

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Diploma Thesis

**Economic Evaluation of Online Marketing For a
Selected Pharmaceutical Company**

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DIPLOMA THESIS ASSIGNMENT

Bc. Žaneta Šupová

Economics and Management

Thesis title

Economic evaluation of online marketing for a selected pharmaceutical company

Objectives of thesis

The aim of this diploma thesis is to identify various online marketing campaigns of two selected brands. Comparison of success of each of the campaigns must be done, so the design of visual content can be made. Evaluation of the profitability will be done as well.

Methodology

Definition of used online marketing campaigns. The selection of data from online campaigns of two specific brands is needed. Then the analysis of each of the techniques must be made to make a graphical representation. On the base of the graphical content the economic evaluation of applied campaigns can be presented.

The proposed extent of the thesis

60 – 80 pages

Keywords

Marketing, Online, Digital, Campaign, Economic Evaluation, Pharmaceutical Industry, Cost, Revenue, Profit

Recommended information sources

Bird, D. (2002). Commonsense direct marketing. 1st ed. London: Kogan Page, ISBN-13: 9780749447601

Lee, K. and Carter, S. (2012). Global marketing management. 1st ed. Oxford: Oxford University Press, ISBN-13: 9780199609703

Prevel Katsanis, L. (2016). Global Issues in Pharmaceutical Marketing. 1st ed. New York, N.Y.: Routledge, ISBN-13: 9780415895323

Rollins, B. and Perri, M. (2014). Pharmaceutical marketing. 1st ed. Burlington, MA: Jones & Bartlett Learning, ISBN-13: 9781449697990

Smith, M. (2009). Pharmaceutical marketing: Strategy and cases. 1st ed. New York: Informa Healthcare, ISBN-13: 9781560241102

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Statutory Declaration

I declare that I have worked on my diploma thesis titled "Economic Evaluation of Online Marketing For a Selected Pharmaceutical Company" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on

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Economic Evaluation of Online Marketing For a Selected Pharmaceutical Company

Summary

The aim of the diploma work is to economically evaluate marketing campaigns of two brands from the selected pharmaceutical company. In the first part, theoretical, there are main definitions of economic procedures that are used in the analytical part. Also, there are theoretically explained online marketing tools and marketing campaigns. The second part, analytical, is focused on the economic point of view of the marketing campaigns that were applied to the two undisclosed brands. Analysis of prices and costs of individual campaigns must be taken into account in the final economic evaluation and after that, the conclusion can be made. The conclusion must include the decision if the profit exceeds the cost and if an investment into these campaigns will pay off. Regression analysis must be included as well, so the significance of the campaigns for each of the brand can be stated.

Key Words: Marketing, Online, Digital, Campaign, Economic Evaluation, Pharmaceutical Industry, Cost, Revenue, Profit

Souhrn

Cílem diplomové práce je ekonomicky vyhodnotit marketingové kampaně dvou značek vybrané farmaceutické společnosti. V první části, teoretické, jsou definice ekonomických postupů, které jsou následně použity v analytické části. Dále jsou zde teoreticky vysvětleny online marketingové nástroje a marketingové kampaně. Druhá, analytická část, se zaměřuje na ekonomické hledisko marketingových kampaní, které byly aplikovány pro dvě nezveřejněné značky. Analýza ceny a nákladů jednotlivých kampaní musí být zohledněna ve výsledném ekonomickém zhodnocení a poté může být udělán závěr na základě těchto výsledků. Závěr bude obsahovat rozhodnutí, zda výnos převyšil náklad a zda se vyplatí do těchto kampaní v budoucnu investovat. Regresní analýza kampaní pro každou značku musí být taktéž zhotovena pro stanovení významnosti.

Klíčová slova: marketing, online, digitalní, kampaň, ekonomické zhodnocení, farmaceutický průmysl, cena, náklad, výnos

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1 Introduction

Traditional marketing methods are nowadays too expensive and less and less effective. The importance of online marketing is currently high and continues to grow. If online marketers neglect or even omit completely from the overall marketing strategy, there are many business opportunities and interesting results that an effective online strategy can bring.

Digital marketing is one of the fastest growing industries at all, and it is not easy to keep up with the ever-evolving innovations and novelties. Online marketing is not only fast to apply but also easy to measure. With accurate and fast measurability, it is possible to flexibly respond to customer demand and modify online marketing campaigns accordingly. Digital marketing is a very good business today and, when campaigns are well set up, companies generate high returns.

This diploma thesis is focusing on the digital marketing, and its economic evaluation, in the pharmaceutical industry. All of the data expressed in the analytical part are real, based on own experience from one of the largest pharmaceutical companies in central Europe. Anyway, the pharmaceutical area is very specific because of many constraints in communication throughout the Internet. Due to the obstacle of being very careful on word expression, the online campaigns must be prepared with maximal accuracy and with the smallest number of errors, in order to avoid to any comments from competitors or customers.

The theoretical part is focusing on the theoretical background of the pharmaceutical industry, the history, and evolution. Very important part is the oligopoly on the pharmaceutical market, how companies are setting its prices, how they compete with each other and how it affects the price and the consumer in the final. In the price elasticity subchapter there is explained the elasticity of demand and supply and graphically illustrated the relationships. Research and development must be discussed as well in order

to know the constraints of the new drug development and all the processes of getting on the pharmaceutical market.

The online marketing campaigns and their definitions are explained in detail in the chapter focusing on reaching the market of the pharmaceutical industry. The digital communication tools and their expression are selected in order which online activities are analyzed in the practical part. In this chapter deeper analysis of the Search engine optimization and the Search engines in the Czech Republic are discussed, because they are used in the practical part and are one of the online campaigns that were running and optimized during the whole campaign time. Pay per click is also described in detail, and not just what it is and how it can be used for online campaigns, but also some practical computations, connected with the banner size and number of impressions, are used and expressed as well. Pay per click goes hand in hand with the banner advertisement, which is an important part of every successful campaign.

The practical part focuses on two undisclosed brands, with a similar pricing and target groups. On the base of the analysis of each of the brand in the meaning of the history, target groups, current position on the Czech market, and also analysis of the data from Google Analytics from the brand's website. The crucial part of the analysis is the economic site, concretely costs, revenues and the final profits of Brand X and Y during the campaign period of 18 weeks, July – October 2017. The main aim of this diploma thesis is to economically evaluate them and state whether there was a profit or a loss, and make a decision based on the data, which of the campaign combination was the most successful and so does worth to apply in the future for a similar type of the campaign.

Brand X had its campaign during 9 weeks, concretely from the beginning of July 2017 until the end of August 2017. Each of the campaigns that were running during this period is evaluated, its costs and then the revenues compared with the previous year 2016, so the real difference is visible. Brand X has been running four different digital campaigns – Search engine optimization, Pay per click campaign (banner, text ads), PR articles and videos on YouTube.com. The costs for each of the online marketing tool are collected and

analyzed together with the revenues. The same applies to Brand Y, but in this case, there were used, instead of the PR articles, the influencers (ambassadors) and the campaign period of 9 weeks were from the beginning of September 2017 until the end of October 2017. The economic part is the same as in case of Brand X – the costs and revenues are analyzed and compared with the previous year 2016.

In the final chapter, there is a focus on the final profit, not just of these two undisclosed brands, but also the profit of the company's e-shop, on which the purchases were made and from which the revenues are taken and analyzed. A discussion of the final profitability of the campaigns and most successful combination (there was never only one online marketing campaign running, it is always a combination of a few of them) of them will be stated.

Regression analysis will take place at the final part of this thesis. The analysis is important to show the relationship between the dependent (revenue) and independent (cost) variables, and by how many percent the model explains the variance in the dependent variable (R^2).

On the base of the final profit or loss of the campaigns and a decision, which one was most successful, the final conclusion may be stated and can be taken as a significant result from this diploma thesis.

2 Objectives and Methodology

2.1 Objectives

The aim of this diploma thesis is to define various online marketing campaign of two selected and undisclosed brands, economically evaluate them and make a decision which of the campaign was set up better and which one is worth to repeat in the future for similar type of campaign.

The target market as well as the costs must be discussed in the cost-benefit analytical part of both of the brands. On the base of this discussion a proper analysis of the brands can be done, and then the visual content can be made. The collected data for each of the online activity must be analyzed as well, the graphical part must be processed and so the comparison of profitability of online marketing activities can be done.

On the base of the comparison the final economical evaluation of the campaign activities combination can be stated which of the online marketing campaign has been more successful in meaning of costs, revenues and final profits. The final chapter must deal with the regression analysis of the relationships between the dependent variable (revenues) and independent variable (costs) and prove or disapprove the statistical significance.

The expected outcome of this diploma thesis is to answer the following research questions:

1. Did the online campaigns have an influence on profit, either positive or negative?
2. Which one of the online campaigns had the biggest impress on users?
3. Should the campaign be recommended to repeat in the future?

2.2 Methodology

Firstly, theoretical definition of used online marketing campaigns is necessary for the right recognition. The selection of data from online campaigns of two specific brands is needed.

Secondly, the cost-benefit analysis of each of the techniques must be made to make a graphical representation. On the base of the graphical content the economic evaluation of applied campaigns can be presented. Creation of proper tables and charts is important for the statement representing results of profit or loss. Graphical content needs to compare the costs and revenues, and brings the final answer whether the campaigns were successful or not. Regression analysis takes place in the last chapter where the significance of online campaigns and the relationship between costs and revenues must be revealed.

3 Pharmaceutical Industry Background

3.1 History

The longest development of pharmacy is considered from the time point of view from the prehistory to the ancient Greeks and the Romans. The healing experience was centered mainly on specialists who took over all the experiences of previous generations and enriched them by their own and then passed it to the next generations. These healers held the function of both physicians and drug manufacturers, saying "all health care". The journey to Europe, which the healing evolution underwent, was no different from the path of civilization. [7]

The beginnings of knowledge were in Mesopotamia, Egypt, and across Asia Minor spread throughout Crete and Greece. From the Greeks, the Romans took over knowledge, and then the Arab empire. The healing knowledge came to Italy and France from the 11th century, from where they spread further north to Germany and then to the Czech lands. This period was a monopolistic healing and only in the 5th century BC. in ancient Greece, it was created by a separate pharmacy department of specialists who provided medicines. They called the rhizotomes, or the root cutters, to collect plants and smoke or to dry it in the sun. By Greek rhizotomes, they switched to another pharmaceutical category, a medicinal product. The Greeks are considered to be the forerunners of the pharmacists and the creators of the first pharmacies. In street stalls, they sold their own products made from drugs. Everything was subject to special laws and supervision by the authorities. Pre-classical pharmacy dates back to the 1st to 2nd century BC, since the 4th century there are the first public pharmacies in Baghdad, from where they spread from Persia to Spain. Classic pharmacies date back to Europe from the 11th century to the 19th century. While there has been monastic pharmacy in front of the public pharmacy. Part of the monasteries was a plan for the doctor's office, a room for the sick, a medicine cabinet, and a place for the cultivation, preparation and storage of medicines. [7]

In the Czech Lands, the pharmacy had an era from the 13th to 18th centuries, when both monastic and civilian burghers had developed. The first public pharmacy was in Prague, and in other towns in Jindřichův Hradec, Vysoké Mýto, Cheb and Kutná Hora. The breakthrough point is the 19th century, until the pharmacy is separated from the pharmacy and all the activities took place directly at the pharmacy's workplace, is referred to as the best period of classical pharmacy. Since then, pharmacy has become one of the pharmaceutical industries. This development was related to the development of the production technology of medicinal products, new methods of evaluation and control in the processing of substances and, last but not least, to the mechanical and later machine production of medicinal products in large volumes, which was allowed by advances in technology. The then stormy development of organic chemistry at universities and the discovery of morphine by Friedrich Wilhelm Serturmer 1803, which marked the beginning of chemical analysis of alkaloids and drugs, opened pharmaceutical production to a new perspective. With this development, however, pharmacists with no full academic education, mostly focused on manual production of prescription drugs, were not able to keep up. [7]

Pharmacists could not compete with factories, so they bought products from pharmaceutical companies. It has been officially authorized in 1855 by the Austrian Pharmacopoeia and attempted by pharmacists, but the industry and drug production have grown, and today we know that the efforts of pharmacists to hinder this development have been futile. Since 1890, preparations for use in the morning have come to the pharmacy, such as compressed tablets. Medicines get catchy names and packs with a characteristic label. An example is the introduction of Dr. Höchst's antipyrine, named Dr. Knorr's Lion brand antipyrine. Brands and advertising for a drug appear for the first time. Today's chemical-pharmaceutical companies have their origins in three areas. One of them is a group that has grown from a small pharmacy to a factory. This group includes E. Merck, a Darmstadt pharmacy in the country, or Beiersdorf & Co., a Mercury pharmacy in Hamburg. In the Czech Republic, for example, Zentiva has its roots in the U černého orla pharmacy in Prague, whose predecessor was the pharmacy U bílého anděla at Opava. The other predecessors include wholesalers of raw materials for the production of dyes and

pharmaceuticals. Pharmaceutical firms such as C. F. Boehringer & Sons in Mannheim and GEHE & Co. in Dresden, for example, was the wholesale origin of raw materials for the production of dyes and pharmaceuticals. The third group is industrial manufacturers of chemicals from the chemical industry, specialized mainly on tar dyes. These companies had both operational and economic assumptions to produce high-quality pharmaceuticals, as well as evolving scientific work. [7]

3.2 Oligopoly in Pharmaceutical Industry

Definition of Oligopoly

- A situation where there is a limited number of (at least two) relatively large companies dominating the market concentrating a large part of the offer.
- High degree of mutual decision-making.
- If an oligopolistic firm takes a decision, other firms are forced to accept this decision as well.
- Concentration ratio (coefficient) = rate of production concentration in a particular sector.
- It indicates the percentage of production in a particular industry attributable to its four largest companies.
- Oligopolies: automobile production, oil processing, pharmaceutical industry, computer hardware production
- A characteristic feature of the oligopoly is barriers to entry of new competitors on the market [26]

The dominant firm will supply the quantity of which its MC and MR equals, or Q_D (Quantity demanded) at the P_D (Price demanded) price. [16]

The competitive edge takes over the P_D price and will deliver a Q_{CO} (Quantity competition) amount to it. [16]

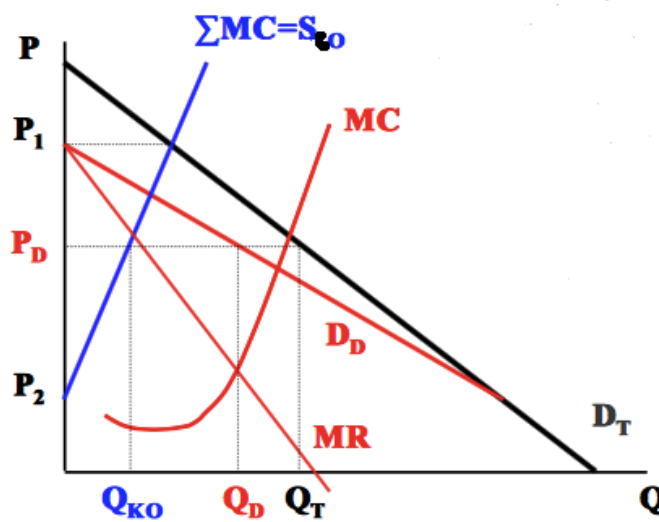
The total market value at the P_D price is given by the sum of the production of the dominant company and the production of the competitive edge:

$$Q_T \text{ (Total quantity)} = Q_D + Q_{CO} \text{ [16]}$$

MC (Marginal cost) - the costs of producing an additional output unit. They indicate an increase in total costs if production (output) increases by a unit or a certain number of units. [16]

MR (Marginal revenue) - indicate an increase in total costs due to an increase in production per unit. [16]

Figure 1 – Oligopoly with a Dominant Firm



Source: [23]

At P_1 and higher, total demand will only satisfy the competitive edge.

For P_2 and lower, the competition edge output will be zero: $Q_D = Q_T$

The price of P_2 represents the point of closure of competitors' competitive edge. [18]

3.3 Price Elasticity in Pharmaceutical Industry

3.3.1 Price Elasticity of Demand

Differently high prices lead to different levels of demand. The relationship between price and demand is shown by the demand curve.

For marketers, it is very important to know the elasticity of price, i.e. the flexibility of demand. Price elasticity is measured by how demand is sensitive to price changes. If demand stays almost the same as a small change in price, it means that demand is inelastic. If it changes significantly, the demand is elastic.

The demand response to price change is expressed by the economic indicator of price flexibility of demand and can be calculated using the following formula. [29]

Figure 2 – Price Elasticity of Demand Formula

The Price Elasticity of Demand Formula

$$E_d = \frac{\% \Delta Q_d}{\% \Delta P}$$

Δ = change

Source: [11]

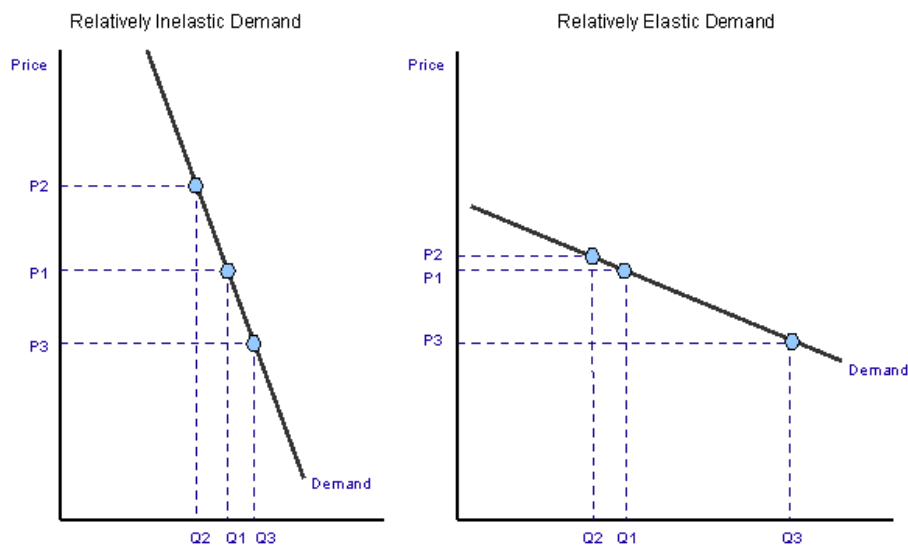
Price flexibility of demand tells how consumer spending changes to a particular farm if its price changes.

If demand flexibility in absolute value is greater than 1, which means that a 1% price increase will cause more than a one-percent drop in quantity, then an increase in

price will lead to a decrease in consumer spending on a given farm - that is, demand is elastic.

