication Industry Data

In order to analyse Latvian telecommunications industry there should be certainty on the size of the industry and the companies that should be regarded as industry participants. Secondary data are used for Latvian telecommunication industry data analysis. Public Utilities Commission of Latvia (the PUCL) regulates the industry in Latvia. PUCL is an independent state institution responsible for regulating energy, telecommunications, post and railway sectors in accordance with the law "On Regulators of Public Utilities". Most of the data provided by the PUCL cannot be referred to as recent thus reflecting the current market situation, as reports

usually dated at least one year back. Thus there could be minor derogations from the current market situation, however it was not critical for the analysis.

In order to reach the objectives of the present Diploma Project, the following filters were applied for data gathering purposes:

a) Companies operating at the national level;

b) Companies providing duo-play or triple-play services.

Such a division is not available publicly so the research was performed manually by visiting the websites of each of the companies that were selected amongst the national level companies that provided TV services according to the GfK research. The research was performed in the middle of 2013. The *adhoc* method was used by interviewing households (CAPI method) and segmenting given answers in accordance with the GfK ROPER Consumer Styles system.

TV services were selected as an indicator because the IP or cable TV services could not be provided to end consumers without having a physical Internet connection. Currently web-based TV services are underdeveloped in Latvia and there is only one company providing them – Lattelecom SIA.

3.3. Lattelecom SIA Data

The following Lattelecom SIA retail operation (private segment) KPIs for the period 2011-2013 have been analysed in this Diploma Project – Churn (average disconnected customers during the period, as a percentage of total customers), ARPU (Average Revenue Per User), CLV (Customer Lifetime Value) and NPS (Net-promoter score). The primary cross-sectional data have been used for Churn (average customers during the year end and disconnected customers in the respective year) and ARPU (customers at the beginning and end of the year and the respective revenue during the year).

Lattelecom SIA uses a mixed bundling approach, therefore various telecommunications services are offered individually or bundled. The principal products are Voice, Broadband or the Internet, IPTV and DVB-T.

Two principal broadband technologies (fixed connections) are used. DSL (Digital Subscriber Line) uses copper wires and offers to the customers 5 - 20 Mbit/s speed. Optic stands for fiber-to-the-home (FTTH) standard, which uses an optical fiber to handle the signal and are offered to customers at speed from 100 Mbit/s to 1 Gbit/s.

All technical connection details of customers are recorded in the IT system DIPS, PAPS at the detailed product level. Every change in customer details triggered either by customer

request or initiated by the company is recorded in the database by renewing the customer connection data. The key changes are: adding or disconnecting customers, upgrading or downgrading the existing customer product category (e.g. from the Internet to Voice + the Internet & ITV or downgrade) or upgrading or downgrading the existing customer detailed product (e.g. from upgrade from the Internet 1 to the Internet 2 or downgrade). The revenue accounting has been done in the IT system Unicorn.

The objective of data gathering is to obtain churn, ARPU, CLV and NPS for individual products and bundled products. It is done on aggregate basis, i.e. product category (e.g. Voice + the Internet & ITV, Voice + the Internet etc.) and where possible on a detailed product level (e.g. the Internet 1 & ITV, the Internet 2 & ITV etc.). Certain modification has been made at the detailed product level to maintain comparability throughout the period under review.

For the purpose of this research churn is calculated on disconnected customers only at the product category level. Thus it assumes the same churn for the respective detailed products. It excludes any internal upgrading or downgrading of products at the product category or detailed product level.

$$\text{Churn as \%} = \frac{\text{Disconnected customers per year in category}}{\text{Average number of customers in category}}$$

Figure 6 Churn calculation formula

Revenue is accounted for at the detailed product level. ARPU is calculated as a total product category revenue divided by the average number of customers in the respective product category. The average number of customers are calculated as customers at the beginning and ending of the respective year, divided by two.

Since 2011 Lattelecom SIA has been performing the NPS surveys. These surveys are performed with the IBM SPSS Modeler (15.0) assistance, which ensures the handling of the NPS data. Namely, the following tasks are performed: a random selection of individual customers to be surveyed according to a predefined sample size, sending out of questionnaires, gathering and processing the responses. The table below outlines the approximate distribution of the total customer population by type for the survey purposes based on the March 2014 data. The distribution below is considered to be applicable also for the period under review.

Valid for sample	30%
Recently participated in survey	11%
No e-mail address	48%
Refuse to receive news/survey	10%
Other reasons	1%

Total number of customers	**100%**

Figure 7 Customer selection for NPS purposes

From the total population only 41% of customers could be surveyed. Of these, 30% of customers were available for survey, while 11% are temporary unavailable (approx. for 6 months) because they had been selected for previous surveys. The remaining 59% were not reachable for different reasons, but mainly due to the absence of email addresses.

NPS was analysed at the Product category level. The NPS surveys are performed on a quarterly basis by sending out approx. 10,000 questionnaires per quarter or 40,000 annually, requesting to evaluate a particular service provided by Lattelecom SIA in 10-point scale. A sample of 10,000 customers was segmented in the Product category level according to its relative size and taking into account the historical response rate (on average - 26%). Individual customers to be surveyed were randomly selected by the IBM SPSS Modeler (15.0) system. The received questionnaires were categorised in respect of detractors, passives and promoters.

The following input data were used to calculate the Customer Lifetime Value (CLV): the detailed product ARPU, the product category contribution (as %) and the product category churn. The Product category contribution was obtained from the costing system of Lattelecom SIA. All direct costs were allocated to the detailed products based on their drivers, which most precisely reflect the cause of respective costs and economical substance. The product category churn was used to derive the length of the customer lifetime (*1/Churn as % =lifetime in years*). No detailed information was available on the marketing costs spent on the bundled or individual products, therefore it was assumed that there was no significant difference and thus marketing costs were ignored. Similarly there was an assumption that other costs of customer acquisition (COCA) were similar either for customers with the bundle or individual products. The Net-Present Value (NPV) or CLV was obtained by applying a discount rate of 10%, which approximates to the Weighted Average Cost of Capital (WACC). CLV is calculated for each of years under review by applying CLV formula (see Figure 8 CLV formula).

$$CLV = CF \times \frac{1-(1+i)^{-n}}{i}$$

CF = Contribution from customer (ARPU-direct costs)

i = 10% (WACC)

n = periods derived from chunr (1/churn %)

Figure 8 CLV formula

3.4. Summary

The chapter on the research methodology, firstly, provided an overview of the research methods and data used for analysis of the Latvian telecommunications industry companies. Secondly, an overall explanation laying down the framework for the research limiting methods, data and technologies used to obtain data. Thirdly, the section on the Latvian telecommunications industry data described the data sources as well as limits of the freely accessible data thus defining the data that should be gathered specifically for the purpose of the present Diploma Project. And finally, the section on the data of Lattelecom SIA presented a thorough description of the data sources, technologies and respondent groups used for the analysis.