However, if demand flexibility is less than 1, the price increase will lead to a rise in the cost of a given farm - that is, demand inelastic. [29]

Figure 3 – Elasticity of Demand Graphs



Source: [29]

However, it could also be that demand flexibility is equal to 1, which means that it is a unitary flexible demand, and therefore a change in price will keep spending on the farm unchanged. [29]

The fundamental effect on the elasticity of demand is also whether it is possible to replace a farm with other goods, that is, whether it has some close substitutes. If the farm is easily replaceable, the demand for it is elastic. [29]

3.3.2 Price Elasticity of Supply

The price elasticity of supply reflects the sensitivity of the supplied quantity of a particular farm at its cost. The value of the price elasticity of supply for individual goods

can be calculated as a percentage of the percentage change in the quantity supplied and the percentage change in the price of the selected farm, below the whole formula for calculation. [19]

Figure 4 – Price Elasticity of Supply Formula

$$\text{Price elasticity of supply} = \frac{\% \text{ change in } \textit{quantity supplied}}{\% \text{ change in } \textit{price}}$$

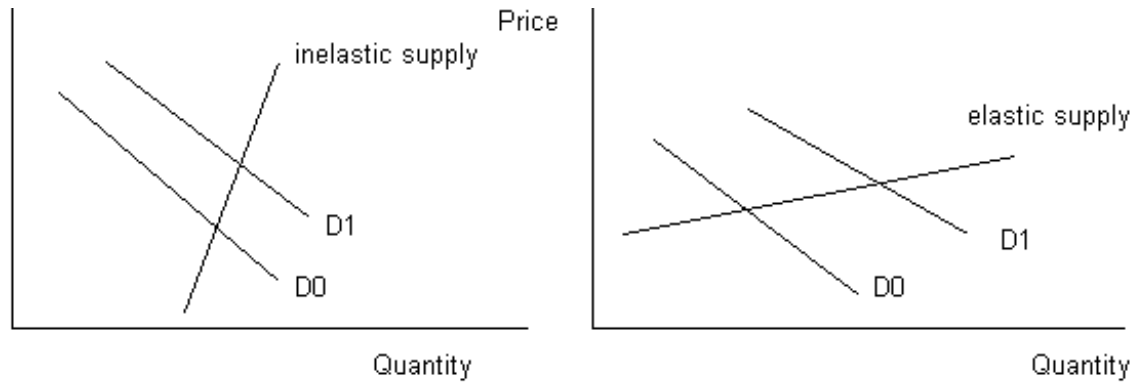
Source: [28]

When monitoring the price elasticity of the offer and its subsequent understanding, it is necessary to consider two factors that should be borne in mind. First, we do not detail the reasons for the price change. However, we can assume that the increase in demand raises higher prices. [19]

Secondly, it is also necessary to include a time factor that undoubtedly influences the supply elasticity. The response to the offer is markedly influenced by the time at which price changes may occur at all. The distinction of a supply responses to a change in a demand and a price at various times. [17]

The supply is very elastic if the company can combine different levels of labor and capital for production at a certain level of performance. If production factors are interchangeable, then the offer is elastic. If the factors of production cannot be replaced with one another, then the offer is inelastic. [17]

Figure 5 – Elasticity of Supply Graphs



Source: [29]

Due to the time factor considered, the offer is more elastic in the long run. In a short period of time, companies are unable to fundamentally change the size of their production capacities, so the quantity offered is not very sensitive to price changes. In the long run, companies can change their production capacity - open or close new plants, etc. New competitors can enter the market to significantly expand the offered quantity of the farm. It follows that the quantity offered responds more sensitively to the change in the cost of the farm. [29]

3.3.3 Cost, Price and Competition

A customer who is considering buying a particular product tends to compare the product with a competitive product. Companies, therefore, monitor the behavior of the competition and respond to its changes. In particular, the price of the products offered and the costs of the competition are measured so that the company can determine whether it has an advantage or disadvantage. [29]

3.4 Research and Development

3.4.1 New Drug Development

New active substances develop through long research and testing. First targeted a Paul Ehrlich, who discovered a salvarsan in 1904, was the treatment of syphilis. Since then, he has discovered a way to discover pharmacologically effective molecules huge progress. Today, new drugs are created on the basis of pharmaceutical efforts researchers and new chemicals are coming into the world with complex procedures. The process at the end of which is the discovery of a new drug in the market has three phases:

1. Drug discovery - based on the investigation of the disease, its principles function, chemicals that may have a pharmacological effect on human tissue.

2. Drug development - several molecules are selected from the originally found molecules the most appropriate ones entering the preclinical assessment.

a) Preclinical evaluation - testing the biological activity of the drug on the experimental animals, its safety shall be investigated, from this phase to the clinical stage the evaluation passes about 50% of the molecules originally select.

b) Clinical assessment - passes through three phases, the first is treated with a healthy drug and the safety of the drug is monitored; in the second phase, the drug is given a small number volunteer patients, the therapeutic efficacy, and side effects are assessed, and in the third, the results are verified on a larger number of patients, they are examined adverse effects in long-term use.

3. Approval procedure (FDA) - if the drug expert was rated as safe, the authorization of the drug is requested

4. Drug marketing and expansion

5. Post-marketing studies - Drugs are used to investigate other possible fields of action (e.g. back pain can help with the treatment of physical injuries), it can be done by manufacturers to expand the market with other options the time from research to product placement is the longest in the pharmaceutical industries and may last for more than 15 years. Because the process of developing a new drug is very complex and a financially and time-consuming, patent protection applies to newly developed pharmaceuticals. [27]

The patent is the legal form of protection of the invention and also the expression of its ownership. Its sense is to promote inventions that improve living standards and to guarantee temporary exclusive rights to production, utilization, and sale of a new invention. The inventor is left to property exclusivity of his invention, and thus he gets the chance to get back his investment. After ending the invention becomes a public property and is freely used. [27]

At present, around 15,000 active substances are patent-protected worldwide. Original pharmaceutical companies apply for patent registration in the early stages of development, mostly after discovering the beneficial effects of the substance. Since the patent application has been filed, the deadline is running patent protection (and shorter shelf-life). In most states, it takes patent protection 20 years after the registration of the new active substance.

In the Czech Republic patent protection is covered by Act No. 527/1990 Coll., on inventions, industrial designs and refinements, harmonized with the relevant EU directive.

The possibilities of protection in the pharmaceutical field are possible in three forms:

- Protection of the chemical itself
- Patent (a fabric patent or a method of making it)
- Indications (uses of a pharmaceutical substance)

A classic example of the original drug is Aspirin's Bayer Pharmaceuticals. [27]

3.5 Identification of the Market

The market or total demand for a given product or service determines the highest possible price limit. The seller decides on the amount of the price depending on what type of market it is, distinguishing between four basic types of markets. In a perfectly competitive market, there are many buyers and sellers who trade with a single commodity. Buyers and sellers do not have a significant impact on the current market price. In the case of monopolistic competition, the market is made up of many buyers and sellers who trade for a certain range of prices because they are able to differentiate their goods or services by eg quality, characteristics, style, etc. Within the oligopoly market, only a few sellers sensitively respond to the pricing and marketing strategy of the competition. Under pure monopoly, there is only one seller on the market. It may be a state monopoly, a private regulated monopoly or a private unregulated monopoly. In any case, prices are set in a different way. The pricing policy of the state monopoly is often set to cover costs or bring at least a reasonable profit. Prices may, however, be set too high in some cases to reduce consumption. In a regulated monopoly, price regulation usually allows a reasonable profit and the possibility of expanding business operations. In the case of an unregulated monopoly, the firm fixes the prices themselves. [8]

The customer is always the one who decides whether the price set is correct. Pricing policy, like other marketing mix tools, must be customer-centered. [8]

3.6 Processes before the Entry of a New Product on a Market

The driving force of the pharmaceutical industry is the profit and it is generated primarily by the development and sale of new products, and therefore large investments are being made. However, these investments are long-term and risky. Pharmaceutical companies, if we talk about the original companies, invest 10-20% of their turnover in the research and development of new medicines. [9]

Introducing a new product to the pharmaceutical market is not a matter of weeks or months. The process at the end of which is the emergence of a new drug on the market can

last for more than 15 years. Given the long-term nature of the specific process and the close link between the results of clinical and post-marketing studies and the product marketing strategy, I consider it necessary for the reader to approach this process. The process of introducing a new product to the pharmaceutical market can be divided into three phases - search research, drug development, drug marketing, and support. [9]

4 Reaching the Pharmaceutical Industry Market

The market for health services on the supply side consists of two groups of entities:

- Hospitals, ambulances or private practitioners, where services are mainly concerned customers, i.e. patients
- Pharmacies, pharmaceutical companies, drug distributors or medical device vendors and devices, especially for tangible products, medicines or devices. [2]

They both have one thing in a common, the center of interest is patient with all these devices. As a recipient of healthcare i.e., a service or as a customer (direct or indirect), which needs medication or various medical devices. [2]

4.1 Marketing of the Pharmaceutical Companies

A pharmaceutical company carries out marketing activities to bring the product to the market, ensure it has a high sales volume and achieves the largest market share in a particular category of pharmaceuticals for the longest time. It needs to know the customer's needs and then satisfy them. When designing a marketing plan, the marketing department of the pharmaceutical company must consider the influence of several factors, such as drug consumption in the population or population composition. The target customer is in pharmacy, in particular, the doctor prescribing the medicine and the pharmacist who issues the medicine. Pharmaceutical marketing is, therefore, a tool for transferring information to healthcare professionals, doctors, and pharmacists. They are informed about the effect and proper use of the drug. [5]

Better information leads to the right decision of a physician and pharmacist on the appropriate choice of medicine for the patient's needs. End-users are target customers only when they are over-the-counter drugs or dietary supplements. [2]

Both the subsidiaries of global pharmaceutical companies and a number of local Czech companies (Zentiva, Teva), which compete with each other, operate on the Czech market. Most of these global subsidiaries, thanks to a number of influences such as aging

populations or the development of civilization illnesses, are making huge profits, and have the potential to spend considerable money on classic advertising such as TV, billboards and the like (when it comes to over-the-counter medicines). A number of smaller 28 local companies do not have these options, and therefore these companies are looking for new communication opportunities to get on the market effectively and cheaply. [5]

4.2 Online Marketing in the Pharmaceutical Industry

4.2.1 Web Marketing Mix 4S

The model has been developed by Efthymios Constantinides (2002). This is a web marketing mix, which is an alternative to the 4P and 4C concepts. Applied to marketing activities realized via the Internet:

Scope: includes strategic activities, linking the organization's marketing activities with its marketing strategy, market analysis, goal setting and website tasks organization, customer definition, and analysis of their purchasing behavior on the web [20]

Site (s): Web pages are often the main way of communication today (often sales) between the company and its customers. So, for designing successful sites, it's crucial to find out:

- What are the customer's expectations for the site?
- Why should he want to use the site?
- Why should he want to return to the site? [20]

Synergy: synergy between three key components:

- Front office integration: Linking Internet activities with other marketing company activities (uniform form of communication, identical symbols, logos, uniform branding)
- Back office integration: Linking Internet activities with other processes inside organizations and related IT infrastructure and services
- Integration with external partners: linking organization pages to sites and IT third party services [20]

System (s): Includes management and operation of all web-based technology (hardware, software, network infrastructure and related IT services, i.e. administration website, payment system, tracking site traffic, analytics). [20]

Figure 6 – Web Marketing Mix Concept

Web Marketing Mix



Source: [12]

4.2.2 Marketing Communication on the Internet

Communication on the Internet is based on the traditional division of marketing communications into advertising, sales promotion, PR, direct marketing and personal sales. Similarly, it can be divided into a specific one communication on the Internet:

- Advertising (banner or flat, catalog, preferred listings, PPC advertising)
- Sales promotion (incentives to buy, affiliate programs, loyalty programs)

- Public Relations (news and news, articles, discussions, information, questionnaires, forms, social responsibility, viral marketing)
- Direct marketing (e-mailing, newsletters, web seminars, conferences, workshops, online chat) [1]

Each company must choose a communication strategy on the Internet to take into account its goals communications and target markets. It is important to act on customers from multiple parties and differentiated at the same time. [1]

4.2.3 Advertising on the Internet

When placing an ad on the Internet, it is important to realize where people are focusing on browsing the site. A good helper is Google's research,

"Heat Map". Where the orange color shows the places that attract the most attention and light than little or no attention. It is important for companies to realize how to creating an ad, as well as creating your own website. [1]

Ad-hoc distribution according to product lifecycle not only on the Internet:

- Information advertising: trying to wake up demand
- Conviction advertising: to develop demand for the product
- Remarketing: helps to maintain the brand's position used mainly in the phase maturity or decline [1]

Advertising on the Internet according to the type of advertising campaign:

- Brand ad: Focuses on as many ad views as possible
- Traffic-enhancing ad: tracks the highest click-through rate
- Performance ad: it is intended to achieve the greatest possible conversion rate, in particular, making the purchase [1]

Splitting online advertising by form:

- Banner (desktop advertising) - static, animated, interactive, pop-up windows, buttons
- Catalog entries
- Preferred listings
- PPC advertising [1]

4.2.4 Banner Advertising

This ad was the first type of ad on the Internet. It has forms of banners (advertising strips), pop-ups, and buttons. Banner advertising has been in decline in recent years, as people have created so-called banner blindness over time. Now they are experiencing comeback mainly thanks to the fact that new technologies can already be connected thematically the display of site content by motion history and user search. Remarketing and retargeting will be explained below. [10]

Examples of ad pricing types:

- CPC (cost per click): The client pays for an ad click. For example, it sells Google ad in your AdWords system)
- CPT (cost per thousand): cost per thousand impressions. It uses, for example, List.cz [10]

An example of the current Price List:

Banner size 467 x 120, CPT = 120 CZK. That is, 1 million impressions = 120,000 CZK.

- CPA (cost per action): An advertiser only pays for a customer [10]

PPC Advertising

Click-to-CPC-based advertising system, CPC, as was mentioned above. PPC (pay per click): currently the most used form of advertising. However, it is not applicable to all sectors. For example, advertisements for pharmaceuticals regulated by the Advertising Act may not be advertised freely. [1]

PPC has a sophisticated, highly targeted targeting system. The ad will only appear when related to the topic the customer searches on the site by keywords and phrases.

The benefits of PPC advertising: accurate targeting is only for the visitor, so it is relatively inexpensive relative to other types of payment. Customers can set their own daily budget, but they need to be tracked. [1]

Sales Promotion

Sales promotion on the Internet has several forms:

- Purchase incentives: they are rather short-term in nature, in the form of discounts, sales, action sets, cross-selling, how to make a purchase of related goods, up-selling, it means how to get a new model of goods, price watchdog, products, stock, extended warranty, free shipping, personal collection, vouchers, gift samples, competitions and polls, product comparison, product reviews,
- Loyalty programs: are of a long-term nature, the goal is to bring the customer to re-purchase
- Affiliate Programs: This is a sales commission for an intermediary, i.e. a sale product through third party websites [3]

Public Relations

In public relations, different communication tools are used, but they are based on their own websites with links to PR articles, news or discussions.

PR activities on the Internet:

- news: can be posted on your own website or on intelligence or interest server
- Articles
- Blogs
- Discussion
- Podcasting: transfer of audio / video content over the Internet
- Viral marketing: Creating a product message for further dissemination
- PR on social networks
- PR on your own website [3]

Direct Marketing

The forms of direct marketing on the Internet are:

- E-mailing: the most common form of direct marketing on the Internet. It is necessary to have quality customer information in the database with detailed contact details, with previous purchases and, of course, personal data. Can be used for product offers, marketing research, sales promotion, or advertising. Within of the law, e-mail can only be sent to persons who have given their consent or are already in the process customers of that company.
- Newsletter: Regularly sent emails with information that you should not have sales or advertising. Topics included

The newsletter should be eye-catching and readable. The goal is to increase the number of subscriber's newsletters. It is typical of interest and branch portals.

- Web seminars and conferences: used mainly for educational purposes, problem clarification, discussion, customer or employee training (e-learning)
- VoIP telephony: Internet telephony
- Online chat: text messaging over the Internet. Frequently used e-shops like online customer support [3]

Internet Communication Tools

Communication tools on the Internet are distributed at following:

- Websites
- E-shops
- E-mail messages
- News, interest or branch portals
- Blogs: This is a regular, chronological publication of posts on a specific web page, can take the form of a "diary", be professional or business, or corporate. To be blog marketing efficient, it should have high traffic, so you need it regularly update interesting content
- Microblogs: Unlike a blog, a microblog is designed for a particular group of users. [3]

The most famous microblog is Twitter:

- Discussion Forums: They are set up to address a topic. It should not be in shape advertising messages.
- Social networks: places where people meet to create a circle of their friends or themselves joined a community with common interests. [3]

4.2.5 The Essence of Internet Marketing Success

4.2.5.1 Internet Search Engines

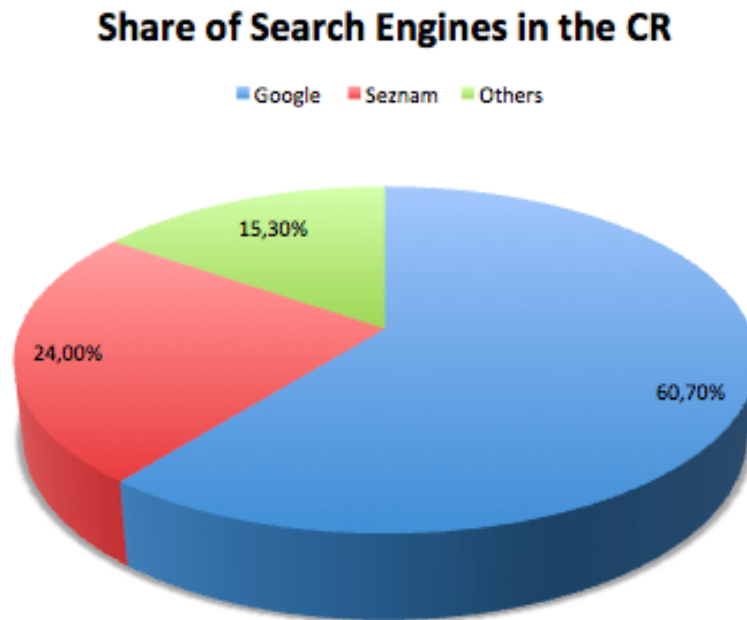
A search engine is a key tool for searching the Internet. Provides answers to queries users and therefore has an impact on what people will read or buy. For the search engine to find something and viewed, it is necessary to visit the site and remember its content (indexed). The pages are linked hyperlinks (links) that form the cornerstone of the Internet.

The search engine works in three basic steps:

- Crawling or crawling: a program (crawler, bot, robot), periodically visits websites, uses hyperlinks, or predicts domain names.
- Indexing: When indexing the robot, it analyzes the page content (e.g., keywords) to see what the party is about and sorts and evaluates the stored data.
- Ranking: The content you are searching for is rated. Pages that have a higher rating (higher quality sites) will be shown in a higher position in the results for the given phrase. Frequently updated high-quality robot sites visit many times a day, others, for example, once every six months. [24]

The most popular search engines in the Czech Republic are Seznam.cz and Google.cz. Currently, over the past half year, Google has outpaced the Market Share List for the first time, as shown in the following figure. By August 2017, Google has 60.7% and Seznam 24% on the Czech market. [1]

Figure 7 – Share of Search Engines in the CR



Source: [1]

Website access options:

- Direct attendance: Customer knows the website address and enters the address link
- Access through search engines: The user searches for a query or a keyword
- Visits from Referrals [1]

4.2.5.2 Website Optimization

The web can be created at the beginning of its quality, i.e. technically and in terms of content, it can be perfectly linked, it can be designed with flawless control and a great user experience. However, if it lags in any respect, it is appropriate to adjust and improve it. Sometimes this process is called "optimization (SEO)". The vast majority of those who offer optimization generally promise a certain better position in the search engines, which is desirable, but few can guarantee it. Search engines are constantly evolving (their site evaluation algorithms are not public and changeable) and websites should be developed not only in terms of keyword editing but also in terms of complexity, technical, content,

branding. Just a better position does not guarantee product sales, it's not enough to bring a potential customer to the site, but you need to quickly to work well, to convince him/her to action, to get to know him and to work with him/her for a longer time. [4]

4.2.5.3 Link building

Link building basically expresses the interest of the site's content and is important to it. It will naturally refer to it from its websites, discussions, blogs or social media. These backlinks increase site popularity for search engines. Link building is part of a communication strategy that aims to build a brand and increase reputation. [4]

4.2.6 Evaluation of Marketing Communication

In order for the company to find out which forms of Internet communication work for customers, it is necessary to evaluate marketing communication. Measurements on the Internet can be performed successfully if there is sufficient quality data. Then you can measure and evaluate any marketing activity on the Internet. There are many online techniques to evaluate, such as analyzing traffic from Google Analytics. [22]

4.2.6.1 Traffic Analyses

These analyses are used to measure the performance of marketing activities such as monitoring the visitor's behavior on the web, i.e. returning visitors, new visitors, where they come from, visitors with conversions that means when a visitor becomes a customer. Thanks to these analyzes, you can find out what visitors want, trends, seasonality. You can determine the performance of your PPC campaigns, or whether site optimization is done properly. [21]

Google Analytics: Most Popular Traffic Analysis Tool. Google offers this tool for free. It provides information about how people find the site, how they use it, what is the effectiveness of marketing campaigns. Graphs and spreadsheets, with the ability to compare both segments can easily and comprehensively track traffic from mobile phones

or tablets, non-stop visits, conversion visits, returning users, and formats. If the Google advertising system is also used AdWords, these two tools can be skilfully linked. [22]

4.3 Health Care Marketing

The market for health services on the supply side consists of two groups of entities:

- Hospitals, ambulance or private medical practitioners, where services are mainly concerned customers, i.e. patients.
- Pharmacies, pharmaceutical companies, drug distributors or medical device vendors and devices, especially for tangible products, medicines or devices. [6]

4.3.1 Legislation of Pharmaceutical Industry

The following laws apply to the pharmaceutical industry:

- Act No. 378/2007 Coll., on Drugs and on Amendments to Certain Related Acts [25]
- Act No. 40/1995 Coll., on the regulation of advertising and on the amendment and supplementation of some other laws [25]
- Act No. 48/1997 Coll., on Public Health Insurance and on Amendments to Certain Related Acts [25]
- Act No. 527/1990 Coll., on Inventions, Industrial Designs, and Improvement Proposals [25]
- Act No. 372/2011 Coll., on health services and the conditions for their provision [25]

They are further governed by the regulations of the following institutions:

Ministry of Health: Central Government Authority for Health Care and Protection public health. It regulates the prices and reimbursements of medicines that are covered by health insurance. [25]

State Institute for Drug Control: oversees only the use of quality, safe and effective drugs and medical devices. SÚKL is directly subordinated to the Ministry of Health. The State Institute for Drug Control establishes, in accordance with its statutory mandate, the amount of payment of the medicine. Public health insurance companies: they pay for medicinal products on the basis of the public law health insurance. [25]

4.3.2 Marketing of Pharmaceutical Companies

The pharmaceutical company carries out marketing activities to bring the product to the market, ensure it has a high sales volume and achieves the highest market share in a particular category of pharmaceuticals for the longest time. It needs to know the customer's needs and then satisfy them. When designing a marketing plan, the marketing department of the pharmaceutical company must consider the influence of several factors such as drug consumption in the population or population composition. The target customer is in pharmacy, in particular, the doctor prescribing the medicine and the pharmacist who issues the medicine. [14]

Pharmaceutical marketing is, therefore, a tool for transferring information to healthcare professionals, doctors, and pharmacists. They are informed about the effect and proper use of the drug. Better information leads to the right decision of a physician and pharmacist on the appropriate choice of medicine for the patient's needs. End-users are target customers only when they are over-the-counter drugs or dietary supplements. [14]

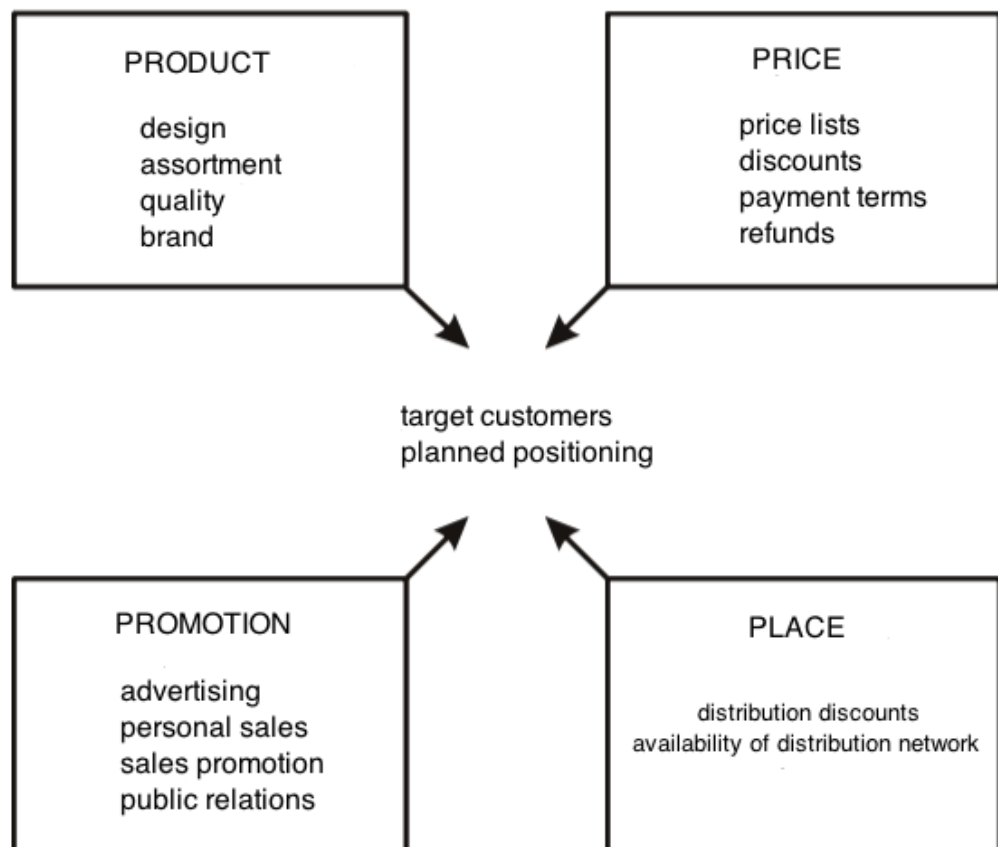
Both the subsidiaries of global pharmaceutical companies and a number of local Czech companies (Zentiva, Teva), which compete with each other, operate on the Czech market. Most of these global subsidiaries, thanks to a number of influences such as aging populations or the development of civilization illnesses, are making huge profits, and have the potential to spend considerable money on classic advertising such as TVs, billboards, and so on (in the case of over-the-counter medicines). Many smaller local companies do not have these options, so these companies are looking for new ways to communicate effectively and cheaply. [14]

4.3.3 Marketing Mix in the Pharmaceutical Industry

For the pharmaceutical industry, the same principle of marketing mix applies as in other industries. However, it must be born in mind that the key element of marketing that affects the purchase of a product is usually not the final customer, that is, the patient, but

the doctor, who the product, that is, the medicine, prescribes or the pharmacist who issues the medicine. [4]

Figure 8 – 4P Marketing Mix



Source: [4]

5 Analytical Part: Economic Evaluation of Online Campaigns

The analytical part is focused on the two very successful campaigns that ran over the period of 18 weeks, specifically from July 2017 until October 2017. The campaigns were running for the two very well known brands that produce food supplements, cosmetic products, and medical aid products. Each of the brands is focused on women's health in the meaning of gynecological problems such as itching, burning and urinary tract infection. That is why both of the brands are very important to women and both of the brands have loyal lady customers.

The specification of both brands like geographical – language and location, and demographical – gender and age, will be discussed in detail in the following chapters Analysis of Brand X and Analysis of Brand Y.

It is also important to mention that both of the brands have been running the similar kind of campaigns, the similarity has met at PPC campaign, Search engine optimization, YouTube campaigns (Videos, Bumper ads) and Newsletters (Emailing). Brand X was differentiated by using PR articles with an awareness of the specific problem – concretely “How to take appropriate care of women's intimate parts” with its products. Meanwhile, Brand Y was using women influencers, who were letting out a post about the product every week during the lasting campaign. There were three lady influencers, one with the main base of Slovak followers and one with the main base of Czech followers. The third one was specific, she appeared in one Czech reality show that has been also transmitted at Slovak TV, and so has a rich base of followers from both Czech and Slovak Republics.

Due to the fact that all of the numbers and values are real, the brand names cannot be published, because of the competitors.

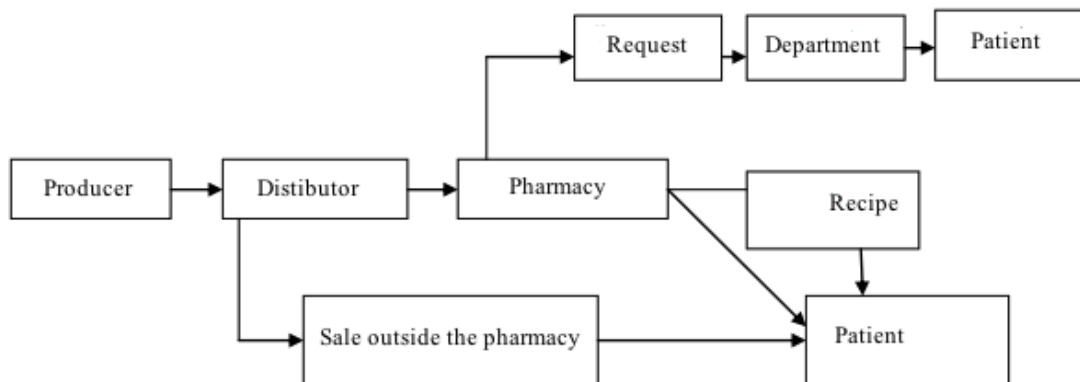
5.1 Food Supplement Analysis on the Czech Market

Part of the healthcare market is also the pharmaceutical market, which has its own specificities compared to other markets. In this market, medicinal products, food supplements and medical devices (medicines) are subject to shifts. Because medicines are reimbursed from public resources, it leaves control over spending for them in the form of price regulation. On the supply side, manufacturers and importers of pharmaceuticals are supplying medicines through a wholesale distributor of medicines and pharmacies.

The medicinal product may be placed on the market only after it has been approved by the State Institute for Drug Control (Act No 378/2007) [25] or has been granted a marketing authorization in accordance with a directly applicable European Community regulation. The State Institute for Drug Control will allocate electronically a code for the registration of each product, which will enable it to be uniquely identified. [13]

Figure 9 below shows the movement of the drug before it reaches the patient. The patient may obtain it at a pharmacy based on a medical prescription where the price of a medicinal product may be fully or partially covered by a health insurance company, or it can buy prescription-free medicines. Some of the reserved medicines may be purchased outside the pharmacy. Another possibility for a patient to obtain a medicinal product is through a medical facility during hospitalization (individual departments of health establishments can not buy medicines directly from distributors, but only from pharmacies). [15]

Figure 9 – Movement of Drug in Society



Source: [15]

The pharmaceutical market in the Czech Republic has undergone stormy development since 1989. While the number of pharmacies has almost doubled, the number of distribution companies has decreased significantly. In terms of distribution, the concentration process took place between 1989 and 2000 as a result of hard competition. Of a large number of large-scale distribution companies that have emerged since 1989, four major companies remain in the game: PHOENIX Pharmaceutical Wholesale a.s., Pharmos, a.s., Alliance Healthcare s.r.o. and Gehe Pharma Praha s.r.o., who control over 90% of the drug market in the Czech Republic. During that period, pharmacies' networks have also begun to form in the pharmaceutical market, which means that more of the pharmacies are owned by one owner, or a group of owners. Some of them have a direct property link to distribution companies. Significant chains include, for example, Lloyds s.r.o., Pharmaland, Dr. Max or Eurotech. [7]

5.2 Cost-Benefit Analysis of Brand X

The analysis consists of the theoretical description of customers, such as the demographical and geographical aspects – gender, age, location, and language. Also consists of the customer's behavior in the meaning of how they act when seeing a special price banner offer on the Internet, if they are searching for a special price somewhere else, what kind of research they are making and so on.

Brand X and its products were launched in 2015 in the Czech and Slovak Republic. These two markets are connected and online campaigns are set up equally, just the spending is different – the Slovak Republic does not have yet developed customer base on the Internet, people are still more used to buy food supplements and medical aid products in pharmacies. On the other hand, people in the Czech Republic are now more used to buy any kind of products on the Internet, so that is why the investments into the online campaign in the CR are a little bit higher, but the strategy stays the same.

Products of Brand X are focusing on educated young women who care about themselves. The pricing and targeting reflect these aspects of the target group of women. Those women are not afraid to tell what afflicts them and are looking for a proper help to solve the intimate problem. Even though the brand is relatively new – around two and a half years old – it already found its base of loyal customers. It may be due to an effective way of advertisement – not just online, but also strong and loud TV commercial that sometimes incited people, but the negative advertisement is also an advertisement.

The analyzed campaigns were running for the period of time of 9 weeks, from the very beginning of July, until the end of August 2017. During this period of time were used various online campaigns, in the case of Brand X it was these campaigns: Pay per click, Search engine optimization (proper keywords), PR articles on various kind of websites that are somehow connected with women’s health, YouTube videos – three 47 seconds long videos, three 25 seconds long videos and three bumper ads that are about 6 second long. And the last but not least are newsletters that were mailed to registered customers on company’s e-shop.

Table 1 – Brand X Campaign Distribution

	PPC	SEO	PR Articles	Influencer	Youtube	NWL
Brand X						

Source: Own table based on undisclosed data

In Table 1 above it is visible the distribution of used online campaigns for both brands. It is visible that Brand X has been running PPC campaigns, had been optimizing search engines, specific PR articles were created according to the problematics, YouTube videos were targeting on women and also newsletter was sent to lighten up the appropriate care (not targeted).

In case of Brand Y there were similar campaigns during the time period – PPC campaigns, the search engine was also optimized instead of PR articles Brand Y used three female influencers – one for the Slovakian market, one for the Czech market and one shielding both markets. YouTube videos were also created and targeted on the specific target groups and newsletter was sent as well.

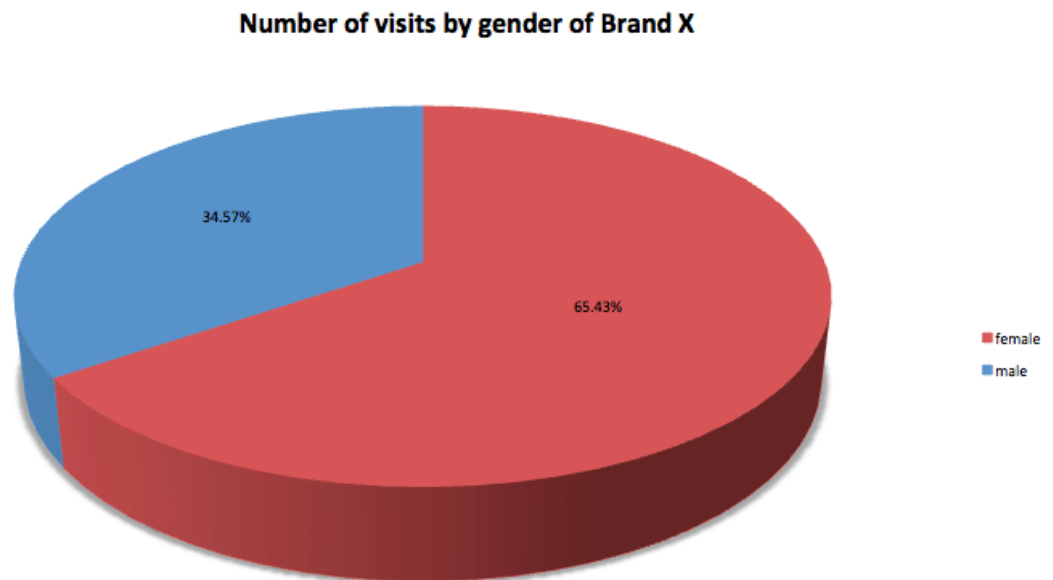
One more tool was used by Brand Y campaign and it was the online quiz to which all the banners, display ads and overlay ads on YouTube were landing on the fun quiz.

5.2.1 Demographical and Geographical Aspects of Brand X

First of all it is necessary to mention that Brand X is producing products for females only. It also does not mean that men are not curious about women's intimate health. So it is very well visible on the following chart and pie, where number and total share of visitors on the brand website is shown.