4. Analysis of Data

4.1. Overview

As a reminder, the research questions of this Diploma Project are: to describe how bundling is being used in the telecommunications industry in Latvia, to assess the impact of bundling on long-term profitability in Lattelecom SIA and assess the bundling and customer loyalty (NPS rate) relation.

The chapter on the analysis of data includes an analysis of the bundling practices of the Latvian telecommunications industry companies providing an overview of their bundling practices. Even though some attention is paid to the technologies used, the aim is to analyse product groups rather than individual technologies. Also, an impact of bundling on the long-term profitability is assessed by analysing NPS variance and changes of major KPIs in bundled and unbundled products. This section provides an insight on ARPU, churn, CLV and NPS correlation and mutual application logics.

4.2. Bundling Practices in Telecommunications Industry in Latvia

4.2.1. Leading Companies of Telecommunications Industry

The industry consists of 407 registered companies, however, only about 52 of them operate at the national level ("Yearly Report of Public Utilities Commission of Latvia", p.33), i.e. they are able to provide their service in more than one geographical location – a city or village. Most of the registered companies provide services in a single city or a part of the city usually where there is no competition or competition is relatively low. The majority of companies - 45,65%, are engaged in business of providing access to the public Internet. Followed by the

companies providing voice telephony service - 16,63%, and radio and TV broadcasting services in public electronic communications networks - 11,03%.

The key individual products that are available in the Latvian market are: the Voice, Internet and pay TV services. Products like WiFi internet, web TV and electricity should be included into their respective categories or excluded from further analysis as these products do not influence the market shares, ARPU and churn rates.

There are a few hundred companies that operate on a national level providing at least one of the individual products – the TV, Internet or Voice services ("Yearly Report of Public Utilities Commission of Latvia", p.33).

The fixed voice product is the oldest industry product available on the market, however at present the voice product suffers from intense competition not only from fixed network operators but also from mobile operators. The price comparison shows that the fixed voice costs approx. 9 EUR / month for unlimited calls in Lattelecom SIA network; however mobile voice product is available starting from 4,27 EUR / month for unlimited calls to any network. The particular situation stimulates the customer to switch from the fixed voice product to the mobile voice product. Other fixed voice product providers in Europe are exposed to similar problems, according to our knowledge.

The Internet product is well developed and competition is fierce at the national as well as regional level – within cities. The trendsetter is Lattelecom SIA that thrives to provide the latest technologies to households, like fiber-optic connections of 1 Gbit/s speed. In 2013, Lattelecom SIA defined the Internet speed standard for households - 100 Mbit/s, 250 Mbit/s, 400 Mbit/s and 1 Gbit/s symmetrical rates that still remains the highest Internet speed available to Latvian households and probably generally in Europe. Currently Lattelecom SIA is the only telecommunications company in Latvia that provides fiber-to-the-home (FTTH) connectivity. Most of the companies that claim to have fiber optics technologies available to customers are providing fiber-to-the-node (FTTN) connectivity.

During the research performed for the purposes of the present Diploma Projects, it was identified that the Internet products usually had the most misleading product specific information. For example, leading companies claimed to have fiber optics available to their customers, however most of them were not able to provide one for more than few selected customers, apart from Lattelecom SIA. Usually, the information on the download and upload speeds was misleading, as these did not represent the actual speed that the customer would receive because of the technological differences and product availability depending on the address where a fixed connection was required. Our research showed that, for example, Baltcom

claimed to provide a symmetrical internet connection up to 250 Mbit/s, however, the availability tests show that there were a plenty of addresses where internet speeds would not exceed 5 Mbit/s, and it was hard to locate addresses where the speed would reach 250 Mbit/s rate (speeds could be tested by using the address locator at Baltcom's web site http://www.baltcom.lv/lv/pakalpojuma-pieejamibas-parbaude/). Even though Lattelecom SIA has developed its fiber optics network, still older technologies are being used, like, VDSL that is able to provide the Internet connection with download speed from 6 to 20 Mbit/s.

The pay TV product group consists of several technologies, like DVBT, IPTV and CATV. Offers are merely based on the contents – number of channels included in the bundle at a single price. The content differs depending on the provider. As the analysis of the contents was not the purpose of our analysis, the aspect of contents was not analysed. The market was previously dominated by the companies offering CATV technology-based services that were used to provide the Internet and CATV at the same time. Currently the market is growing and the situation is changing year by year as companies try to diversify their pay TV products by adding extra features, for example, video on demand (archive), movie rentals, recording functionality, etc. In this respect, Lattelecom SIA Is a company that innovates most and has developed a high definition interactive TV (ITV, based on IPTV) with most features available to its customers that are included in the bundle price.

Triple-play is a combined business model where each individual product is combined into a larger product. For the purposes of analysis and further discussions, the term "triple-play" is used to describe the companies that have the Voice, Internet and TV products which does not mean that they are engaged in bundling practices. Triple-play bundles are common in Latvia, however, but are few in number. Three companies provide triple-play bundles to their customers including the companies that resell others product.

In order to provide the product to the customers, most of the triple-play telecommunications companies use each other's infrastructure or resell the products of others, for example, in the case of Balticom TV services, actually Baltcom pay TV is resold. IZZI and Baltcom use each other infrastructure to provide Internet services. After the merger of the companies Baltcom and IZZI, their market shares can be summed. Lattelecom SIA uses its own infrastructure for the provision of services.

A quadruple-play bundle, where the mobile voice is added to the triple-play bundle, is not yet present in Latvia.

4.2.2. Bundling Practices

As referred to in previous section, there are few major telecommunications companies that currently provide triple-play and duo-play bundles in Latvia. Two bundling practices can be observed in Latvia – a mixed price bundling, where each component can be bought separately or as a bundle, and a pure price bundling where only one of the products can be bought separately. The strategy employed by most companies is to lower the price for the bundle. The strategy of Lattelecom SIA is the opposite, the company adds extra features to the products included in the bundle, and thus customer gains extra value of purchasing the bundle; discounting the price for the bundle comes as a second priority. It is common that two or three telecommunications products are bundled, any additions to the set should be regarded as diversification rather than an attempt to make a quadruple-play bundle, as the mobile voice is not bundled in Latvia.