Demographical Aspects:

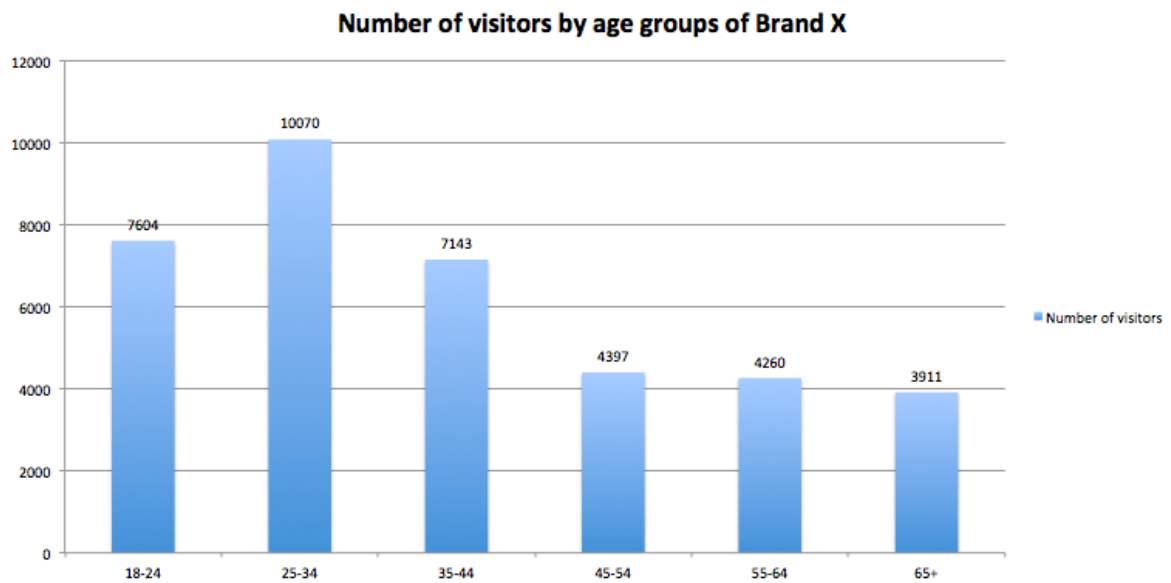
Figure 10 – Number of Visits by Gender of Brand X



Source: Own pie from undisclosed source

From Figure 10 above is visible that during the online campaign not only women were curious about the problematic of women's intimate health. About 1/3 of the total number of visitors were men, so it also testifies about that the social taboo is being erased, and men are interested in women's problems and are trying to help women.

Figure 11 – Number of Visitors by Age Groups of Brand X



Source: Own chart based on undisclosed data

From Figure 11 is visible that even though the campaign was very modern and controversial and in the videos were many gossips about sex and intimate parts, women in the age group of 25-34 were interested the most and the campaign force them to visit the website and find out something new and educational. What is so interesting about this? That women in the youngest age group 18-24 should be interested more and the campaign was basically targeted the most on age groups 18-24 due to the customer base that on the result of the previous research this age group buys products of Brand X the most.

Geographical Aspects:

Brand X is targeting women from big cities, who are living modern and healthy lifestyle. That is why the main base of customers are from big Czech and Slovak cities – Prague, Brno, Ostrava, Pilsen, Olomouc, Bratislava, Košice.

From the small Table 2 below it is visible how many visitors were speaking which language. It is obvious that most of them were Czech, but many people would guess that

the second language groups will be Slovaks, but it is English speaking group, concretely American English speaking group. The next one is a group from Great Britain, then Slovaks. What does it say? That even though the campaign was in the Czech language it was so original and controversial that different language groups of people had to click on it and visit the Czech website.

Table 2 – Language Groups of Brand X

Language	Visits
cs-cz	67491
en-us	1872
en-gb	584
sk-sk	554
sk	434

Source: Own table based on undisclosed data

From Table 3 below is visible from which location people came. So it is obviously the Czech Republic, then Slovakia and the third are the United States. It is interesting almost all of the countries are in Europe, except the United States and Canada.

Table 3 – Visitors by Location of Brand X

1.	 Czechia	71 954 (98,11 %)
2.	 Slovakia	418 (0,57 %)
3.	 United States	237 (0,32 %)
4.	 Hungary	96 (0,13 %)
5.	 Ireland	86 (0,12 %)
6.	 Germany	73 (0,10 %)
7.	 Canada	71 (0,10 %)
8.	 Ukraine	63 (0,09 %)
9.	 United Kingdom	51 (0,07 %)
10.	 Poland	38 (0,05 %)

Source: Google Analytics account of undisclosed brand

5.2.2 Total Campaign Costs of Brand X

In this chapter, there will be shown the total costs for campaigns that were running from the different accounts (AdWords, Sklik). Those costs of 2017 will be compared with costs of the previous year 2016 and so that the increased investments in the campaigns.

In Table 4 below the important thing is to mainly look at the costs of July and August and compare them. To be specific those two, which are red highlighted. It is obvious that when comparing these two years and the investments of July and August the increase is significant.

Investments in AdWords are always higher than in Sklik system, because Google is the most used search engine in the world and is much more elaborated than Seznam search engine. But Seznam has a long history, it was basically the most frequently used search engine before Google came into the Czech Republic. Google brought many new tools and functions in running PPC ads. That is why it is also reflected in the final investment into the ads.

Table 4 – Total Costs of Brand X

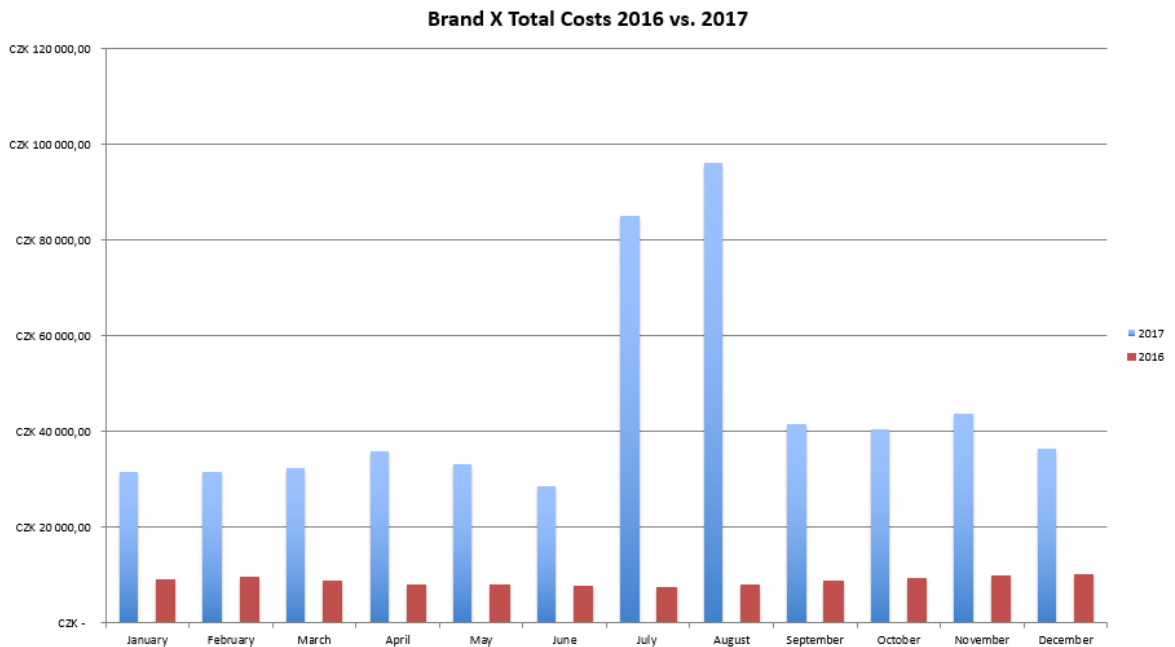
Brand X				
		Adwords	Sklik	Total
2016	January	7 871,01 CZK	1 098,10 CZK	8 969,11 CZK
	February	8 010,68 CZK	1 674,30 CZK	9 684,98 CZK
	March	7 540,58 CZK	1 256,50 CZK	8 797,08 CZK
	April	6 873,63 CZK	1 120,50 CZK	7 994,13 CZK
	May	6 984,50 CZK	1 093,60 CZK	8 078,10 CZK
	June	7 008,54 CZK	764,00 CZK	7 772,54 CZK
	July	6 561,74 CZK	845,50 CZK	7 407,24 CZK
	August	6 760,60 CZK	1 234,70 CZK	7 995,30 CZK
	September	7 132,05 CZK	1 563,90 CZK	8 695,95 CZK
	October	7 535,03 CZK	1 764,90 CZK	9 299,93 CZK
	November	7 887,61 CZK	2 045,10 CZK	9 932,71 CZK
	December	8 124,37 CZK	1 932,40 CZK	10 056,77 CZK
Brand X				
		Adwords	Sklik	Total
2017	January	28 836,79 CZK	2 759,50 CZK	31 596,29 CZK
	February	28 890,84 CZK	2 821,60 CZK	31 712,44 CZK
	March	29 814,55 CZK	2 578,00 CZK	32 392,55 CZK
	April	31 821,47 CZK	4 158,40 CZK	35 979,87 CZK
	May	30 014,01 CZK	3 085,30 CZK	33 099,31 CZK
	June	25 489,95 CZK	3 077,10 CZK	28 567,05 CZK
	July	80 503,77 CZK	4 546,70 CZK	85 050,47 CZK
	August	87 921,80 CZK	8 280,70 CZK	96 202,50 CZK
	September	26 269,69 CZK	15 422,10 CZK	41 691,79 CZK
	October	32 941,62 CZK	7 621,20 CZK	40 562,82 CZK
	November	30 849,97 CZK	12 890,20 CZK	43 740,17 CZK
	December	28 126,43 CZK	8 388,60 CZK	36 515,03 CZK

Source: Own table based on undisclosed data

In Table 4 – **Total Costs of Brand X** there is a summary of all costs from both accounts AdWords and Sklik that were used. In those systems, PPC banner ads were running. The intensity of the campaigns is visible from the values, as mentioned above Google is more known and more complex than Seznam, so the costs reflect these aspects. Also, the costs in July and August 2017 reflect the point that the PPC campaigns were running during the period of 9 weeks. During the whole year 2016, there were just some

always-on campaigns in the meaning of general search and search engine optimization. From the year 2017, the costs went higher because the whole digital area became more needed due to emerging online era.

Figure 12 – Brand X Total Costs 2016 vs. 2017



Source: Own chart based on undisclosed data

In Figure 12 is very well shown the difference in investments in campaigns between 2016 and 2017. During the year 2016 the investments are basically constant and in 2017 the investments during the whole year are three times higher, except the months July and August when the campaigns were running. In 2016 the costs were about 8.000 CZK each month and in 2017 the costs were almost 40.000 CZK each month, except the two campaign months and last four months (September, October, November, and December) when the Christmas campaigns were about to start.

5.2.3 Revenues vs. Costs of Brand X

This chapter is focused on detailed comparison of revenues and costs of Brand X and the success of the campaigns. Also what is very important to mention is that the campaigns were landing to company's e-shop and so the revenues are from this source.

Table 5 – Brand X Costs vs. Revenues – Values

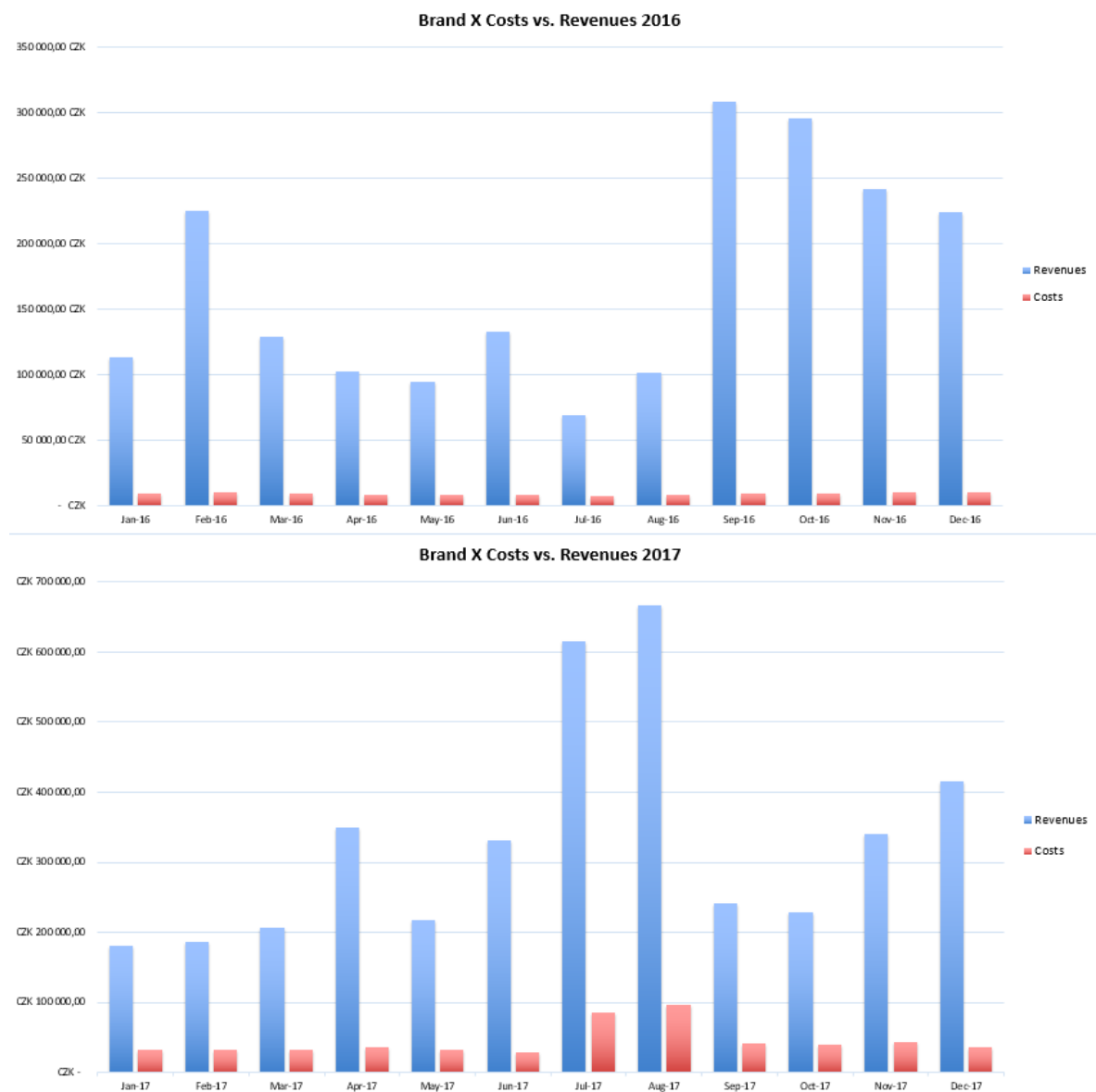
Brand X		
	Revenues	Costs
Jan-16	113 477,88 CZK	8 969,11 CZK
Feb-16	225 248,70 CZK	9 684,98 CZK
Mar-16	128 774,62 CZK	8 797,08 CZK
Apr-16	101 826,78 CZK	7 994,13 CZK
May-16	94 263,99 CZK	8 078,10 CZK
Jun-16	132 196,91 CZK	7 772,54 CZK
Jul-16	69 357,89 CZK	7 407,24 CZK
Aug-16	101 126,80 CZK	7 995,30 CZK
Sep-16	308 633,22 CZK	8 695,95 CZK
Oct-16	295 187,98 CZK	9 299,93 CZK
Nov-16	241 619,23 CZK	9 932,71 CZK
Dec-16	223 625,24 CZK	10 056,77 CZK
Jan-17	181 249,39 CZK	31 596,29 CZK
Feb-17	186 118,75 CZK	31 712,44 CZK
Mar-17	205 710,71 CZK	32 392,55 CZK
Apr-17	350 156,48 CZK	35 979,87 CZK
May-17	218 223,56 CZK	33 099,31 CZK
Jun-17	331 661,39 CZK	28 567,05 CZK
Jul-17	615 174,92 CZK	85 050,47 CZK
Aug-17	665 913,65 CZK	96 202,50 CZK
Sep-17	240 440,74 CZK	41 691,79 CZK
Oct-17	228 207,39 CZK	40 562,82 CZK
Nov-17	340 326,78 CZK	43 740,17 CZK
Dec-17	415 258,79 CZK	36 515,03 CZK

Source: Own table based on undisclosed data

In Table 5 the real values like revenues and costs are shown. It is obvious that during the two the year 2016 and 2017 the values are increasing. It means that not just that the investments in the campaigns are increasing but it has a significant effect on the

revenues as well. In the highlighted rectangle there are the revenues and costs during the two months campaign duration. It is obvious that the costs are the highest, but also the revenues are the highest from the two years examined period.

Figure 13 – Brand X Costs vs. Revenues



Source: Own chart based on undisclosed data

In Figure 13 above there is shown the difference between the costs and revenues in the years 2016 and 2017. The difference between these two years is more than significant. Not just that the costs are so much higher but also the total revenues of the Brand X. What is visible from the charts is the fact that when comparing the same period of time – in this case July and August 2016 and 2017, the difference in spending on the campaigns is visible and also the difference in revenues. While in 2016 the revenues were almost the lowest from the whole year and increase started in September 2016, in case of the year 2017 the situation has changed. The highest spendings were during July and August and also the revenues were the highest in comparison with other months in the same year. This fact is very interesting – it means even though the spendings during the year 2016 were constant the revenues went up and down due to seasonality. And in 2017 the situation is 180 degrees different – the spendings on campaigns had a significant effect on the final brand revenues and it also affected the pre – Christmas campaigns because people were stocked from July and August, so did not need to buy before Christmas, so the revenues went down.

5.3 Cost-Benefit Analysis of Brand Y

In this chapter, there will be a focus on the analysis of the demographical and geographical aspects – age and gender of visitors on the website and also their location and language.

Brand Y is of Czech origin and was founded in 2007. Since that time Brand Y started to build a successful brand with amazing reviews from female customers. The reputation started to grow as well as the brand. The problem started around the year 2011 when two competitive brands entered the market of female health food supplements. Since that time the market shares started to fall and competition started to grow. So it was time to change something. The complete rebranding was necessary and also to change the strategy. The brand started to focus on the younger customer base, due to still falling customer base in female target group 35-45 years. The rebranding was connected with changing the ingredients of all of the Brand Y food supplements and also change the package itself. A package is a very important part when doing rebranding – people will always look first at

the appearance of the product, and the other thing is the price. When the package will look nice and quality but the price will be low there is a space for speculation whether the product is quality or the brand is just focusing on making the first good impression but the quality is very low. When the packaging is poor and the price is high there is also space for speculation. The price must be equal to the appearance of the package as well as the size – a number of tablets inside the package.

Table 6 – Brand Y Campaign Distribution

	PPC	SEO	PR Articles	Influencer	Youtube	NWL
Brand Y						

Source: Own table based on undisclosed data

The Brand Y campaigns were running from September 2017 until October 2017, concretely 9 weeks. During that time period – PPC campaigns, the search engine was also optimized, instead of PR articles that Brand X had, Brand Y used three female influencers – one for the Slovakian market, one for the Czech market and one shielding both markets. YouTube videos were also created and targeted on the specific target groups and newsletter was sent as well.

One more tool was used by Brand Y campaign and it was the online quiz to which all the banners, display ads and overlay ads on YouTube were landing on the fun quiz.

The whole problematic was about “How to avoid urinary tract infection” by very easy thing – going on a toilet after sex. The quiz was in a fun form, where ladies were filling out questions like “I have learned how to sleep with opened eyes, so my partner thinks I am really into his car repair stories” and the lady should answer Yes or No depends on her opinion. At the end of the quiz, a proper “After-sex nation” based on their answers appeared. But one thing had all the results in common and it was – go to a toilet right after “it”.

Having influencers was one of the most successful parts of the whole campaigns. As well known influencers or ambassadors that shield the project or specific idea are always one of the most significant parts. When having influencer it is very important to choose someone who can properly reflect the project idea, who can deliver it to the final consumer without any pressure. They have wider and much more colorful base of followers and can actively communicate with them practically immediately. In case of Brand Y the influencers were promoting the problematics of going on a toilet after sex, and why is important to take proper food supplements in case that the urinary tract infection occurs.

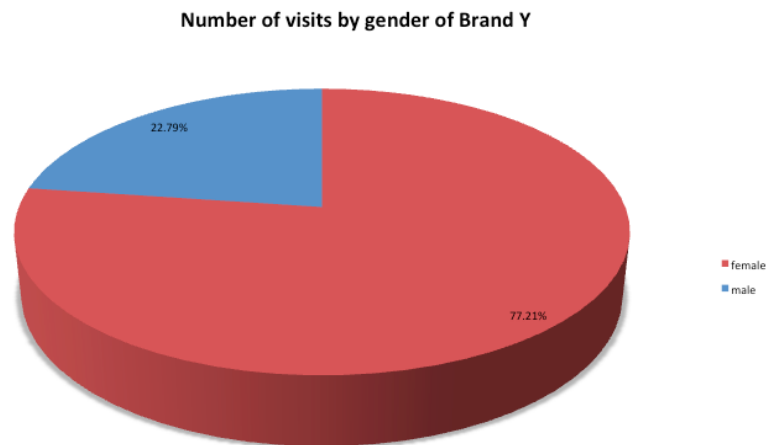
5.3.1 Demographical and Geographical Aspects of Brand Y

In this chapter there will be detailed focus on the location, language, gender and age of the Brand Y website visitors. It is important to analyze it due to future setting of the campaigns and its targeting.

Demographical Aspects:

Brand Y is producing products only for women's health. Even though the products are only for women the times change so even men are curios about women's health and are trying to help them. It is visible in the table and chart below.

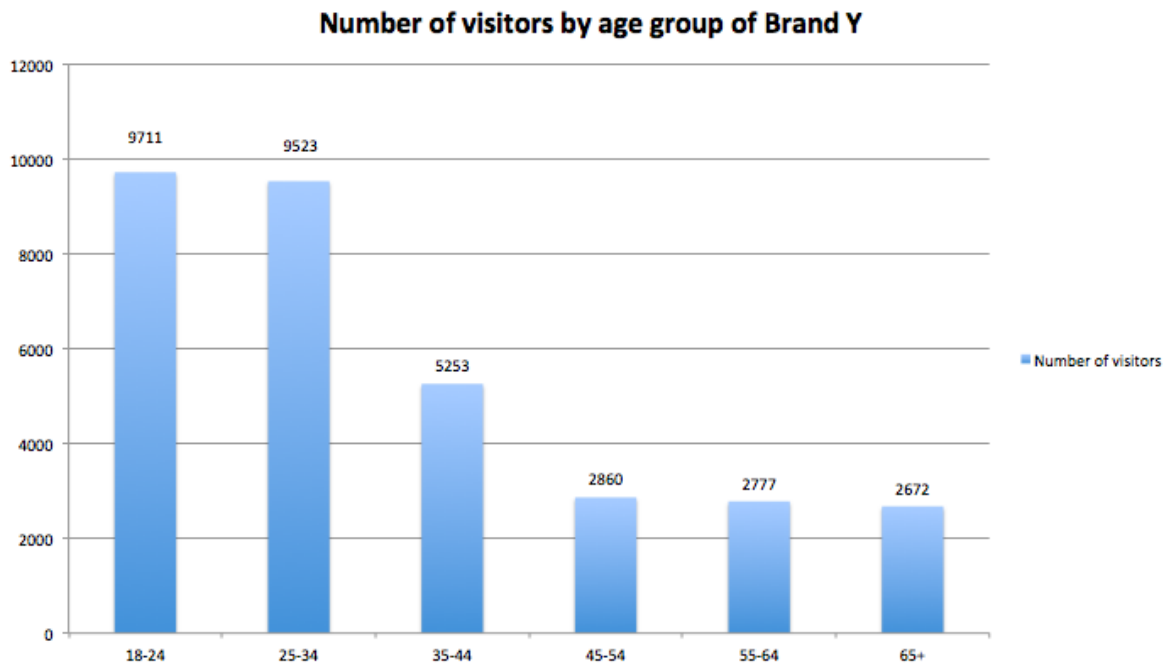
Figure 14 – Number of Visits by Gender of Brand Y



Source: Own figure based on undisclosed data

In Figure 14 above is visible how big by gender the traffic on the Brand Y website was. It is obvious that there are more women than men, but also men are interesting. Almost $\frac{1}{4}$ of all visitors were men, it means even though the campaigns were targeting only on women even men were influenced and visited the website with the quiz. The explanation can be also that the campaign was so visible and loud that even men were curious and wanted to try the fun test.

Figure 15 - Number of Visitors by Age Groups of Brand Y



Source: Own chart based on undisclosed data

In Figure 15 above there is visible traffic on the website by age groups. Even though the campaign was set up for younger women 18-35, even the older age groups were very interested. There are two very strong age groups that were interested in the campaign and it was group 18-24 years and group 25-34 years. These two age groups are the target group not just when starting the online campaign but also in the offline campaigns. So the result of this chart is that the campaigns were set up very well and had the impression that was expected.

Geographical Aspects:

As Brand Y started its production in 2007 the target groups and the whole strategy were different. In the beginning, the brand was focused more on all age groups, especially the older ones, from 35-45 and higher. By the time of 2011 when the competitors entered the market, it was necessary to change the target groups and the whole strategy. That is

why it was important to make market research because market shares and sales of the Brand Y products were still falling down. It was important to determine why is it happening and how to solve the problem. The whole strategy started to be based on focusing on young educated women with a modern way of life. Those women were from the big cities like Prague, Brno, Ostrava, Košice, and Bratislava. Those women were not just well educated but also wanted to solve their health problems quickly and were not afraid to tell what bothers them.

Table 7 – Language Groups of Brand Y

Language	Visits
cs	25687
cs-cz	20856
en-us	1524
sk	513
sk-sk	388
en-gb	327
ru	213
ru-ru	213

Source: Own table based on undisclosed data

From Table 7 above is visible that most of the website visitors are Czech speaking people from the Czech Republic. Very interesting fact is that the second language groups are not Slovaks but English speaking people, right after them are followed by already mentioned Slovaks, then English speaking people from Great Britain, Russian, and Russians from Russia.

Table 8 – Visitors by Location of Brand Y

1.	 Czechia	48 797 (96,85 %)
2.	 Slovakia	614 (1,22 %)
3.	 United States	223 (0,44 %)
4.	 Germany	106 (0,21 %)
5.	 United Kingdom	91 (0,18 %)
6.	 Ireland	91 (0,18 %)
7.	 Poland	40 (0,08 %)
8.	 Austria	31 (0,06 %)
9.	 France	27 (0,05 %)

Source: Google Analytics account of undisclosed brand

From Table 8 above is visible from which location people were visiting the Brand Y website. Obviously in the first position is the Czech Republic, followed by Slovakia. It is interesting that even though English talking people from the United States were in the second place, from the point of visiting location are in the third position. Then Germany – not mentioned in the language table – is in the fourth position, followed by the UK, Ireland, Poland, Austria, and France. This visitor’s location table is much more colorful than in case of Brand X. It can be caused by the whole campaign – the theme of the campaigns was “After-sex nation”, so most of the nations there were in the quiz.

5.3.2 Total Campaign Costs of Brand Y

The campaign costs of Brand Y consist of AdWords and Sklik costs and also the influencers, which are included in the total cost but influencer’s costs will be more visible in the following chapter with the week split of the campaigns.

Table 9 – Total Costs of Brand Y

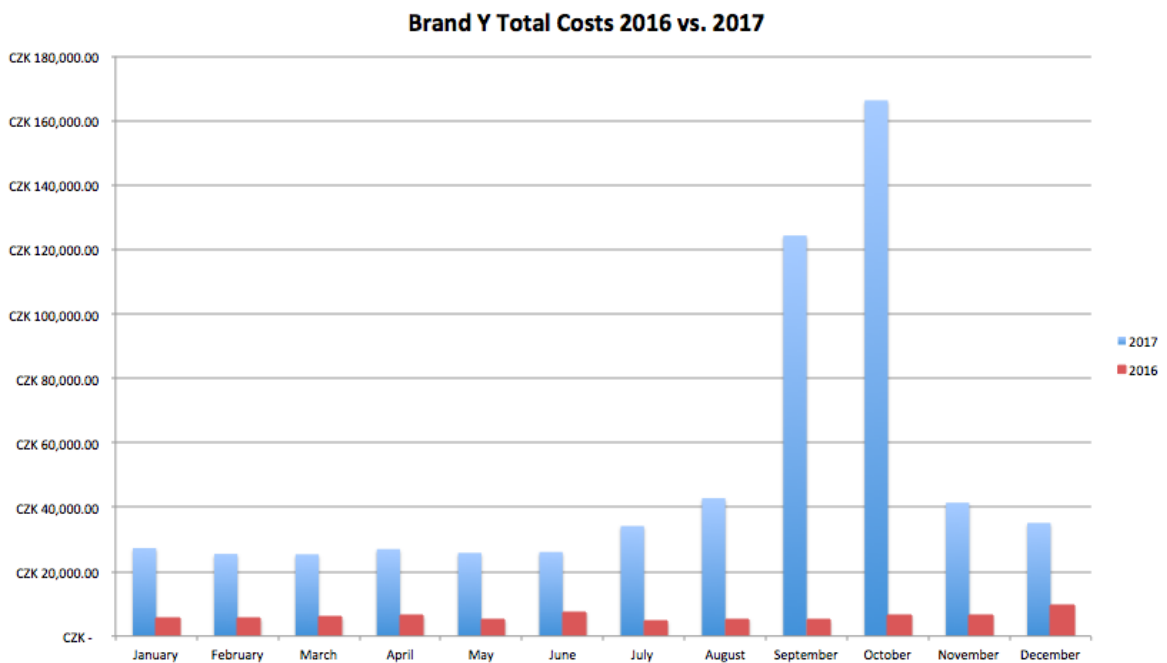
Brand Y				
		Adwords	Sklik	Total
2016	January	5 018,24 CZK	756,90 CZK	5 775,14 CZK
	February	4 959,65 CZK	546,30 CZK	5 505,95 CZK
	March	5 458,87 CZK	387,10 CZK	5 845,97 CZK
	April	5 580,90 CZK	765,40 CZK	6 346,30 CZK
	May	4 617,36 CZK	546,90 CZK	5 164,26 CZK
	June	5 739,57 CZK	1 854,20 CZK	7 593,77 CZK
	July	3 828,53 CZK	739,60 CZK	4 568,13 CZK
	August	4 390,12 CZK	984,90 CZK	5 375,02 CZK
	September	4 161,23 CZK	836,90 CZK	4 998,13 CZK
	October	5 466,23 CZK	1 098,00 CZK	6 564,23 CZK
	November	5 506,76 CZK	1 024,60 CZK	6 531,36 CZK
	December	7 080,79 CZK	2 567,80 CZK	9 648,59 CZK
Brand Y				
		Adwords	Sklik	Total
2017	January	24 013,84 CZK	3 309,90 CZK	27 323,74 CZK
	February	23 696,91 CZK	1 801,60 CZK	25 498,51 CZK
	March	23 867,85 CZK	1 523,30 CZK	25 391,15 CZK
	April	24 753,54 CZK	2 252,60 CZK	27 006,14 CZK
	May	23 675,03 CZK	2 170,30 CZK	25 845,33 CZK
	June	23 332,28 CZK	2 789,10 CZK	26 121,38 CZK
	July	29 366,08 CZK	4 810,30 CZK	34 176,38 CZK
	August	35 423,81 CZK	7 395,70 CZK	42 819,51 CZK
	September	110 005,07 CZK	14 352,60 CZK	124 357,67 CZK
	October	149 270,45 CZK	17 048,70 CZK	166 319,15 CZK
	November	29 322,11 CZK	12 097,30 CZK	41 419,41 CZK
	December	28 949,42 CZK	6 179,50 CZK	35 128,92 CZK

Source: Own table based on undisclosed data

In Table 9 above there can be seen the costs between the years 2016 and 2017. The highlighted areas are those months to be compared – in 2017 there was the campaign during September and October. There is a significant difference between the same period of time in 2016 and 2017. In 2016 the spendings are really small, but in total 2016 the spendings are quite constant. The peak is only in December 2016 where investments into Christmas campaigns are obvious.

A different situation is during the year 2017, where the spendings are constant from the beginning of the year until the September, where a significant increase is visible continuing in October 2017 and in November and December is represented by a significant decrease in spendings.

Figure 16 – Brand Y Total Costs 2016 vs. 2017



Source: Own chart based on undisclosed data

In Figure 16 above there are total costs of Brand Y comparing the whole years 2016 and 2017. The red ones are the costs of 2016 and the blue ones the costs of 2017. It is obvious that the costs got higher during 2017 in comparison with 2016 more than four times, during the campaigns months September and October 2017 the costs are incomparable to the same period of time in 2016. There is also visible that as the campaign was about to start in 2017 the spendings got slightly higher in comparison with the other months. After the two months of the campaign period, the spendings went down crucially but still stayed quite high in comparison with January – June 2017 period.

It is also visible that as the campaign started the spendings during September were not as high as in October, this is due to influencer's costs, which were a significant part of the campaign in October and had a serious impact on the final sales and profit. The final profits will be visible in the following chapter with both of the brands and the campaign influence on the final revenues.

5.3.3 Revenues vs. Costs of Brand Y

In this chapter, the comparison of costs and revenues will be done for a better understanding where the spendings and final revenues stand and if the campaigns were successful.

It must be taken into consideration that the revenues in this chapter are only the revenues of the Brand Y. The revenues are determined from the company's e-shop where it can be easily found out how much the customers spent on the Brand Y products during which period of time. It can be assumed that during the campaign period customers were purchasing the Brand Y product on the base of the campaign and it is relevant to think that. Any other source of revenues cannot be taken as a relevant source of earnings because it is not possible to determine and measure from which source a person that came to store or pharmacy have the information about the special campaign. It can be that the person who came to the store or pharmacy saw the campaign (banner) on the Internet and have been struggling whether to buy it online or physically. Many people rather buy everything physically than online, due to distrust of e-shops, those people are mostly the older age groups of people.

Table 10 – Brand Y Costs vs. Revenues – Values

Brand Y		
	Revenues	Costs
Jan-16	52 346,72 CZK	5 775,14 CZK
Feb-16	336 754,81 CZK	5 505,95 CZK
Mar-16	117 156,77 CZK	5 845,97 CZK
Apr-16	126 744,06 CZK	6 346,30 CZK
May-16	124 754,78 CZK	5 164,26 CZK
Jun-16	225 866,13 CZK	7 593,77 CZK
Jul-16	296 403,79 CZK	4 568,13 CZK
Aug-16	266 784,04 CZK	5 375,02 CZK
Sep-16	366 321,03 CZK	4 998,13 CZK
Oct-16	370 490,12 CZK	6 564,23 CZK
Nov-16	371 766,89 CZK	6 531,36 CZK
Dec-16	420 331,94 CZK	9 648,59 CZK
Jan-17	292 037,21 CZK	27 323,74 CZK
Feb-17	271 971,77 CZK	25 498,51 CZK
Mar-17	294 106,74 CZK	25 391,15 CZK
Apr-17	264 224,32 CZK	27 006,14 CZK
May-17	331 351,67 CZK	25 845,33 CZK
Jun-17	289 208,09 CZK	26 121,38 CZK
Jul-17	324 507,08 CZK	34 176,38 CZK
Aug-17	439 090,76 CZK	42 819,51 CZK
Sep-17	629 775,69 CZK	124 357,67 CZK
Oct-17	944 893,13 CZK	166 319,15 CZK
Nov-17	489 205,32 CZK	41 419,41 CZK
Dec-17	630 577,15 CZK	35 128,92 CZK

Source: Own table based on undisclosed data

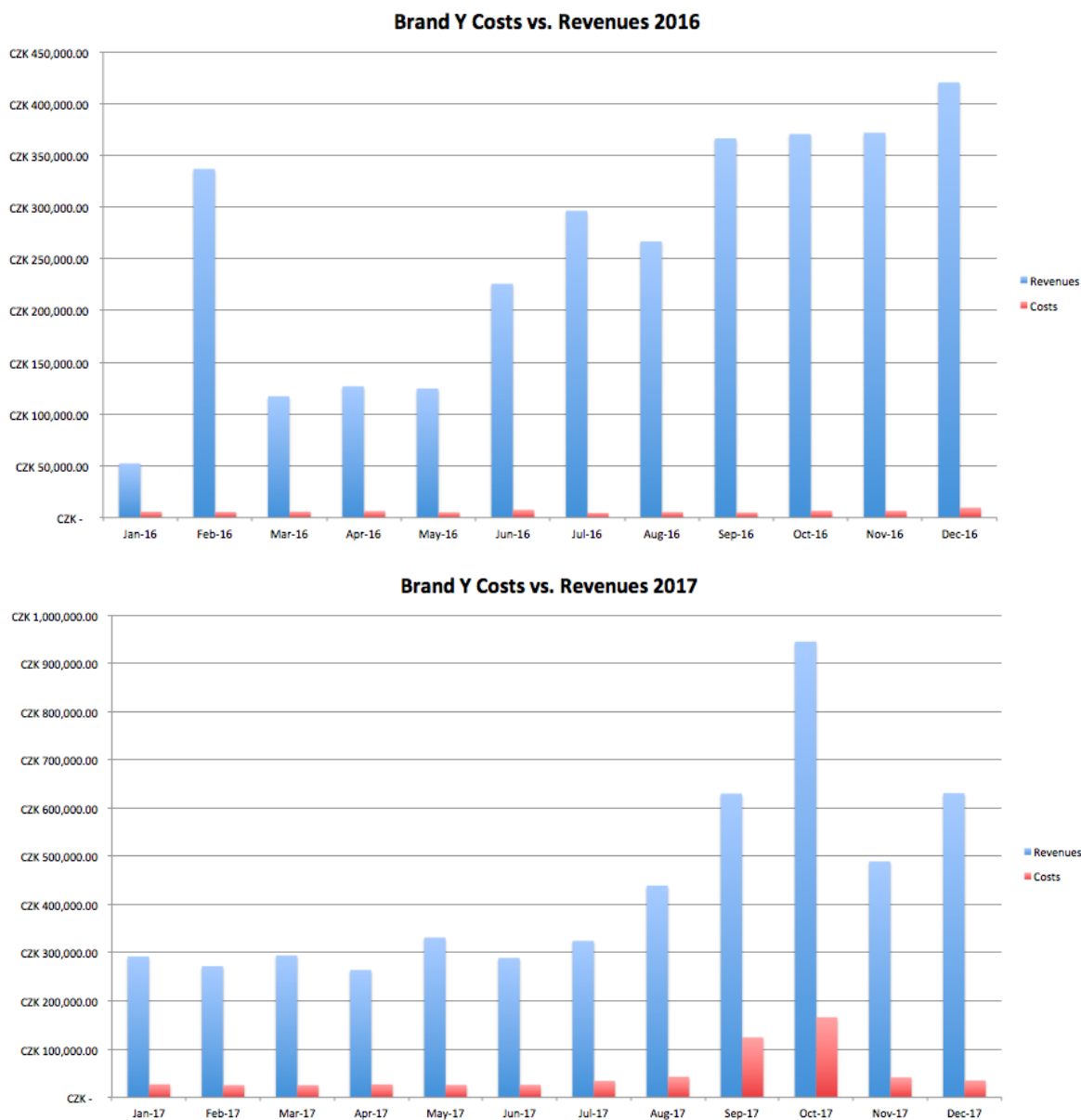
In Table 10 above there can be seen the final revenues and costs together and so the comparison of both groups of values may be made. The revenues are higher, which is a very good sign for the merchant – in this case, the undisclosed company. Not just the revenues increased but also the spendings (costs), it is due to new digital area, when the companies are aware that it has a huge potential and in comparison “costs vs. impression” the final impression and final purchase has a significant weight. In comparison with offline marketing activities, online marketing is the fastest, can be targeted accurately, is the

cheapest – depends on the daily budget, and can be addressed to a wider audience than offline marketing activities (leaflets, newsletter, TV commercials).