Two strategies are employed for selling triple-play bundles in Latvia – a mixed price bundling, where prices are significantly discounted, and a pure price bundle – where an extra value is added to the bundle. Bundling practices under mixed price bundling strategy can be split into two groups according to the amount of the discount. According to the research, the individual products Lattelecom SIA have a middle-level pricing thus they are not the most expensive products compared to other offers in the market. Different practices are employed by Baltcom and Balticom that discount their bundles by 21-34%. It means that individual products are overpriced and the main objective for these companies is to sell more bundles thus losing on the ARPU rates. From the marketing perspective Baltcom and Balticom are not positioning themselves as the high-end service providers because their communication strategy is based merely on price, internet speeds, number of pay TV channels. Quality comes as second and cannot be spotted while evaluating the price of a bundle. The bundling practice of Lattelecom SIA is to give a small discount of approx. 7%. Even though the Voice + the Internet & ITV product is a triple-play bundle, in essence it is a pure price bundle (not mixed price bundle) as only two of three components can be sold separately. The ITV product can only be sold with the Lattelecom SIA Internet connection. The ARPU analysis should be done in order to discuss the benefits of pursuing this strategy.

A discount of 20% and more of the individual product price can be regarded as being focused solely on the price, thus, directly inviting the potential customers to buy at least two or three individual products. Conversely, a discount of 10% or less is not encouraging enough to choose the bundle. It means that a great tactical difference exists. As we look into each proposal the difference is obvious, Lattelecom SIA offers are diversified at two levels – first, each product is provided either a single product or within a bundle. In order to stimulate people buying more

products, Lattelecom SIA offers a small discount of 7%. Second dimension diversifies products between their detailed product groups, e.g. the Internet is diversified by speed and extra value provided, for example, by switching from the Internet 1 to the Internet 3 a public WiFi access is offered anywhere in Latvia. Or if the person is a bundle customer, the switch from the Internet 1 + ITV to the Internet 3 + ITV will imply not only a free WiFi access but also a free web TV access, plus an extra gift card to be used in the Lattelecom SIA shop. It means less attention is focused on the price, it is rather laid on the value that the customer gets by paying almost the full price.

The competitors rely only on price as a major diversifier between individual products and bundles, even not diversifying products according to their product specific qualities, e.g. speed and technology of the Internet, number of TV channels and technology used to provide TV. This kind of information can be extracted from the competitor offers only by performing a rigorous analysis.

The duo-play bundling is a common practice however competition between offers is not fierce. Both – pure price bundling and mixed price bundling, strategies are used. There are certain characteristics of bundling that can be observed: Lattelecom SIA and Balticom uses the Internet component as a core for their duo-play bundles, while Baltcom uses the pay TV product (see Appendix: Duo-play Bundling Offers based on the Internet Product and Appendix: Duo-play Bundling Offers based on Voice Product). Offers are less diversified in terms of tariffs, related speeds and the number of channels between competitors. However Lattelecom SIA constantly sticks to the following logics – showcasing the same product on a standalone basis and in a bundle thus providing a whole variety of products, typical mixed bundling strategy except for the Internet and ITV bundle that is a pure bundle. The discount policy is less aggressive than for the triple-play bundles; however Lattelecom SIA would still provide a discount of only 7-9% from the amount of the individual product-list price. Further analysis is provided in the next section – the evaluation of the financial gains.

4.3. Impact of Bundling on Long-Term Profitability

4.3.1. NPS Variance in Bundled and Unbundled Products

As previously analysed, the bundling strategy may have a significant impact on the pricing strategy and *vice versa*. It becomes more important as the long-term profitability is addressed. Thus it is crucial not only to set a pricing strategy but also to understand the role of NPS.

NPS is analysed by the NPS spread across customers that are promoters, passives and detractors. There are three business lines – one triple-play and two duo-play bundles that can be analysed. The fourth business line containing the Internet + DVB-T is excluded from the analysis as the sample size is too small for the analysis.

The triple-play pure price bundle Voice + the Internet & ITV includes three products, however, the bundle can be divided into two individual products: voice and the Internet & ITV products. As previously mentioned, the fixed voice product is rapidly losing its importance and market share. As the market share decreases, the NPS score is becoming less negative, however, this mainly occurs due to the loss of detractors as churn rates exceeded 29.15% in 2013 which was the highest rate amongst all Lattelecom SIA business lines. The Internet & ITV product increased its NPS score by more than 7% from 2012 to 2013 and keeping a constant increase of the ARPU rates. The churn rates that tend to increase slightly, and the number of new customers that subscribe to the bundle, can explain the increase of NPS. It means that the negative NPS effect of voice -25.62% was neutralized and absorbed in the common NPS rate of 22.80% marking a significant improvement by bundling products togeather (see Figure 9 Product: voice, the Interent & ITV and voice + the Internet & ITV NPS spread).

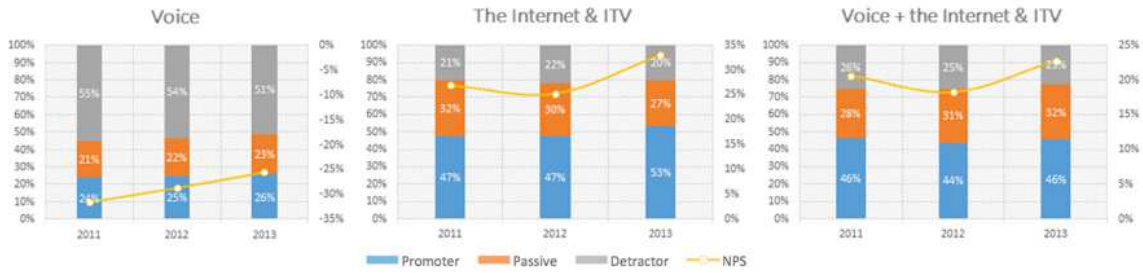

Figure 9 Product: voice, the Interent & ITV and voice + the Internet & ITV NPS spread

Another triple-play bundle consists of voice, the Internet and DVB-T that is a product relatively similar to ITV, however, it is not fixed to a particular location. The analysis showed that the NPS rate of DVB-T was negative over a period of three years reaching its lowest level of -16% in 2012. The DVB-T product has had a negative publicity due to the digitalisation of analogue TV, probably this was the main reason why there were so many detractors. The NPS of the Internet product is about 21-22% depending on the year. In 2012, NPS reached 26.15%. An increase in the NPS rate was due to the increase in the churn rates – the decreasing number of detractors and an increasing number of new subscribers. Combining the Voice, the Internet and DVB-T products into a bundle definitely show a significant NPS increase for the NPS negative products. The NPS of a bundle in 2013 reached 6.70% or approx. 5% higher than a year before

and more than 7% higher compared to 2011. (see Figure 10 Product: voice, the Internet, DVB-T and voice + the Internet + DVB-T NPS spread).