During the year 2016, the revenues went higher during the whole, month by month. It started in January (comparing period) where the revenues were on the lowest level and then went higher and higher, also as visible before summer people were stocking themselves, due to coming summer season – vacations and also a season of urinary tract infections. Then came a slight decrease in revenues and in December 2016 the significant increase has become due to Christmas and special prices of the products of Brand Y. The costs during 2016 were almost constant, only in December, as mentioned before, even the costs for Christmas campaigns went higher.

In 2017 the situation is different. As the focus on the digital activities has been rising, the costs were rising as well. There cannot be the revenues without the inputs. During the campaign months the costs were six times higher in September 2017 than in the rest of the year and in October 2017 it was almost eight times higher. The higher costs reflect also the higher revenues, which are three and four times higher than in the rest of the year. In November there is an obvious decrease in costs for campaigns and even the revenues went down, but not that rapidly as was expected. In December 2017, even though the spendings for Christmas campaigns were not that high, the revenues were pretty incredible.

Figure 17 – Brand Y Costs vs. Revenues



Source: Own charts based on undisclosed data

In Figure 17 above there are visible the up and downs of the costs and revenues. There can be very nicely seen the difference between spendings and the final revenues. The difference is obvious in both years 2016 and 2017.

In 2016 the costs were constant during the whole year, without any significant deflection. It is interesting that even though the Christmas campaigns were running from the middle of November till the end of December 2016 the costs did not change – when comparing other months in 2016 – anyway the revenues were the highest. This trend is usually represented by the season – in this case upcoming Christmas, many people buy such of these products as a gift, or it can be due to flu season (it also brings urinary tract infections).

When the look is taken on the revenues and its peaks, it is visible that distinct peak in February 2016 – there was a special promotion sale with a lower price, no needed extra spend on campaigns, the information has spread quickly even with the regular always on campaign. Other peaks are in September, October, and November - including December, but it was caused by the Christmas - in these months it can be caused by an upcoming season of flu and UTIs (Urinary Tract Infections). But the continuous increase in revenues is significant during the whole year, starting in January until the end of 2016 – December.

By the beginning of 2017, the costs went higher in connection with increasing the digital knowledge and building a strong online customer base. The costs were constant during the whole year, except the two campaign months September and October 2017, where the increase in spendings is significant. In November there is a huge drop in earned revenues, almost by 50%. In December a slight increase by 100.000 CZK.

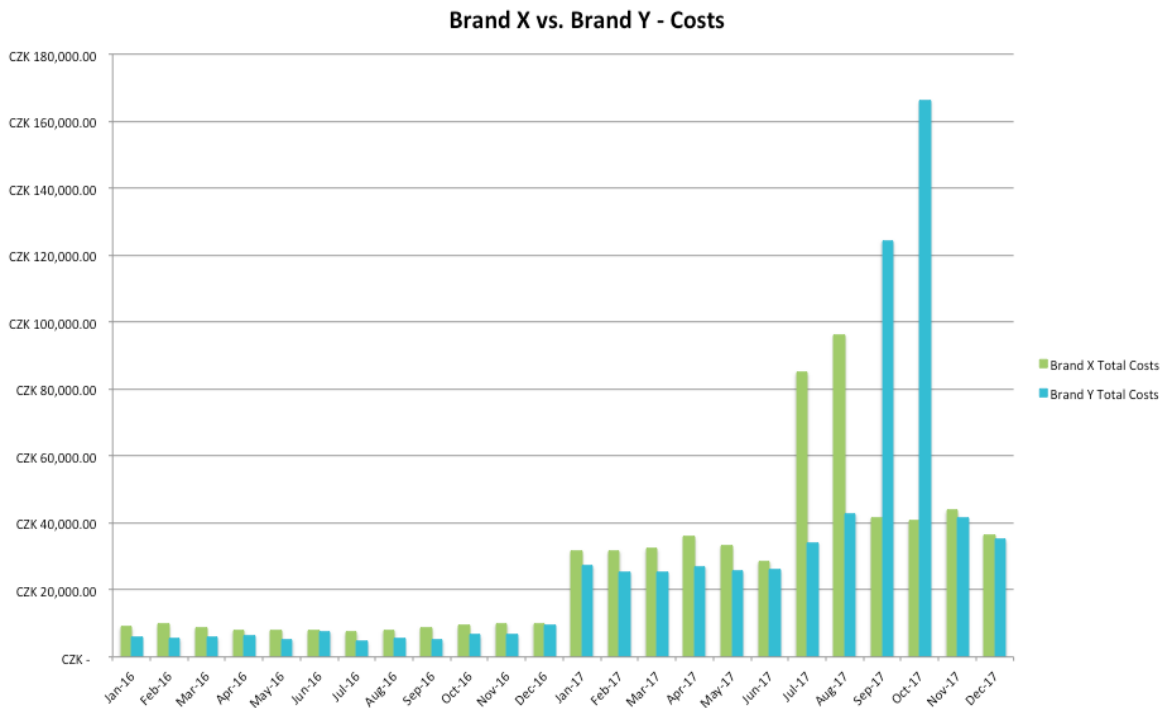
5.4 Costs, Revenues and Profits

In this chapter, there will be a focus on the final profit of both brand X and Y and also the overall profit of the e-shop. The company's e-shop must be taken into consideration as the final and ending part where the traffic from brand websites leads on. Concretely - all the campaigns are landing on the brand websites, but then the button BUY leads to the e-shop on the specific product where only the purchase can be made.

First of all is important to compare both of the brands and also to compare the intensity of campaigns, costs, and revenues. Then the export of data and final deduction of

costs from revenues can be made. On the base of this result, the final image of success of the campaigns and final economic evaluation can be created.

Figure 18 – Comparison of Costs

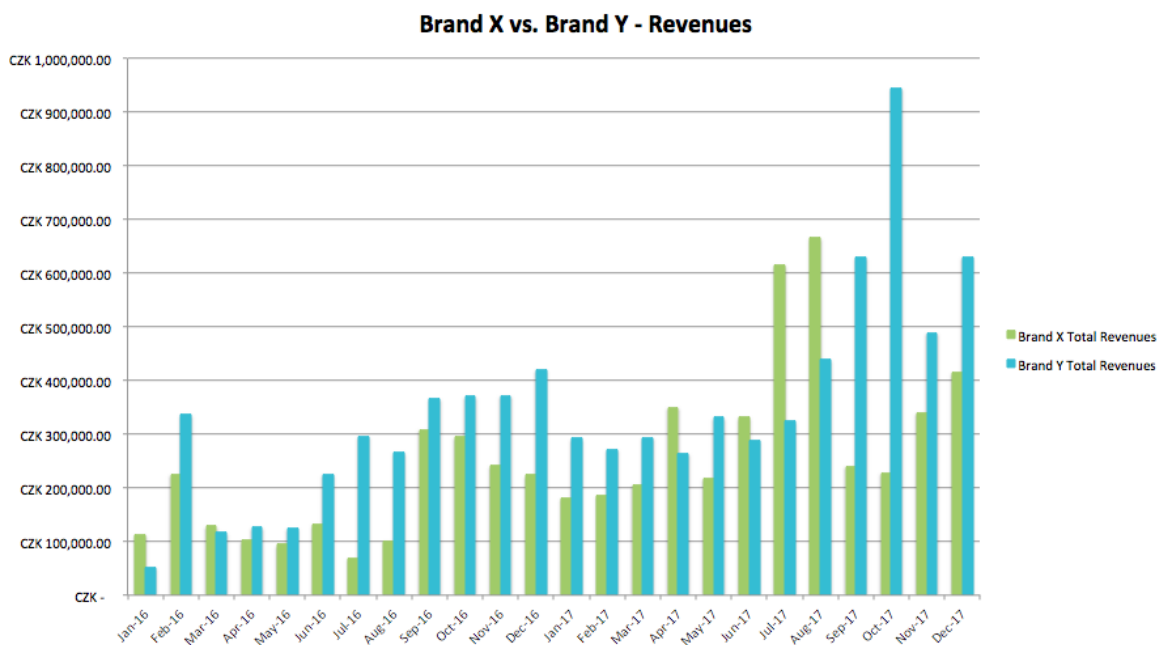


Source: Own chart based on undisclosed data

In Figure 18 above there can be seen the differences between costs of Brand X and Brand Y. The comparison is taken for both of the comparing years 2016 and 2017, and there is distinctly shown the difference in spendings for the campaigns – during the year 2016 there were just always on campaigns, it means general search and properly set keywords. The costs were constant and almost the same when comparing both brands – but in case of Brand X, the costs were slightly higher due to the fresh enter the market in 2015. In case of Brand Y and its campaigns during 2016 there was general search and keywords optimization, it was important to keep the audience and customers, but there were not planned any other and highly cost campaigns.

During 2017 there was a bigger pressure on the digital campaigns, and also the budget has been increased in order to have higher spendings and higher impression on an audience. There are clearly shown the increased costs during the months of the campaigns for the Brand X and Brand Y. While there was higher cost during the campaigns in July and August for the Brand X, the costs stay low in case of Brand Y of course, but still a bit higher in comparison with previous months. Then when in September and October the Brand Y campaigns started the spendings for Brand X were lower, but still higher than in the previous period January – June 2017. After these 18 weeks of the campaigns rapid decrease in costs became. Even though the Christmas campaigns were on point, the costs could not be compared with the 18 weeks period.

Figure 19 – Comparison of Revenues



Source: Own chart based on undisclosed data

In Figure 19 above the comparison of revenues of both brands is visible. This comparison is important to be shown due to the detailed and exact evaluation of revenues and their impact on the final e-shop’s profit.

First of all, it should be explained why the revenues have its ups and downs and how sensitive are these products at the time of the year. As mentioned in the analytical chapter regarding both brands, these products are for women's intimate health only. Their sensitivity and then the reflection in revenues is more than visible in Figure 19. The season is one of the most significant factors, the most significant is the digital campaign, but the campaigns must always response the season, so there is an undeniable connection. The top season for these products is during a winter season, especially before and after Christmas, and during a summer season. As these products are for healing women's health problems that are connected with the cold of the urinary tract (Brand Y) and all kind of infection of intimate parts – bacteria or yeast (Brand X). Because these products are one of the most expensive on the market today, but most effective, the price reflects. That is why the season is not one of the most significant factors for purchase, but it is the campaign, special clearance, or additional service connected with the product (free shipping, free gifts etc.)

Brand X is focused more on healing infections and the avoidance of it. That is why its season is after the summer or during, due to a higher risk of getting an infection from water (pools, lakes etc.). In case of Brand Y, the problem is urinary tract infection and is focusing on its healing. The season for purchasing Brand Y products is mostly during the winter season.

The revenues were obviously lower during the year 2016 as there was no pressure on the digital campaigns and so the revenues reflect the invested money – costs for campaigns. Anyway, there are some ups and downs, which perfectly copy the season. In the January 2016, there is very low revenue for both of the brands, as it is the season right after the Christmas season, so people are stocked for a long time forward. The change is visible in February 2016 where a big increase in revenues is visible, and it is also a very good example of the seasonality and the sensitivity of such these products at the time. Then a slight decrease, in case of both brands, followed. During the autumn and winter season, a huge increase in revenues is visible and it is due to the season as well as a stronger Christmas campaign.

With the start of the year 2017, the revenues were slightly decreased in comparison with the end of 2016, but are not as low as the same period of time in 2016. In during the campaign months, the huge increase in revenues is visible, so the campaigns were set up well and so the revenues are reflecting this fact. Also when started the campaign of one brand, the other brand had lower revenues and vice versa. But the very interesting fact is that when one brand had its campaigns, the revenues went up even for the second brand, in comparison with the previous period. It may be due to an increased awareness of society about the problematics and so they wanted to try products even from the other brand.

Table 11 – Weekly Cost Split

2017		Brand X	Brand Y
July	I	39 979,35 CZK	8 582,05 CZK
July	II	39 881,89 CZK	7 686,31 CZK
July	III	40 435,41 CZK	7 463,91 CZK
July	IV	46 089,28 CZK	8 830,81 CZK
August	V	32 882,48 CZK	6 076,54 CZK
August	VI	44 279,02 CZK	9 386,03 CZK
August	VII	45 411,01 CZK	9 960,44 CZK
August	VIII	57 868,45 CZK	10 915,27 CZK
August	IX	12 945,68 CZK	6 739,50 CZK
September	X	11 939,27 CZK	14 841,36 CZK
September	XI	13 418,27 CZK	32 515,39 CZK
September	XII	13 304,36 CZK	32 781,64 CZK
September	XIII	11 514,71 CZK	43 977,25 CZK
October	XIV	10 647,24 CZK	40 389,78 CZK
October	XV	11 815,70 CZK	42 345,69 CZK
October	XVI	10 520,49 CZK	42 254,43 CZK
October	XVII	9 949,99 CZK	30 830,75 CZK
October	XVIII	7 626,10 CZK	22 617,30 CZK

Source: Own table based on undisclosed data

In Table 11 above the weekly split of costs is visible. The highlighted areas are those to be focused the most because in these weeks the campaigns were running. Brand X had a start of the campaigns from the 1st of July 2017 and was active until the end of August, respectively 31st of August. As can be seen, the costs are getting higher from the

start and the strongest was in the middle of the campaigns period, concretely from the fourth week until the eighth week. Then rapid and visible decrease came. The campaigns hold the same time period as in case of Brand Y, and its 9 weeks for Brand X and 9 weeks for Brand Y.

Brand Y had its beginning in September and its end by the last day of October. The strongest campaign weeks were from the 13th week until the 16th week. At the beginning of the campaign period of Brand X had Brand Y very slow and insignificant start. Then the roles have changed for each of the brands.

When comparing the costs of both brands, they are different and also the intensity of the start is divergent. In case of Brand X the campaigns started intensively, the costs per week reached almost 40.000 CZK, in case of Brand Y the costs were only around 15.000 CZK per the first campaign week. In the third, fourth and eighth week there were article issue on the webpage and also PR articles on other non-brand sites, so the increase in spending is obvious, but also then the return in impression and visitors on the webpage is visible in the next chart. The same is true for Brand Y and the weeks thirteen, fourteen, fifteen and sixteen, when influencers posted a message about the product and its usage, as well as their quiz result from the brand website, so the increase in traffic on the webpage rose enormously.

The costs are slightly higher as the charge for issuing the PR articles and influencer's posts were not included in the Adform, AdWords and Sklik accounts. So the costs were counted in this final part and the final values in Table 11 are different than in Table 5 and 10.

Table 12 – Weekly Revenue Split

2017		Brand X	Brand Y
July	I	153 793,73 CZK	81 126,77 CZK
July	II	125 897,05 CZK	76 258,23 CZK
July	III	165 241,53 CZK	78 951,14 CZK
July	IV	170 242,61 CZK	88 170,94 CZK
August	V	120 876,13 CZK	87 818,15 CZK
August	VI	150 691,41 CZK	89 654,85 CZK
August	VII	152 124,71 CZK	85 417,58 CZK
August	VIII	178 963,02 CZK	88 952,36 CZK
August	IX	63 258,38 CZK	87 247,82 CZK
September	X	50 114,85 CZK	150 443,92 CZK
September	XI	66 236,45 CZK	154 753,02 CZK
September	XII	60 458,19 CZK	156 852,45 CZK
September	XIII	63 631,25 CZK	167 726,30 CZK
October	XIV	50 028,08 CZK	188 978,62 CZK
October	XV	52 148,59 CZK	190 548,78 CZK
October	XVI	48 060,80 CZK	191 036,85 CZK
October	XVII	39 357,87 CZK	188 641,87 CZK
October	XVIII	38 612,05 CZK	185 687,01 CZK

Source: Own table based on undisclosed data

In Table 12 above there is visible the weekly split of revenues of both of the brands. The revenue is the total amount received from the purchases on the corporate e-shop. Also to have a clear image the costs need to be deducted from the revenues, and so we know the final profit, which is the most important.

First of all is important to mention that both of the brands have a product of a similar price, so the revenues can reflect it more precisely.

When comparing both of the brands, Brand Y has slightly higher revenues than Brand X, even though when the campaign started both of the brands had similar revenues, then Brand X had its peak during the fourth and eighth week, for the deeper understanding

it is important to take a look on the activities table below (Table 13), there is visible that during those weeks the PR articles were issued as well as other activities were running. It will be discussed in detail in the following paragraphs. During the final month of the campaign of both of the brands, Brand X receive about one third when compared with the previous week.

In case of Brand Y, the situation is different, the revenues went higher and during the fifteenth and sixteenth week of the campaign the revenues were the highest, it perfectly reflects the influencer’s posts and their information in the post regarding the Brand Y products. With the end of the campaign period of Brand Y, the revenues are also decreasing slightly and insignificantly.

While Brand X was running its campaigns Brand Y had during the first 9 weeks period quite high revenues. Even though the prices and number of products are almost the same, Brand Y is on the market a longer period of time (See Chapter 5.3 Cost-Benefit Analysis of Brand Y) so that is why during the non-campaign period has a higher revenues share that Brand X.

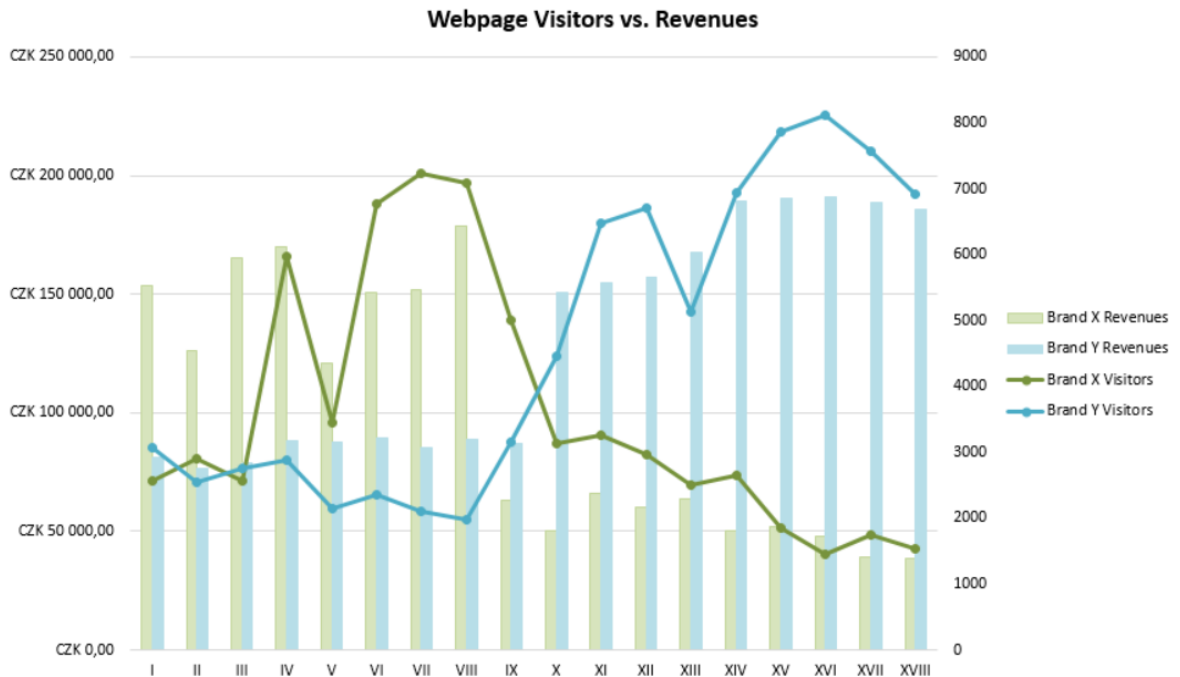
Table 13 – Activities by Weeks

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII
Brand X	Search PPC New video	PPC	PPC New video	Search PPC PR article	PPC	PPC New video	Search PPC PR article	Search PPC PR article	Search	Search	Search	Search	Search	Search	Search	Search	Search	Search
Brand Y	Search	Search	Search	Search	Search	Search	Search	Search	Search	Search PPC New video	Search PPC New video	Search PPC Influencer	Search PPC	Search PPC Influencer	Search PPC Influencer	Search PPC New video Influencer	Search PPC Influencer	Search PPC

Source: Own table based on undisclosed data

In Table 13 there are activities of brand X and Y split by weeks. It will be more discussed in the following paragraphs regarding to Figure 20.

Figure 20 – Webpage Visitors vs. Revenues



Source: Own chart based on undisclosed data

In Figure 20 above there can be seen the ratio between the revenues and the webpage visitors during the campaign period of both of the brand. This fact is important to show because of the final profit of both of the brands as well as the campaigns’ impact. As was mentioned earlier on the webpage there is a call to action (CTA) button is directly linked to the company’s e-shop on the specific product, so that is why the number of webpage visitors is important to compare with the high of the revenues by the weeks.

The campaigns for both of the brands were distributed logically based on the given budget, there should not be any deflection in spending. The budget is always fixed and can be just moved from one activity to another, but cannot be increased.

While the column charts show the brands revenues, the line charts show the number of webpage visitors each week. When there were campaigns of Brand X the number of

webpage visitors has been rising and has its ups and downs regarding the activities table. In the end, on the base of the activities table and the final profit, it can be stated which of the combination of online marketing activities was the most successful and which one worth to be applied in the future for a similar type of campaign.

Brand X and its launch of the campaign started slowly, even though there was a video posted and supported by the significant amount of money. The search engine was still setting up due to the requirements of the problematics/subject (women, 18-55 years, active, healthy lifestyle...) so it has the highest possible reach. PPC campaign was set up properly, on the base of the search ad text, static and animated banners. The significant increase in revenues as well as in the number webpage visitors was during the fourth week, so it can be claimed that the **combination of those activities – Search, PPC, and PR article – has the biggest effect on the audience**. During the sixth week, the number of page visitors rose visibly and it can be due to the new video launched and supported and was directly linked to the brand webpage. Also when the eighth week started the visitors were the most active and the revenues for this brand increased the most, in comparison with the previous period of time. For the Brand X it can be stated that the combination of Search, PPC, and issue of PR articles and its online support works the best and what is more important than the lead on the webpage, is the brand revenue which was increased significantly. With the lowering of the spendings for the campaigns in the last ninth week, the revenues went also down, because of lack of the brand support.

Brand Y had during the Brand X campaign period stable revenues, while with the start of its campaigns in the tenth week the revenues went up significantly, also the webpage visitors connected with it. The significant increase in the number of webpage visitors is reflected during the eleventh and twelfth week, while the revenues stay the same (10th-12th week). Special increase in the number of visitors on the webpage was during the twelfth week, when looking into the activities table, there is visible that during this week there were running these campaigns – Search, PPC and Influencer (post) – it means that these campaigns had significant influence on the number of visitors, but the revenues stayed the same. During the thirteenth week the number of visitors went down but the

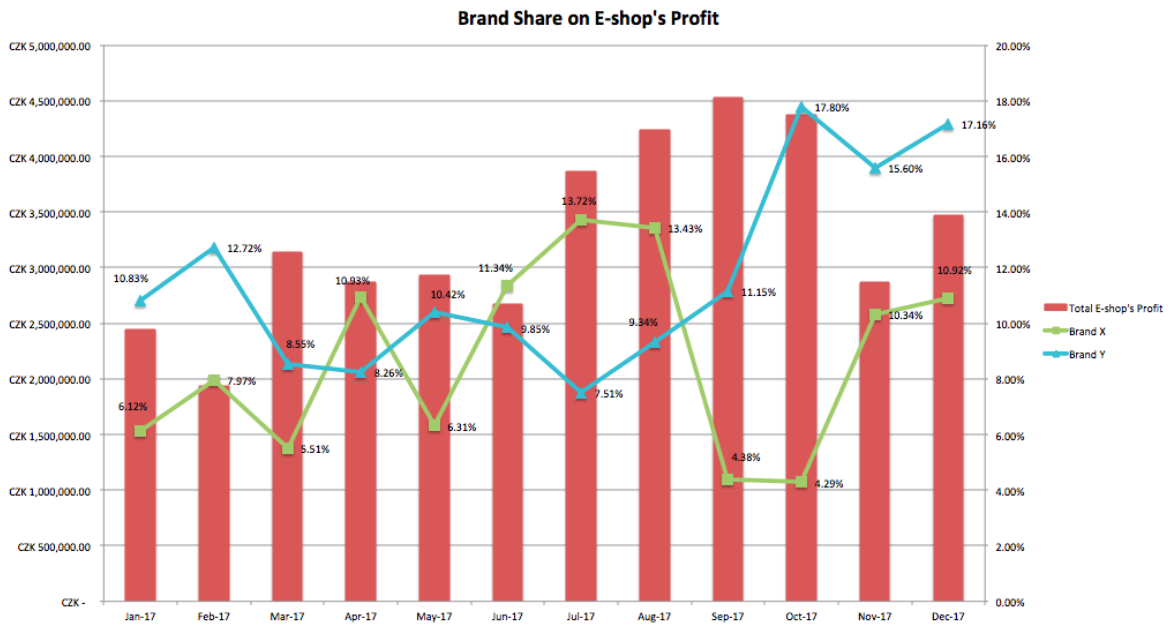
revenues increased. It can be explained by the persistent influence of the post and the lower number of visitors can be explained by the campaigns running – only Search and PPC. It can be claimed that when there is a combination of at least three campaigns like Search, PPC, and Influencer the number of visitors, as well as the revenues, go up. During the fourteenth, fifteenth and sixteenth week, the number of webpage visitors increase significantly as well as the revenues. It can be stated it is due to the well-set **combination of the campaigns – Search, PPC, New video, and Influencer – had the biggest impression.**

5.4.1 Total Brand Share of E-shop's Profit

This chapter is mainly focused on the profit of both brands and their share on the total e-shop's profit. As the company does have more these two brands, it has about 150 other products, it is important to take a look at the profit of Brand X and Brand Y and compare the campaign period with the previous months and on the base of the results make a decision whether the campaigns were successful and which combination of online marketing campaigns is the best and which one should be repeated in the future.

This chapter includes tables and charts that are reflecting real values and percentage share of Brand X and Brand Y on the total e-shop's profit. It can be predicted that during the campaign period there was a significant increase in total profit and thus can be computed the percentage increase compared with the same period of time one year ago. Then the total increase in profit of both brands compared with the previous year can be computed as well, so the difference will be visible in values and percentage.

Figure 21 – Brands Share on the Total E-shop’s Profit



Source: Own chart based on undisclosed data

In Figure 21 above there are shown e-shop’s profits by months in 2017 and also the individual share of the Brand X and Y on the profit. As visible during the whole year, the shares have its ups and downs due to a season, but the important period comes when the campaigns have started. When Brand X has its campaigns the share on the total profit of the company’s e-shop grow rapidly and significantly. Its peak was during the July, then it can be predicted during this month the campaign has a significant effect on the customers and so they were willing more to make a purchase on the e-shop. The well-set combination of campaigns for Brand X will be revealed in the last chapter. During the August 2017 the share on profit slightly decreased, then during the September 2017 rapid decrease by almost 10% has arrived.

When taking a look on the Brand Y campaigns period and its share on the total e-shop’s profit, it can be seen that the profit share started quite low when comparing both of the brands, but then during the October 2017 the share was even higher than in case of Brand X.

It is obvious that during the campaign period of both of the brands the share on the total e-shop's profit increase significantly as well as the total e-shop's profit. It means when this kind of campaigns will be repeated in the future it can be predicted that it will have a positive influence on the e-shop and its profit, even though the spendings are paid by the brand's budget, not the e-shop's budget.

Table 14 – Comparison of E-shop's Profits 2016 vs. 2017

	Total E-shop's Profit		Total E-shop's Profit	Increase CZK	Increase %
Jan-16	1 508 068,76 CZK	Jan-17	2 443 410,55 CZK	935 341,79 CZK	62,02%
Feb-16	1 534 668,64 CZK	Feb-17	1 937 111,36 CZK	402 442,72 CZK	26,22%
Mar-16	1 353 578,54 CZK	Mar-17	3 143 829,87 CZK	1 790 251,33 CZK	132,26%
Apr-16	1 317 008,19 CZK	Apr-17	2 873 512,08 CZK	1 556 503,89 CZK	118,18%
May-16	1 772 214,24 CZK	May-17	2 932 367,20 CZK	1 160 152,96 CZK	65,46%
Jun-16	1 066 891,35 CZK	Jun-17	2 671 789,54 CZK	1 604 898,19 CZK	150,43%
Jul-16	1 258 835,26 CZK	Jul-17	3 864 965,92 CZK	2 606 130,66 CZK	207,03%
Aug-16	1 741 983,31 CZK	Aug-17	4 242 584,49 CZK	2 500 601,17 CZK	143,55%
Sep-16	1 574 656,77 CZK	Sep-17	4 533 799,15 CZK	2 959 142,39 CZK	187,92%
Oct-16	1 428 183,65 CZK	Oct-17	4 373 479,61 CZK	2 945 295,96 CZK	206,23%
Nov-16	1 790 390,39 CZK	Nov-17	2 869 631,49 CZK	1 079 241,10 CZK	60,28%
Dec-16	2 513 451,32 CZK	Dec-17	3 469 481,85 CZK	956 030,54 CZK	38,04%

Source: Own table based on undisclosed data

In Table 14 above there can be seen the comparison of e-shop's profit 2016 versus 2017. Then the computation of the increase during 2017 is made, and it can be stated that the campaigns had a significant effect on the total profit. In comparison with 2016, the profits were increasing constantly during the whole year 2017. Significant effect on the total profit had campaigns during July 2017 and October, when the profits increased by over 200% in comparison with the previous year 2016. Even other campaign months – August and September 2017 - had very good results on the final e-shop's profit. It must be taken into consideration even other aspects, like the profit high of the previous months, and how much the profits rose during the campaign months – almost twice more than during the other months.

Table 15 – Comparison of Brand X Profits 2016 vs. 2017

	Total Brand X Profit		Total Brand X Profit	Increase CZK	Increase %
Jan-16	104 508,77 CZK	Jan-17	149 653,10 CZK	45 144,33 CZK	43,20%
Feb-16	215 563,72 CZK	Feb-17	154 406,31 CZK	- 61 157,40 CZK	-28,37%
Mar-16	119 977,54 CZK	Mar-17	173 318,16 CZK	53 340,62 CZK	44,46%
Apr-16	93 832,65 CZK	Apr-17	314 176,61 CZK	220 343,96 CZK	234,83%
May-16	86 185,89 CZK	May-17	185 124,25 CZK	98 938,37 CZK	114,80%
Jun-16	124 424,37 CZK	Jun-17	303 094,34 CZK	178 669,98 CZK	143,60%
Jul-16	61 950,65 CZK	Jul-17	530 124,45 CZK	468 173,80 CZK	755,72%
Aug-16	93 131,50 CZK	Aug-17	569 711,15 CZK	476 579,65 CZK	511,73%
Sep-16	299 937,27 CZK	Sep-17	198 748,95 CZK	- 101 188,32 CZK	-33,74%
Oct-16	285 888,05 CZK	Oct-17	187 644,57 CZK	- 98 243,48 CZK	-34,36%
Nov-16	231 686,52 CZK	Nov-17	296 586,61 CZK	64 900,09 CZK	28,01%
Dec-16	213 568,47 CZK	Dec-17	378 743,76 CZK	165 175,29 CZK	77,34%

Source: Own table based on undisclosed data

In Table 15 above there can be seen the increase of profit when comparing the previous year 2016 with 2017. The increase is more than significant, in July 2017 the profit has risen by 755% and in August 2017 it was 511%. It must be also taken into consideration that in 2016 the profit was really low and August had even lower profit than July, so in 2017 it seems like August has risen less, but it is due to the low profit during August 2016.

During September and October, there is a significant decrease in profit, when comparing it with the previous year. It can be explained by the campaign of Brand Y, and so the profit was transfused. It does not mean that people are not loyal to the brand, it just means that people stocked themselves during July and August 2017, because of the special price connected with the campaign period, and then started to purchase again during November and December 2017.

Table 16 – Comparison of Brand Y Profits 2016 vs. 2017

	Total Brand Y Profit		Total Brand Y Profit	Increase CZK	Increase %
Jan-16	46 571,58 CZK	Jan-17	264 713,47 CZK	218 141,89 CZK	468,40%
Feb-16	331 248,86 CZK	Feb-17	246 473,26 CZK	- 84 775,60 CZK	-25,59%
Mar-16	111 310,80 CZK	Mar-17	268 715,59 CZK	157 404,80 CZK	141,41%
Apr-16	120 397,76 CZK	Apr-17	237 218,18 CZK	116 820,42 CZK	97,03%
May-16	119 590,52 CZK	May-17	305 506,34 CZK	185 915,82 CZK	155,46%
Jun-16	218 272,36 CZK	Jun-17	263 086,71 CZK	44 814,35 CZK	20,53%
Jul-16	291 835,66 CZK	Jul-17	290 330,70 CZK	- 1 504,96 CZK	-0,52%
Aug-16	261 409,02 CZK	Aug-17	396 271,25 CZK	134 862,23 CZK	51,59%
Sep-16	361 322,90 CZK	Sep-17	505 418,02 CZK	144 095,12 CZK	39,88%
Oct-16	363 925,89 CZK	Oct-17	778 573,98 CZK	414 648,10 CZK	113,94%
Nov-16	365 235,53 CZK	Nov-17	447 785,91 CZK	82 550,38 CZK	22,60%
Dec-16	410 683,35 CZK	Dec-17	595 448,23 CZK	184 764,88 CZK	44,99%

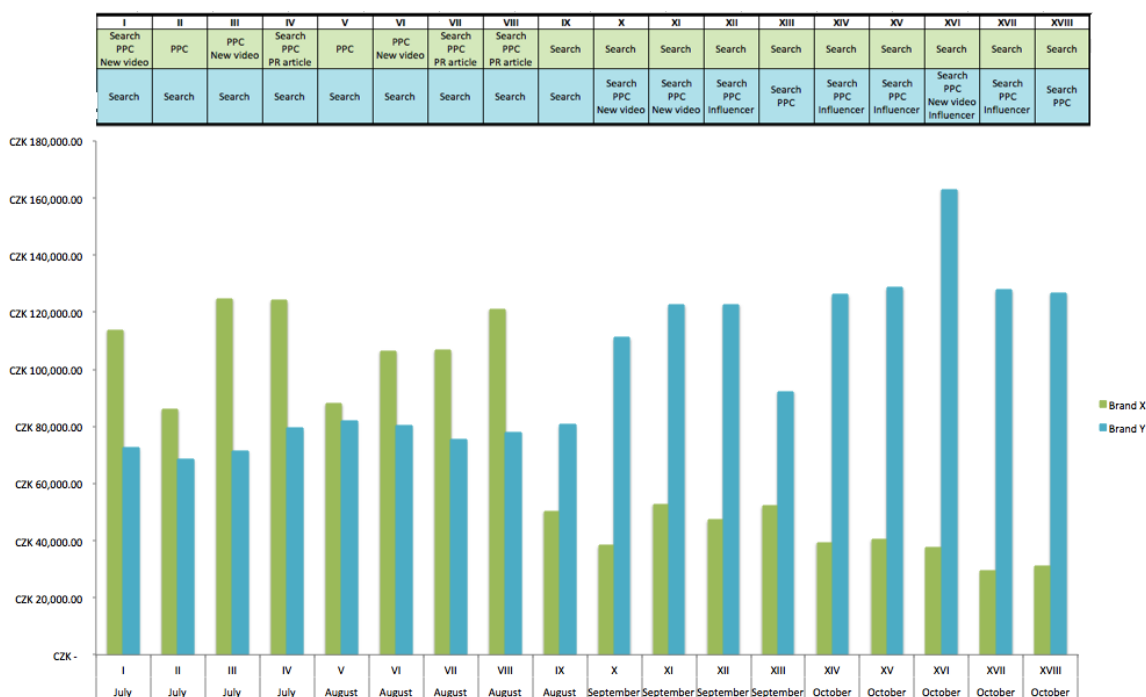
Source: Own table based on undisclosed data

In Table 16 there can be seen the profits of 2017 compared with 2016. In the highlighted area there are profits during the campaign period in 2017 in September and October. It is visible that the increase is not that significant like in case of Brand X, but it is due to the high of the profit during 2016, it has been really high and so the difference in 2017 is not that significant like for Brand X. Anyway the increase is noticeable, and also the final profit is even higher than in case of Brand X. Especially during the October 2017 the increase is significant, as there were very successful combinations of online marketing activities, mainly from the 14th week till the 17th week of the campaign period.