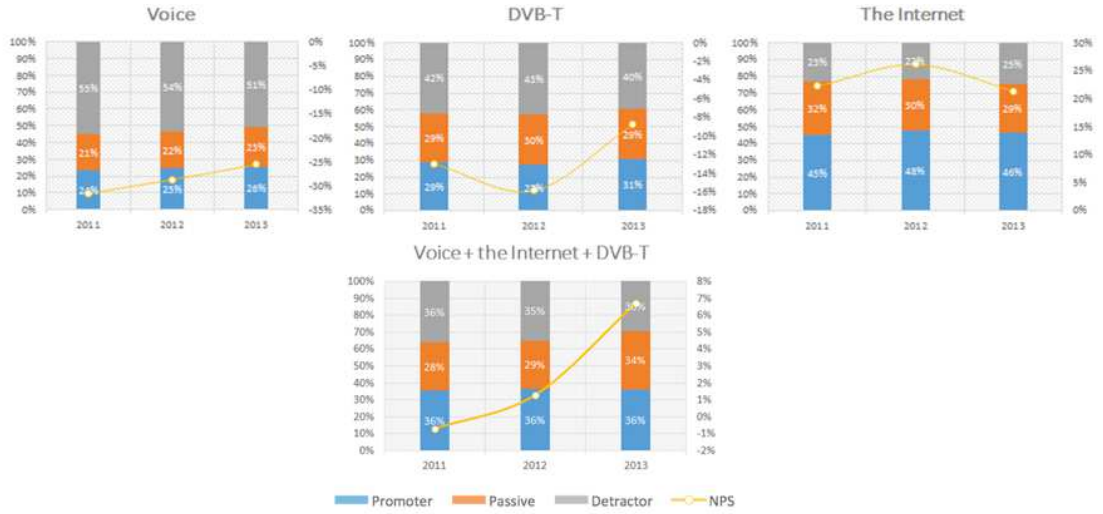

Figure 10 Product: voice, the Internet, DVB-T and voice + the Internet + DVB-T NPS spread

Critiques should be addressed to the analysis of the Internet product NPS rate, as the particular analysis incorporated both – the old DSL and the new optic fiber technologies. It means that there could be considerable differences in the customer perception of the product. This aspect of analysis deserves to be researched further. The triple-play product bundling, regardless of whether mixed or pure, had a positive effect on NPS rate, i.e. the negative NPS rates could turn positive if at least one product of a bundle had a positive NPS rate on its own.

A duo-play bundle did not hold the same pattern as the triple-play bundles in respect of the NPS rates turning positive. If a triple-play bundle of Voice + the Internet + DVB-T were converted into Voice + the Internet bundle, the NPS rate would turn negative (close to zero). Thus a negative effect of the NPS rate of voice product is affecting yet a positive NPS rate of the Internet product and the NPS rate become equal to zero. A slightly negative or equal to zero - 'neutral' NPS means that the number of promoters and detractors are equal or close to equal. However the tendency to decrease means that this balance will not last and the number of promotes could decrease as well. The bundle of voice and DVB-T products shows that NPS almost averages between both negative NPS values. The NPS rate of bundle is between min and max values of the product NPS rates meaning that the bundle has a tendency to increase NPS rate.

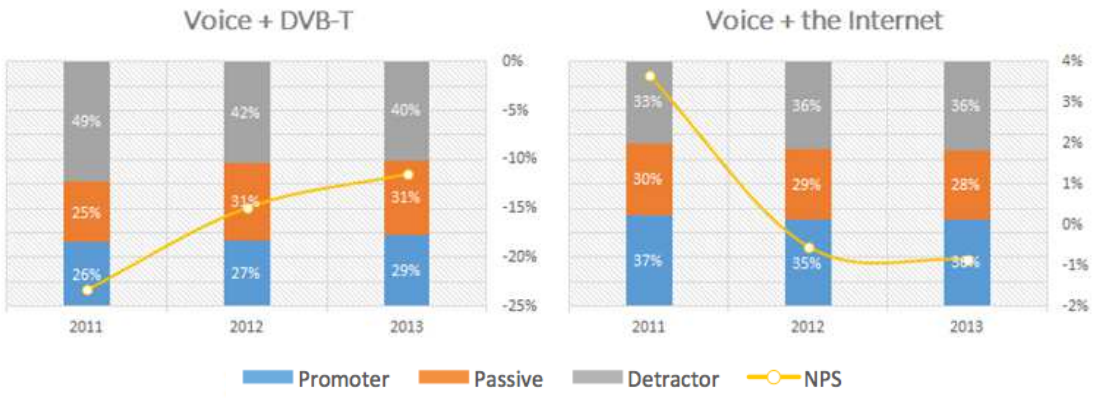

Figure 11 Voice + DVB-T and voice + the Internet NPS spread

The NPS rate will increase if products are bundled, however it would not lead to any conclusion related to finances. In order to understand the financial consequences of bundling for the company it is important to analyse the ARPU, churn and CLV rates that will indicate if the NPS rates bear any relationship to changes in income, growth and eventually profitability.

4.3.2. Major KPIs in Bundled *versus* Unbundled Products

According to the previous analysis, on the one hand, the NPS metric can give an insight into the customer spread but, on the other hand, critique should be provided regarding the scope of the metric as other KPIs come into perspective.

The churn rates for a bundled product are considerably lower than those for unbundled products. The churn rate for the Internet & ITV product is increasing but not significantly. Situation differs for the Voice product, the churn rate increased dramatically in 2013 which was due to the fact that mobile operators introduced flat rates for voice in 2012. The Voice is also a declining business for most telecoms in Europe as there are a lot of alternatives present in the market, for example, the IP-based voice services, like Skype, WhatsApp, Viber or mobile operators who, in quadruple-play business, cannibalize the fixed voice but for triple-play companies – pose an increased competition. Bundling can have a significant impact on the holding churn rates – a steady and slowing down increase over time. For example, in respect of the bundling voice to Internet & ITV we did not notice that churn rates increased in 2013 as much as per voice product individually, thus bundling proved its significance in holding back the churn rates. A particular correlation is true not only for the triple-play bundle but also for the duo-play bundle. The churn rates for the Internet & ITV product were higher but still almost three times lower than for voice in year 2013.

According to the theory, marginality and bundle correlation should be negative. If products were bundled then the margins should decrease, while if products were sold separately, margins should increase. We believe that marginality is important, however it comes second to the ARPU measurement. So the logics similar to the advancing theory could be applied to ARPU.

The ARPU and bundling correlations should be negative under the theory on marginality. The theory was corroborated by comparing the ARPU rates of the triple-play bundle Voice + the Internet 1 & ITV in 2011 - 2012. It means that each customer who chose to buy particular bundle instead of individual products brought in less ARPU to the company in the particular year. The theory is disproved when the bundles containing the Internet 3 and the Internet 4 are analysed. More valuable bundles have a greater ARPU than individual products that might challenge the theory of bundling products.

NPS has a positive correlation with ARPU for a well-positioned product according to the NPS spread and the ARPU rate of the Internet & ITV product. Having more promoters for the product most likely will increase ARPU. Critique should be addressed to such an observation as the triple-play bundle where the ARPU rates decrease over time even though the NPS spread for the bundle is positive. The triple-play ARPU rate decrease can be explained by the Voice product that had a huge churn increase in 2013, so these effects were partly incorporated also in the triple-play bundle. Also, it is worth noticing that throughout 2011 - 2014 significant technological changes occurred – changing from the old DSL technology to optic fiber networks - that are used to provide triple-play the Internet & ITV product. Products based on optic fiber infrastructure are less expensive thus producing smaller ARPU rates. As it was not possible to isolate the data from DSL and optics, the conclusion is that the current ARPU trend for the triple-play bundle deserves further research.

The CLV and NPS correlation is not symmetrical and it was not possible to see true relationship between both KPIs. The Internet & ITV CLV correlates with NPS positively i.e. as NPS increases CLV increases as well, however, we see that in the particular case NPS decreased in 2012, while CLV continued to increase. Analysis showed that the correlation for the triple-play bundle was different – there was a minor CLV decrease over the years, while NPS had a general tendency to increase.

The triple-play CLV decrease was insignificant, 1,2% during 2012 - 2013, i.e. the effects from the Voice product CLV drop of more than 32% during 2012 - 2013 and was well absorbed in the bundle.

The analysis showed that generally CLV correlated positively with NPS. However, NPS would not necessary increase in all cases. NPS for bundles would incorporate effects of all product NPS scores. The research and analysis of the CLV rate for Lattelecom SIA products showed that CLV might increase in the bundles. Ideally, CLV and NPS should correlate positively, i.e. both company and customer would gain benefits.

The aggregated amounts of CLV for individual triple-play components reached only 68% of the bundle CLV. Very similar results are observed also for other technological level bundles and its respective components. It means that irrespective of the NPS and ARPU rates, CLV may eventually have a higher value in bundle rather than individual components. This phenomenon can be largely explained by the lower churn rates that bundle had compared to the individual product churn rates. Especially, as Lattelecom SIA bundle voice to the Internet & ITV product.

Bundles in general tend to show positive effects on individually declining products, for example, the Voice is rapidly losing its customer base, however, the bundles containing Voice still tend to show less churn rates as, ARPU and CLV remain relatively steady as well and do not show significant fluctuations as individual product churn rate changes.

4.4. Summary

The chapter on analysis of data provided analysis of the bundling practices of Latvian telecommunications industry companies providing an overview of their bundling practices. Even though some attention was paid to the technologies used, the aim was to analyse product groups rather than the individual technologies employed. Also, an impact of bundling on the long-term profitability was assessed by analysing the NPS variance and changes of the key KPIs in bundled and unbundled products. The section gave an insight on the ARPU, churn, CLV and NPS correlations and mutual application logics.

5. Discussion

5.1. Overview

The previous chapters focus on describing theoretical background, provide insight on the research methodology and bundling practices and measure the impact of bundling on the long-term profitability and the relationship between bundling and customer loyalty. That allowed to make an in depth analysis of data in an attempt to seek answers to the research questions.

The chapter on discussion focuses on giving answers to research questions set at the beginning of this Diploma Project, as well as describing the theory application relative to the literature review. The second part of the chapter focuses on the practical implications and limitations of the research that lead to suggestions for further research. Particular attention should be paid to the sections where new questions are posed for further research and derogations from the theory are described.

5.2. Answers to Research Questions

5.2.1. How Bundling is Being Used in the Telecommunications Industry in Latvia

Bundling is being used by offering the triple-play and duo-play product bundles in the Latvian telecomunications market, however, the majority of companies that provide services are limited to the regions of Latvia therefore only four companies were evaluated at the national level.

Two bundling practices can be observed in Latvia – a mixed price bundling, where each component can be bought separately or as a bundle, and a pure price bundling where only one of the products can be bought separately. The strategy employed by most companies is to lower the price for the bundle. The strategy of Lattelecom SIA is the opposite, the company adds extra features to the products included in the bundle, and thus customer gains extra value of purchasing the bundle; discounting the price for the bundle comes as a second priority. It is common that two or three telecommunications products are bundled, any additions to the set should be regarded as diversification rather than an attempt to make a quadruple-play bundle, as the mobile voice is not bundled in Latvia. Service, quality of product and brand awareness aspects are excluded from the analysis, as it was not possible to measure them with the available KPIs. The service and product quality aspects are definitely the aspects that distinguish Lattelecom SIA from competitor products and allow maintaining the price level.

Bundling practices under mixed price bundling strategy can be split into two groups according to the amount of the discount. A discount of 20% and more of the individual product

price can be regarded as being focused solely on the price, thus, directly inviting the potential customers to buy at least two or three individual products. Conversely, a discount of 10% or less is not encouraging enough to choose the bundle. It means that a great tactical difference exists.

Triple-play bundles are common in Latvia, however, but are few in number. Three companies provide triple-play bundles to their customers including the companies that resell others product. The duo-play bundling is a common practice however competition between offers is not fierce. Both – pure price bundling and mixed price bundling, strategies are used. There are certain characteristics of bundling that can be observed: Lattelecom SIA and Balticom uses the Internet component as a core for their duo-play bundles, while Baltcom uses the pay TV product.

5.2.2. Assess the Impact of Bundling on Long-Term Profitability in Lattelecom SIA

As discussed previously, CLV ratio best describes company's long term profitability, takes into account the revenue streams, associated costs and the lifetime of the customer. The aggregated amounts of CLV for individual triple-play components reached only 68% of the bundle CLV. It means that irrespective of the NPS and ARPU rates, CLV may eventually have a higher value in the bundle rather than individual components. This phenomenon can be largely explained by the lower churn rates that the bundle has compared to the individual product churn rates - especially because Lattelecom SIA bundle Voice to the Internet & ITV product.