It can be stated that the influencers had a very important and significant effect on the final profit of Brand Y, as it is visible on the table. It may be claimed that influencers are a very useful tool, not just for online marketing activities, but also offline, in the meaning of representing in magazines and other offline channels.

During the next non-campaign months the decrease in profit is apparent, but is more important that there is an increase and not decrease like in case of Brand X.

Figure 22 – Profits vs. Campaigns



Source: Own chart and table based on undisclosed data

In Figure 22 there are final results of the economic evaluation of online marketing campaigns for both of the brands. There is clearly shown during which week of the campaign and which combination of online marketing activities brought the highest profit, so it can be claimed this specific combination of activities worth to repeat in the future.

In case of Brand X the combination were maximum three online activities per one week – the most successful in comparison with the profit is **combination of Pay per Click campaign together with new video and its financial support**, then **another very successful combination was Pay per Click, Search optimization and new PR article**, all of these channels led to the brand microsite and then to the company’s e-shop where the purchase can be done only.

When taking look at the Brand Y and its profit, the situation is even better than in case of Brand X. There can be seen a slight and gradual increase over the time period of the campaigns. Only during the 13th week, there is visible a decrease, caused by the insufficient combination of campaigns, only Search and PPC. With a start of influencer's posts, the profits started to grow immediately. The peak was during the 16th week when the combination of online marketing activities was sufficient and had **the biggest impact on the final profit, there were four of them – Search, PPC, New video and Influencer's post**. With gradually approaching the end of the campaign period, the profits went slightly down, but it is still visible that the influencer had the biggest impact during the 9 weeks period in combination with other online activities it was even stronger and more distinguishable.

It can be stated that the biggest impact on the final profit had the combination of these activities – Search, PPC, New video, and Influencer. If there is planned a similar type of campaign in the future, repetition of these campaigns should be considered, in order to have a high profit.

5.5 Regression Analysis

Regression analysis methods are used in situations when there is an interest in the dependence of a certain quantitative variable on one or more other quantitative variables, the so-called regressions. It is predetermined which variable is independent (explaining) and which is dependent (explained). The objective of regression analysis is to describe this dependency using a suitable (mathematical) model. [30]

Depending on the number of independent variables, there are distinguished models of simple regression and multiple regressions. Simple regression describes the dependency of the explained variable on a single regressor. In contrast, multiple regression addresses the situation where the dependent variable depends on more than one regressor. Depending on the type of regression function, the linear models can also be distinguished nonlinear. [30]

Sample linear regression model: $y = \beta_0 + \beta_1x_1 + \varepsilon$

Multiple linear regression model: $y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \varepsilon$

Following estimated model: $y = \beta_0 + \beta_1x_1 + \varepsilon$

Where:

y = brand revenues in CZK

x_1 = brand costs in CZK

If $p < 0.05$, the coefficients are considered statistically significant

5.5.1 Brand X Regression Analysis

In this chapter the final relationship between the costs and revenues will be estimated by the Regression analysis and in the written form by the sample linear regression model.

By the outcome it can be stated whether the costs had an effect on the revenues or not, and so if the campaign had a significant impact on the final profit.

Table 17 – Brand X Regression Analysis of 2017

<i>Regression Statistics</i>	
Multiple R	0,893827741
R Square	0,798928031
Adjusted R Square	0,778820834
Standard Error	76502,57135
Observations	12

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	36096,86779	51811,96481	0,69669	0,501870081	-79347,384	151541,1196	-79347,384	151541,1196
Variable X 1	6,600655785	1,0471503	6,303446	8,86879E-05	4,267459519	8,933852051	4,267459519	8,933852051

Source: Own table based on undisclosed data

$$y = a_0 + (6.601) x_1$$

In table of Brand X regression analysis above it can be seen that the costs had a significant ($p < 0.05$) effect on the revenues and so on the final profit. It can be explained by a simple relationship, and so, when the costs increase the revenues increase as well.

R^2 is $0.79 = 79\%$, so the model explains the variance in the dependent variable

Table 18 – Brand X Regression Analysis July – August 2017

<i>Regression Statistics</i>	
Multiple R	0,982412903
R Square	0,965135112
Adjusted R Square	0,962956057
Standard Error	10159,53665
Observations	9

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	19379,55227	4405,68057	4,398764721	0,00044839	10039,92668	28719,17785	10039,92668	28719,17785
Variable X 1	3,042080984	0,144547591	21,04553222	4,35555E-13	2,73565378	3,348508188	2,73565378	3,348508188

Source: Own table based on undisclosed data

$$y = a_0 + (3.04) x_1$$

In case of the regression analysis of the 9 weeks campaign period, the p-value is almost equal to 0, it means that the significance ($p < 0.05$) is really low. The relationship can be explained as when the costs increase the revenues increase as well. The R^2 is $0.965 = 96.5\%$ of the model explains the variance in the dependent variable.

5.5.2 Brand Y Regression Analysis

Even though in case of Brand Y there were different campaigns, and due to the graphical content in the previous chapter there was revealed that the combination of campaigns – PPC, Search, Video and Influencer was the most successful and brought a higher profit than in case of Brand X, it is important to measure the relationship between the costs and revenues, concretely how the revenues will change when the costs change.

Table 19 – Brand Y Regression Analysis of 2017

<i>Regression Statistics</i>	
Multiple R	0,882281879
R Square	0,778421315
Adjusted R Square	0,756263446
Standard Error	103059,2405
Observations	12

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	231805,8889	45189,28445	5,12966496	0,00044439	131117,889	332493,889	131117,889	332493,889
Variable X 1	4,022695264	0,678693617	5,92711521	0,00014565	2,51047165	5,53491888	2,51047165	5,53491888

Source: Own table based n undisclosed data

$$y = a_0 + (4.02) x_1$$

in case of Brand Y and the whole year 2017 regression analysis there can be seen that the model is statistically significant due to the p-value, which is lower than 0.05. It means that when the costs of Brand Y for its campaigns increase the revenues of Brand Y increases as well.

R2 is quite high: 0.778 = 77.8% it means that the model explains the variance in the dependent variable.

Table 20 – Brand Y Regression Analysis September – October 2017

<i>Regression Statistics</i>	
Multiple R	0,908193895
R Square	0,824816151
Adjusted R Square	0,81386716
Standard Error	20697,21493
Observations	9

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	67576,40552	8681,347329	7,78409191	7,89396E-07	49172,77131	85980,03973	49172,77131	85980,03973
Variable X 1	2,966440572	0,341778009	8,679436641	1,89616E-07	2,24190356	3,690977584	2,24190356	3,690977584

Source: Own table based on undisclosed data

$$y = a_0 + (2.966) x_1$$

The regression analysis for this time period, concretely the 9 weeks campaign period of Brand Y showed that when the costs increase the revenues increase as well. In this case it is proved that the relationship is statistically significant because $p < 0.05$. It can be explained as when the costs of Brand Y increase the revenues of Brand Y increase as well. Also the R^2 is higher than when the regression analysis was created for the whole year's period of 2017. It is again explained due to the smaller values and a more frequent split. $R^2: 0.82 = 82\%$ of the model explains the variance in the dependent variable.

The relationships between brand's costs and revenues are proved, and it can be stated that when costs of the brands increase the revenues increase as well. The amounts are expressed, so there are also visible the values by which the increase is represented. The models are in all cases statistically significant, so the campaigns had a significant effect on the final revenues and so the profit.

6 Conclusion and Recommendation

Marketing communication itself is in the pharmaceutical industry a subject with a large number of legislative constraints and restriction resulting from the international ethical code. These limitations do not intend to inhibit pharmaceutical companies to advertise their food supplement and medicinal products, but the communication should be transferred in a proper way. Marketing activities in the pharmaceutical industry are primarily informative and should provide an answer and knowledge. Of course, every producer of food supplements is trying to raise its product over the competition and so rise the final profit. Today, the easiest and the cheapest way to support the sales is the application of an appropriate online communication through digital channels.

The analytical part should have provided the answers to the research questions set up at the beginning of the diploma thesis and at the base of the results, the final conclusion can be done.

The first research question **“Did the online campaigns have an influence on the profit, either positive or negative?”** has been analyzed and proven, and at the base of the type of a campaign the profit has risen or has slightly decreased, but the revenues exceeded the costs in case of both of the brands. Due to the results of a regression analysis, it can be stated that the campaigns had a positive significant influence on a profit. When the same period from the previous year 2016 has been compared with the campaign period of 2017 it was proved that the profit has risen, in case of a less successful campaign by 150% and more, and in case of the most successful campaign by almost 800%. It can be explained by an easy equation: higher campaign costs lead to higher revenues. Therefore, the power of the higher costs on the revenues were also proven by the regression analysis, with higher costs and higher number of observation the variance in the dependent variable has risen and p-value was less than 0.05, so the significance of the model has been confirmed. Thus, it is proven that the online marketing campaigns are an effective tool not only for spreading the knowledge and getting a deeper awareness of a society but mainly for increasing the profit.

The second research question **“Which one of the online campaigns had the biggest impress on users?”** can be explained in two ways. The first one can be explained by the number of visitors on the brand’s website during the campaign period. In this case, the result is visible in the chart representing the number of visits on both brand’s websites. During the campaign period, the traffic on the websites was increasing and decreasing regarding the campaign type combination. The second way, how to express the intensity of impress on users, is the revenues. In both ways the result is similar – **the most successful campaign in the meaning of the website traffic and the revenues is the combination of Brand Y campaign: Pay per Click, Search Engine optimization, new video on YouTube and the Influencer.** During this campaign combination there was the highest number of visits on the brand’s websites that led to a high number of purchases on the company’s e-shop, and so the revenues were increasing.

The third research question to be answered is more a recommendation for the future steps in setting up the online campaigns **“Should the campaign be recommended to repeat in the future?”** Every campaign has to be set at the base of the given budget. When taking into consideration that the most successful campaign was also the most expensive one, the budget should reflect that and take it into account. The most successful campaign – Pay per Click, Search Engine Optimization, new video and the Influencer – was not just the most costly combination, but also the one combination with the best results. The most powerful tool to get new customers is through the influencer, who has the base of followers, and so the potency to sell more with unobtrusive manner. For the future campaign the influencer, one or more, is a building stone and should provide to their followers fun, yet educational, content. Then, in combination with the banner advertising, keywords optimization and new videos the campaign has a potential to be very successful and so bring the required profit.

7 References

Literature

- [1] Bates, A. (2006). *Online Marketing and eDetailing*. Oxford: Networkpharma Ltd. ISBN: 978-19-056-7610-1
- [2] Bird, D. (2002). *Commonsense direct marketing*. 1st ed. London: Kogan Page, ISBN: 978-07-494-4760-1
- [3] Ding, M., Stremersch, S. and Eliashberg, J. (2014). *Innovation and Marketing in the Pharmaceutical Industry*. New York, NY: Springer New York. ISBN: 978-14-614-7800-3
- [4] Kotler, P. and Armstrong, G. (2018). *Principles of marketing*. Upper Saddle River: Pearson. ISBN: 978-01-344-9251-3
- [5] Lee, K. and Carter, S. (2012). *Global marketing management*. 1st ed. Oxford: Oxford University Press, ISBN: 978-01-996-0970-3
- [6] Prevel Katsanis, L. (2016). *Global Issues in Pharmaceutical Marketing*. 1st ed. New York, N.Y.: Routledge, ISBN: 978-04-158-9532-3
- [7] Richmond, L., Turton, A. and Stevenson, J. (2002). *The pharmaceutical industry*. Burlington, VT: Ashgate. ISBN: 978-07-546-3352-7
- [8] Rollins, B. and Perri, M. (2014). *Pharmaceutical marketing*. Burlington, MA: Jones & Bartlett Learning. ISBN: 978-14-496-9799-0
- [9] Smith, M. (2014). *Principles of pharmaceutical marketing*. New York: Routledge, Taylor and Francis. ISBN: 978-08-121-0858-3
- [10] Zabin, J. and Brebach, G. (2004). *Precision marketing*. Hoboken, N.J.: John Wiley & Sons. ISBN: 978-07-494-6535-3

Internet Sources

- [11] Anon, (2018). [image] Available at:
http://images.slideplayer.com/47/11728919/slides/slide_10.jpg [Accessed 5 Mar. 2018].
- [12] authorSTREAM. (2018). Web Marketing Mix - Editable Powerpoint Training Slide. [online] Available at: <http://www.authorstream.com/Presentation/24point0-1909654-web-marketing-mix-editable-powerpoint-training-slide/> [Accessed 5 Mar. 2018].
- [13] Cs.wikipedia.org. (2018). Doplněk stravy. [online] Available at:
https://cs.wikipedia.org/wiki/Dopl%C4%9Bk_stravy [Accessed 6 Mar. 2018].
- [14] Democraticmedia.org. (2018). Drug Marketing Moves to Digital: How Pharmaceutical Companies Pitch Consumers Online | Center for Digital Democracy. [online] Available at: <https://www.democraticmedia.org/drug-marketing-moves-digital-how-pharmaceutical-companies-pitch-consumers-online> [Accessed 6 Mar. 2018].
- [15] Eagri.cz. (2018). Doplnky stravy (Potraviny, eAGRI). [online] Available at:
<http://eagri.cz/public/web/mze/potraviny/legislativa/doplanky-stravy/> [Accessed 6 Mar. 2018].
- [16] Economics Discussion. (2018). What is Oligopoly? | Markets | Economics. [online] Available at: <http://www.economicdiscussion.net/oligopoly/what-is-oligopoly-markets-economics/25723> [Accessed 5 Mar. 2018].
- [17] Economicsonline.co.uk. (2018). Price elasticity of supply. [online] Available at:
http://www.economicsonline.co.uk/Competitive_markets/Price_elasticity_of_supply.html [Accessed 5 Mar. 2018].
- [18] Freeeconhelp.com. (2018). What is a Dominant Firm, or a Price Leadership Model?. [online] Available at: <http://www.freeeconhelp.com/2012/02/what-is-dominant-firm-or-price.html> [Accessed 5 Mar. 2018].
- [19] Khan Academy. (2018). Price elasticity of demand and price elasticity of supply. [online] Available at: <https://www.khanacademy.org/economics-finance-domain/microeconomics/elasticity-tutorial/price-elasticity-tutorial/a/price-elasticity-of-demand-and-price-elasticity-of-supply-cnx> [Accessed 5 Mar. 2018].

- [20] ManagementMania.com. (2018). Web Marketing Mix 4S. [online] Available at: <https://managementmania.com/en/web-marketing-mix-4s> [Accessed 5 Mar. 2018].
- [21] Managementstudyguide.com. (2018). Marketing Communications - Meaning and its Process. [online] Available at: <https://www.managementstudyguide.com/marketing-communications.htm> [Accessed 6 Mar. 2018].
- [22] MaRS. (2018). What is Marketing Communication (MarCom) | Entrepreneur's Toolkit. [online] Available at: <https://www.marsdd.com/mars-library/what-is-marketing-communication-marcom/> [Accessed 6 Mar. 2018].
- [23] Slideplayer.cz. (2018). 7. OLIGOPOL. - ppt download. [online] Available at: <http://slideplayer.cz/slide/5671812/> [Accessed 5 Mar. 2018].
- [24] Smallbusiness.chron.com. (2018). What Is Marketing Communication Strategy?. [online] Available at: <http://smallbusiness.chron.com/marketing-communication-strategy-3442.html> [Accessed 6 Mar. 2018].
- [25] s.r.o., Q. (2018). Legislativa České republiky, Státní ústav pro kontrolu léčiv. [online] Sukl.cz. Available at: <http://www.sukl.cz/sukl/legislativa-ceske-republiky> [Accessed 6 Mar. 2018].
- [26] Tremr. (2018). *The Oligopoly Power of the Drug Business*. [online] Available at: <https://www.tremr.com/shardell13/the-oligopoly-power-of-the-drug-business> [Accessed 5 Mar. 2018].
- [27] vydavatelstvi.vscht.cz. (2018). Publikace - Vydavatelství VŠCHT Praha. [online] Available at: https://vydavatelstvi.vscht.cz/katalog/publikace?uid=uid_isbn-978-80-7080-677-7 [Accessed 5 Mar. 2018].
- [28] Quickonomics. (2018). The Price Elasticity of Supply - Quickonomics. [online] Available at: <https://quickonomics.com/the-price-elasticity-of-supply/> [Accessed 5 Mar. 2018].

[29] →, V. (2018). The ‘push and pull’ of the Pharmaceutical industry. [online] Pharmaceutical Business 1.0 Blog. Available at:

<https://myindustrygroupblog.wordpress.com/2012/10/08/the-push-and-pull-of-the-pharmaceutical-industry/> [Accessed 5 Mar. 2018].

[30] En.wikipedia.org. (2018). Regression analysis. [online] Available at: https://en.wikipedia.org/wiki/Regression_analysis [Accessed 20 Mar. 2018].