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The triple-play product bundling, regardless of whether mixed or pure, had a positive effect on NPS rate, i.e. the negative NPS rates could turn positive if at least one product of a bundle had a positive NPS rate on its own. The NPS rate of bundle is between min and max values of the product NPS rates meaning that the bundle has a tendency to increase NPS rate.

The analysis show that generally CLV correlates positively with NPS. However, NPS will not necessary increase in all cases. NPS for bundles will incorporate effects of all product NPS scores. The research and analysis of the CLV rate for Lattelecom SIA products show that CLV may increase in bundles. Ideally, CLV and NPS should correlate positively, i.e. both the company and customer would gain benefits.

If NPS turns negative, it does not necessarily mean that CLV should fall accordingly. In this case NPS correlates to CLV slowly due to the existing barriers – the legal as well as 'human factor'. For example, termination of the contract with customers who are considered to be detractors will increase NPS score but will have negative effect on CLV through the increase of

churn. Therefore, rigorous analysis should be made to understand the true reasons behind the NPS changes. More valuable bundles have a greater ARPU than individual products that might challenge the theory of bundling products

Bundling can have a significant impact on the holding churn rates – a steady and slowing down increase over time. Bundles in general tend to show positive effects on individually declining products, for example, the Voice is rapidly losing its customer base, however, the bundles containing Voice still tend to show less churn rates as, ARPU and CLV remain relatively steady as well and do not show significant fluctuations as individual product churn rate changes. It means that if the churn rates are increasing for particular product line, if bundled, the product line will bring in revenue for a longer period of time. In other words, customers are willing to pay more for a bundle that contains a less desirable product than for the particular product individually. It leads to a conclusion that a product that has a high churn rate can add value also, if the product is bundled and provided it is not the core product.

5.2.3. Assess Bundling and Customer Loyalty (NPS rate) Relation

The proportion of promoters, passives and detractors directly affects the NPS score. It means that even having small churn rates the NPS score can change dramatically from positive to close to zero, but it does not necessarily mean an increase of detractors, for example, it could mean a practical migration of promoters to passive users, which should be monitored. Thus NPS should not be used as a single indicator in order to measure the overall loyalty of customers without looking at the individual spread for each particular product or bundle. A good example would be the Voice + Internet bundle NPS spread.

An increase in the number of passive users implies a risk of increasing churn rates in the next quarters or years. The churn rate may increase as passive customers change their opinion in favour or against the product. This kind of situation may not be foreseen if the NPS spread is not looked at, for example, having 30% promoters, 60% passives and 10% detractors would mean having the NPS score of 20% which is not bad at first sight. But if 60% of passive users were not addressed on time, the result might be - 60% increase of the churn rate, or they can migrate to detractors thus decreasing the NPS rate significantly.

The NPS increase does not mean an increase in the business growth – increase in revenues, as the NPS increase does not mean an increase in the number of customers, but the NPS growth may be achieved by extremely high churn rates and a symmetrical fall in revenues which is indicated by the CLV rate but not by the ARPU rate. It means that the NPS increase does not mean an increase in the number of loyal customers or that the loyalty of customers will

increase if the NPS rate is not looked up as a spread and the churn rate is not monitored. Thus the NPS rate and user loyalty are questionable matters and cannot completely support the theory on the subject. Even though important disqualifying signs that NPS cannot be used as a single indicator were identified, it can help to identify the 'consistency' of customers if the NPS spread is analysed and monitored together with other KPIs.

5.3. Implications for Theory Application Relative to Literature Review

5.3.1. Bundling *versus* Profitability and Mergence of Price and Product Bundling Strategies

According to the theory the product bundles should have lower prices than the sums of the individual product prices thus giving a price advantage to the user who is willing to pay for the bundle as a more economic choice. By analysing the list prices of products in 2014, the theory is true for Latvian telecommunications companies. Lattelecom SIA provides a minor discount to its individual product pricing sums to bundles, however competitors are basically building their offers to the customers only with a strategy to sell the bundle thus offering significant discounts. Lattelecom SIA provides a discount of approx. 7% if the user decides to buy the product in a bundle while its competitors offer discounts of up to 35% discounts.

The theory on bundling holds true if only competitor offers are taken into account, the mixed bundling is more successful if there is an obvious price discount. However, this theory can be challenged by the current Lattelecom SIA practices by analysing the ARPU rates that show that customers are willing to pay a premium for the more valuable triple-play product bundles. Thus the theory is incomplete as under certain circumstances and product setup bundled products have greater ARPU rates and thus they are more profitable than the individual products that means that it is more profitable to sell bundles rather than individual products.

Lattelecom SIA data analysis shows that customers are willing to pay almost the same price for the bundle because they receive additional benefits and they even are willing to choose a bundle containing the Voice product that has a significant churn rate. Thus we argue that the long-term (product bundling strategy) and short-term (price bundling strategy) aspects disappear in the triple-play bundles of the telecommunications industry where products and services are intangible and do not require the reorientation of infrastructure – technological changes.

5.3.2. Application and Use of NPS Metric

Frederick Reichheld argued that NPS could be used as a single indicator that the company has to track. In our view, it is not true as NPS has serious deficiencies and room for errors due to the fact that it does not track the total number of customers and excludes passive users. According to Lattelecom SIA data analysis it is clear that even if NPS were to increase this would not mean growth.

According to the theory the customer retention rate is one of the rates that can be influenced by NPS by adding more customers. However this idea can be easily challenged by the analysis done on the Lattelecom SIA data. The churn rate indicates whether NPS has any significance and easily indicates the customer migration to promoters.

The predictive nature of NPS is challenged by the analysis of Lattelecom SIA data because in particular cases the NPS predictions would not be accurate if the NPS spread were not analysed together with the churn rate, so even though the NPS rate indicated 20%, it would not necessarily mean that the passively-oriented users that can be a significant number, would not become detractors or that the churn rate would increase. An increase in neutral users means the risk of having an increase in churn rates in the next quarters or years. The churn rate may increase as neutral customers change their opinion in favour or against the product. This kind of situation may not be foreseen if the NPS spread is not looked at, for example, 30% promoters, 60% passives and 10% detractors would mean the NPS score of 20% which is not bad at first sight. But if 60% of passive users are not addressed on time, they can turn into 60% increase of churn rate, or they can migrate to detractors thus decreasing NPS rate significantly. There are indications of particular situations in Lattelecom SIA data.

Another example is the Voice product NPS spread that actually was 'waiting for its' possibility to switch to another product but until 2013 had no better offer in the market. In this case the churn rate increase increased the NPS rate as well, but it actually does not mean that some customers have become more loyal to a particular product, rather the number of customers decreased dramatically. Even more, even though the NPS rate shows a positive tendency, the ARPU rate does not indicate major changes, however CLV fall symmetrically to the number of customers lost – the churn rate. It means that in this situation CLV rate should be taken into account as a major indicator as it accumulates both – effects from ARPU and the churn rates.

NPS has an indicative nature for customer loyalty but it should not be related to any financial aspects or analysis of the company performance – it is just a customer loyalty indicator at given point of time. It is critical to analyse the NPS spread before drawing any conclusions, as

the NPS rate alone could be misleading. Financial aspects are well indicated by CLV. Ideally, CLV and NPS should correlate positively, i.e. both – the company and the customer would benefit.

5.4. Implications for Practice

NPS should be viewed as a mathematical outcome of user group proportion rather than a single universal metric. A separate use of NPS can be misleading. An increase of NPS can be achieved by giving unjustified discounts to the customers. Customers might be happy, but in medium term it would trigger financial problems rather than growth. NPS is not an indicator that would indicate growth potential although it might have some potential to be one if it is viewed together with other KPIs and looked at as spread of promoters, passives and detractors.

Bundling is a good strategy for industries where the product offer is intangible melting together pricing and product strategies. However bundling as the only pricing strategy tool that provides discounting of products in a bundle is less sustainable strategy. There is a potential for offer diversification if bundle has added value that would motivate to pay almost a full or full price for a bundled products. Such a strategy allows generating higher ARPU rates per bundle compared to the sum of individual products. NPS together with CLV are the key KPIs to monitor. An increase of NPS raises customer loyalty but increasing CLV is critical for the company's sustainable development. Thus a strong positive NPS and CLV correlation implies that the optimal product offering has to be achieved.

Bundles are less responsive to the dynamics of the customer opinion and behaviour changes. Bundles in general tend to show positive effects on the products that individually are declining, for example, Voice is rapidly losing its user base, however, the bundles containing Voice tend to show lower churn rates. It means that bundling can have a significant impact on holding the churn rates unchanged for individual products in the bundle.

It is important to care for excising customers when the market situation changes, and offer more for the same price thus not losing revenue and ARPU on additional discount, and avoiding the entire churn of the customer. By giving extra for the same price is the most cost effective way of retaining customers – Lattelecom SIA practice shows that switching of the Internet speeds and adding extra features to existing products to existing customers can hold the ARPU rates steady.

5.5. Limitations

This Diploma Project is based on a 3-year analysis (2011 – 2013). This is a relatively short period of time and may contain specific or one-off events, which may have an impact on conclusions. Therefore further analysis of the key metrics should be continued for the more years to increase the confidence level of the conclusions made.

Approximately 59% of total customers were not covered by the NPS survey, mainly due to the lack of their email addresses. Thus the accuracy of the NPS metric might be compromised.

Certain assumptions have been applied for churn calculation. Due to a system limitation it was partly possible to calculate the precise churn at the detailed product level (e.g. the Internet 1 + ITV, the Internet 2 + ITV). Therefore the churn at product category (e.g. the Internet + ITV) was applied to detailed product level. Furthermore, the churn at the product category level contained only those customers, who had discontinued to receive the service completely. The internal movement between product categories was ignored.

From the NPS analysis it is assumed that movements among passives, detractors and promoters are gradual, e.g. a disappointed promoter will first move to passives and later - either back to promoters or detractors. It may well not be true because a certain action or event may change the customer's attitude fundamentally and the promoter would become a detractor or *vice versa* immediately.

With a few exceptions this Diploma Project analysed the Internet data on aggregated level. However, two different technologies, the DSL and optics fiber possesses different characteristics starting from pricing, service quality, capacity and ending up with customer's perception. Therefore the analysis of individual technologies would give more decent data and potentially different conclusions.

The conclusions and suggestions are drawn from the analysis of the Lattelecom SIA operations. The leading role of Lattelecom SIA in the market should be noted. It is questionable whether conclusions and suggestions are well applicable to any other market or another company with much smaller market share. For example, lower churn rates can be achieved because there is a weak competition without good alternatives.

An analysis of bundle *versus* its individual components assumes that respective business line customers are relatively equal in their behaviour and needs. This was the basis to compare separate Voice and the Internet & ITV with respective triple-play bundle Voice + the Internet & ITV. In reality the needs of the individual Voice customer and the service consumption pattern

might be completely different. Consequently, the usage of the Voice service for a single Voice user may differ from the Voice usage of the triple-play bundle user.

5.6. Suggestions for Future Research

Having regard to the limitations of the research and the objectives of the present Diploma Project, certain aspects have not analysed in detail. We see that there is a potential for future research in the following aspects.

Firstly, the industry NPS analysis for major telecommunications companies. As the NPS score is calculated only for Lattelecom SIA it was not possible to compare it to the score of other companies within industry in Latvia. If possible, future research should measure the NPS scores for top national telecommunications companies with a view to reaching a conclusion of whether loyalty has any relation to the product quality and how discounting practices affect the NPS rate. NPS analyses has been performed at product category level. Additional value would be derived had it been done at detailed product level.

Secondly, the key KPIs of major telecommunications companies should be analysed. Particular information is not publicly available, however the data could help evaluate the correlation between the NPS score and other financial metrics – ARPU, churn and CLV.

Thirdly, the technologies, contents of pay TVs and the Internet speeds vary across competitors. For the purposes of the analysis technologies and contents were not segregated. Segmentation was done only based on the speeds of the Internet and the number of channels thus excluding the technological differences. The DVB-T and the Internet TV products were excluded from the analysis as separate business lines. Even though the analysis in terms of the technological and contents dimension would require performing rigorous comparisons and research, it could mean having different NPS, ARPU and churn rates for each product thus allowing to make conclusions based on a particular technology. Even more, customer perception surveys related to particular product they are using would give more information on customer behaviour relative to value perception. That would allow a better user segmentation and a better understanding of the drivers behind user behaviours and customer loyalty.

Finally, mutual analysis of both the NPS score and KPIs could allow drawing a conclusion regarding the effectiveness of the bundling practices in Latvia. Even though the correlation and use of KPIs is clear, the comparison of companies would allow drawing conclusions regarding profitability and the right strategy to be pursued with a view to maximising financial gains.

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7. Appendices

7.1. Appendix: Abbreviations

ARPU – Average Revenue Per User

CATV – Cable Television

Churn rate – the percentage of subscribers to a service that discontinue their subscription to that service in a given time period.

CLV – Customer Lifetime Value

COCA – Cost of Customer Acquisition

DSL – Digital Subscriber Line (originally Digila Subscriber Loop). Is a technology that provides Internet access by transmitting digital data over the wires of a local telephone network.

DVB-T – Digital Video Broadcasting — Terrestrial. DVB-T is a European standart for the broadcast transmission of digital terrestial television.

FTTB – fiber-to-the-building

FTTC – fiber-to-the-node

FTTH – fiber-to-the-home

FTTH – fiber-to-the-node

FTTN – fiber-to-the-node

GPON – Gigabit-capable Passive Optical Networks

IPTV – Internet Protocol Television.

ITV – Interactive Television. Lattelecom Interactive Television is a high definition television that provides divers funcionality, such as – video rentals, archive, video on demand, language selection, record and pause functionalities.

NPS – Net Promoter Score

VDSL – Very-High-Bit-Rate Digital Subscriber Line. Similar technology to DSL technology providing data transmission over a single flat untwisted or twisted pair of copper wires (up to 52 Mbit/s downlod and 16 Mbit/s upload).

KPI – key performance indicator

7.2. Appendix: Latvian Telecommunications Industry Division by Service

Service	Share (%)
Public Internet	45,65%
Leased Line Service	6,00%
Public Data and Electronic Message Transmission	6,96%
Public Pay Phones	0,19%
Voice Telephony	16,63%
Interconnection Services	7,35%
Access Services	6,19%
Radio and TV Broadcasting Services in Public Electronic Communications Networks	11,03%

7.3. Appendix: Triple-play Bundling Offers

Brand / Provider	**Lattelecom SIA**	**Baltcom**	**Balticom**
Type	triple-play	triple-play	triple-play
Source	www.Lattelecom SIA.lv/majai	www.baltcom.lv	www.balticom.lv
Bundled products (product name / technology)	Voice (VoIP) Internet (Optical Fibber) 250Mbit/s ITV (IPTV) Standard	Voice (VoIP) Internet (Optical Fibber) 250Mbit/s pay TV (DVB-T) Standard	Voice (VoIP) Internet 100 Mbit/s pay TV (DVB-T) Baltcom
Contract Term (months)	24	24	24
# Tarrif Plans	7	2	3
Additional features (inclusive)	WiFi router, web TV, 60 movies every month for free in movie rental, pay WiFi access, HD / 3D pack, caller ID indication	-	-
Individual Components	Voice + The Intenret & ITV	Voice + Internet + pay TV (DVB-T)	Voice + Internet + pay TV (DVB-T)
Price for Individual Components if bought separately	Voice € 9.81 The Internet & ITV € 28.89	Voice € 12.95 Internet (Optical Fibber) € 12.95 pay TV (DVB-T) Standard € 10.24	Voice € 1.50 Internet € 12.00 pay TV (DVB-T) € 7.50
Bundle price	€ 35.90	€ 23.34	€ 16.50
Discount	€ 2.80	€ 12.80	€ 4.50
Discount (%)	7%	35%	21%

7.4. Appendix: Duo-play Bundling Offers based on the Internet Product

Brand / Provider	**Lattelecom SIA**	**Baltcom**	**Balticom**
Type	duo-play	duo-play	duo-play
Source	www.Lattelecom SIA.lv/majai	www.baltcom.lv	www.balticom.lv
Bundled products (product name / technology)	Internet + TV (250 Mbit/s, Standard)	TV + Internet (250 Mbit/s, Standard)	Internet 100 Mbit/s pay TV (DVB-T) Baltcom
Contract Term (months)	24	24	24
# Tarrif Plans	3	2	3
Additional features (inclusive)	WiFi router, web TV, 60 movies every month for free in movie rental, pay WiFi access	-	-
Individual Components	Pure bundle only Internet can be bought separately	Internet + pay TV (DVB-T)	Voice + Internet + pay TV (DVB-T)
Price for Individual Components if bought separately	Internet 3 (Optical Fibber) € 21.90 ITV € 9.32*	Internet (Optical Fibber) € 12.95 pay TV (DVB-T) Standard € 10.24	Internet € 12.00 pay TV (DVB-T) € 7.50
Bundle price	€ 28.89	€ 20.49	€ 15.00
Discount	€ 2.33	€ 2.70	€ 4.50
Discount (%)	7%	12%	23%

7.5. Appendix: Duo-play Bundling Offers based on Voice Product

Brand / Provider	**Lattelecom SIA**	**Baltcom**
Type	duo-play	duo-play
Source	www.Lattelecom SIA.lv/majai	www.baltcom.lv
Bundled products (product name / technology)	Voice (VoIP) Internet (Optical Fibber) 250Mbit/s	Pay TV (DVB-T) + Voice
Contract Term (months)	24	24
# Tarrif Plans	3	2
Additional features (inclusive)	WiFi router, pay WiFi access, caller ID indication	-
Individual Components	Voice + Internet	Pay TV (DVB-T) + Voice
Price for Individual Components if bought separately	Voice € 9.81 Internet € 21.90	Pay TV (DVB-T) € 10.24 Voice € 12.95
Bundle price	€ 28.89	€ 20.49
Discount	€ 2.82	€ 2.70
Discount (%)	9%	12%

7.6. Appendix: CLV Comparison Between Individual Products and Bundles

		2012/2011 YoY	2013/2012 YoY
CLV (All Technologies)	**Voice + Internet + ITV**		
	Bundle	-4,1%	-1,2%
	Components	3,8%	-6,1%

CLV (Optics)	**Voice + Internet 1 + ITV**		
	Bundle	1,7%	2,5%
	Components	7,2%	-4,7%

CLV (Optics)	**Voice + Internet 2 + ITV**		
	Bundle	-0,1%	-
	Components	1,4%	-

CLV (Optics)	**Voice + Internet 3 + ITV**		
	Bundle	1,8%	1,4%
	Components	-0,8%	-9,9%

CLV (Optics)	**Voice + Internet 4 + ITV**		
	Bundle	-7,3%	10,0%
	Components	-6,8%	-3,7%

		2011	2012	2013
Voice + Internet + ITV				
CLV (All Technologies)	components as % from Bundle CLV	66%	71%	68%
Voice + Internet 1 + ITV				
CLV (Optics)	components as % from Bundle CLV	71%	74%	69%
Voice + Internet 2 + ITV				
CLV (Optics)	components as % from Bundle CLV	74%	75%	-
Voice + Internet 3 + ITV				
CLV (Optics)	components as % from Bundle CLV	75%	73%	65%
Voice + Internet 4 + ITV				
CLV (Optics)	components as % from Bundle CLV	67%	68%	59%